



10-Hour  
**Florida**  
**Cosmetology**  
Continuing Education Course



**Instructions Inside!**

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# Introduction

## Course Instructions

**Thank you for choosing the printed version of the American Safety Council's 10-Hour Cosmetology Continuing Education Online Course. Please follow the instructions below to complete the course:**

**Step 1:** Read through the course materials. The topics that we will cover throughout this course include:

- ▶ HIV/AIDS and Other Communicable Diseases (1 hour)
- ▶ Sanitation and Sterilization (3 hours)
- ▶ Occupational Safety and Health Administration Regulations (1/2 hour)
- ▶ Worker's Compensation and Florida Law (1/2 hour)
- ▶ State and Federal Laws as Applied to Cosmetology (2 Hours)
- ▶ Chemical Makeup of Skin, Hair, and Nails (1 Hour)
- ▶ Environmental Issues (1 Hour)
- ▶ The Impact of Cosmetics on Health (1 Hour)

**Step 2:** Register for your course and take the module quizzes by visiting [FloridaOnlineCosmetology.com/Renew](https://FloridaOnlineCosmetology.com/Renew) and selecting the Register button.

You must pass each quiz with at least a 75% in order to advance to the next section. Once you have completed all module quizzes, you will receive a certificate of completion and your completion will be reported to the FL DBPR to fulfill your continuing education requirements.





**Module 1:**

# HIV/AIDS and Other Communicable Diseases

**Module Objectives**

The objective for this section of the course is to instruct and inform cosmetologists regarding the subject of HIV and AIDS, as well as any other communicable diseases that they may potentially encounter in their work environment. Throughout this lesson, we will cover:

- ▶ How to recognize the modes of transmission for HIV/AIDS and other communicable diseases
- ▶ How to understand infection control procedures, clinical management and prevention of HIV/AIDS and other communicable diseases
- ▶ Next steps to take for an HIV-positive individual
- ▶ Anti-HIV medications—what they are, how they function, and what a treatment regimen looks like
- ▶ Additional resources and materials available for the HIV-positive or AIDS patient
- ▶ How to develop an appropriate attitude when dealing with persons who may have HIV/AIDS or other communicable diseases



## Brief Overview of HIV & AIDS

You are probably familiar with the terms HIV and AIDS. These pandemics have affected people throughout the entire world and have received substantial coverage by the media in the past, and continue to do so in the present.

The Centers for Disease Control (CDC) estimates that almost 40,000 people in the United States and six dependent areas contract HIV each year. Over 1 million people in the US and dependent areas live with HIV, and nearly 16,000 of those people die annually.

While research has uncovered a lot of information, many individuals may still have misconceptions about HIV and AIDS. The general population, cosmetologists included, likely encounter people or will potentially encounter people in the future who have HIV or AIDS or will encounter such a person at some point. So, throughout these sections, we will seek to understand the truth about these diseases to better inform a cosmetologist in their working environment.

## Basic Facts & General History

HIV stands for Human Immunodeficiency Virus. This is the virus that leads to AIDS. HIV damages a person's body by destroying a type of blood cells called CD4+ T cells, which are necessary for the body to fight diseases.

AIDS stands for Acquired Immune Deficiency Syndrome. This is the last stage of HIV infection when a person's immune system is damaged to the point where it cannot fight diseases and certain types of cancers.

At this time, there is no cure for HIV infection. However, people can live much longer with these diseases if they receive proper medication. It is important for cosmetologists, as well as any other individual, to understand that every day contact with an HIV-infected person does not expose you to HIV. We will discuss later on in this section the methods by which HIV and AIDS are contracted.

On the job site, the possibility of infection is generally very low, especially if you follow universal precautions. We will detail these specific precautions later on in the course. For now, however, we will discuss the history of both HIV and AIDS.

According to Avert, an organization focused on HIV and sexual health education, the earliest known case of infection with HIV in a human was collected from the blood sample of a man in Kinshasa, Democratic Republic of the Congo in 1959. In 1999, an international team of researchers identified a strain of SIV in a chimpanzee that was nearly identical to the HIV infection found in Humans. SIV stands for Simian Immunodeficiency Virus. This is an autoimmune disease similar to HIV that attacks the immune system of monkeys and apes. These researchers concluded that the virus had eventually crossed species and identified that the SIV strain that is similar to HIV and can infect humans was created from the chimpanzees eating two smaller breeds of monkey containing two different strains of SIV. These researchers believed that this particular strain of HIV was introduced into the human population when hunters came into contact with and became exposed to the infected blood of the animal.

In the United States, the HIV virus has been affecting people since the 1980s. In 1981 doctors in New York and Los Angeles began reporting patients who had rare types of pneumonia, cancer and other illnesses. What was a common factor among these patients? A number of these patients were people who were sexually active.

Since we have discussed a bit of history regarding HIV, we will now discuss the history of AIDS. In 1982, the term AIDS was used in order to describe the occurrence of rare types of pneumonia, cancer and other illnesses occurring in people who had previously appeared normal and healthy. It was in this year that the formal tracking of the AIDS virus in the United States began.

In 1983, the virus that caused AIDS was discovered. At first, scientists called this virus HTLV-III/LAV. (This is short

for human T-cell lymphotropic virus-type III/lymphadenopathy-associated virus). Later, the name of the virus was changed to HIV, which, as you learned at the beginning of this section, is short for Human Immunodeficiency Virus.

At that point during the early 1980s, people who developed HIV could also develop AIDS very quickly. But by the 1990s, highly effective combinations of medication were introduced that allowed people to live much longer. Today, people who detect HIV early and receive proper treatment can live for decades before they develop AIDS. As was stated earlier, however, there is still sadly no permanent cure for this disease.

## Transmission

HIV is transmitted through body fluids. The specific fluids that have been shown to contain dangerous concentrations of HIV are:

- ▶ Blood
- ▶ Semen
- ▶ Vaginal fluid
- ▶ Breast milk

Outside of the body, HIV does not survive well though. In 1983, the CDC identified all routes of transmission, going on to say “HIV [is] not transmitted through casual contact, food, water, air, or environmental surfaces.” Review the table below to learn how the virus is passed from one person to another:

### Unprotected Sex

- ▶ Either partner in this case can be infected.

### Injecting Drugs With Contaminated Needles

- ▶ This can occur by either coming into contact with contaminated blood or a contaminated needle, or both.

### Mother to Child

- ▶ A mother with HIV can transmit the virus to her baby during pregnancy, delivery or breastfeeding. This is called perinatal transmission.
- ▶ However, if the mother is tested and treated early enough, the possibility of the baby becoming infected decreases dramatically.
- ▶ According to the CDC, in 2017, 154 children under the age of 13 were diagnosed with HIV in the U.S., while a majority of those infections were not caused by transmission from mother to child.
- ▶ Early detection and prevention programs in the U.S. have become so successful that they are now being used in other countries as well.
- ▶ According to the CDC, if a woman is tested early and antiretroviral therapy is administered to the mother during pregnancy, labor, and delivery and then to the newborn (along with an elective cesarean section) this can potentially reduce the rate of perinatal HIV transmission to 1% or less, while if ART is started pre-conception or early on in the pregnancy then the rate of transmission is effectively zero.

- ▶ Since 2001, the Food and Drug Administration has required that all women with an undocumented HIV status during labor and delivery have a rush test so that antiretroviral treatment can be administered. Now, an opt-out method for HIV testing during prenatal care is being used to better detect HIV early on and reduce the likelihood of transmission.

Although the methods listed above are the most common methods of transmission, HIV may occasionally spread from person to person in some less common ways:

### Blood Transfusions

- ▶ Before blood was screened for HIV, the spread of the virus through blood transfusions was possible.
- ▶ Now, however, donated blood is screened for HIV and heat treated to destroy any possible traces of the virus.
- ▶ Presently, there is little risk of becoming infected with HIV via blood transfusion.
- ▶ The National Heart, Lung, and Blood Institute states that “only about 1 in 2 million donations might carry HIV and transmit HIV if given to a patient.”



### Kissing

- ▶ Although scientists have detected HIV in the saliva of infected people, there is no evidence that the virus is spread by contact with saliva alone.
- ▶ In fact, studies have shown that saliva has natural properties that can actually reduce the infective capabilities of HIV. Additionally, the concentration of HIV in saliva is relatively low.
- ▶ According to the CDC, the risk of getting HIV through kissing depends on the type of kiss:
  - ▶ Dry kissing and kissing on the cheek is considered safe
  - ▶ Open-mouth kissing is considered to be a very low risk activity
  - ▶ However, prolonged kissing that could damage the mouth or lips could allow HIV to pass from an infected person to their partner through cuts or sores
- ▶ The CDC recommends against open-mouth kissing with an infected partner because of this risk.



## Ways You Cannot Be Infected

Remember that HIV does not survive well outside of the body. This means that you cannot be infected by any of the following:

- ▶ Urine
- ▶ Feces
- ▶ Sweat
- ▶ Tears
- ▶ Mosquitoes or bedbugs
- ▶ Casual contact, including shared use of:
  - ▶ Swimming pools
  - ▶ Phones
  - ▶ Toilet seats
  - ▶ Bedding or towels
  - ▶ Food utensils

## Symptoms of HIV

It is important to understand the only foolproof way to know if a person is infected is for that person to be tested for the HIV infection. This is especially important because many people who are infected will not have any symptoms for 10 years or more.

According to the U.S. Department of Health and Human Services, the following may be warning signs of advanced HIV infection:

- ▶ Rapid weight loss
- ▶ Recurring fever or profuse night sweats
- ▶ Extreme and unexplained fatigue
- ▶ Prolonged swelling of the lymph glands in the armpits, groin, or neck
- ▶ Diarrhea that lasts for more than a week
- ▶ Sores of the mouth, anus, or genitals
- ▶ Pneumonia
- ▶ Red, brown, pink, or purplish blotches on or under the skin, or inside the mouth, nose, or eyelids
- ▶ Memory loss, depression, and other neurological disorders

Remember: HIV in and of itself doesn't kill anyone. The only thing that HIV can do is weaken the body's ability to fight off other illnesses and diseases.

### The Difference Between HIV and AIDS

Remember that HIV is the virus that causes the disease AIDS.

HIV infects the CD4 cells or helper T cells that are an important part of the immune system. A person can be infected with HIV for several years before AIDS develops. AIDS is diagnosed when a person's cell count goes below 200 cells per cubic meter of blood. For a person who also has certain diseases, it can potentially be diagnosed when his or her cell count is higher than that.

People go through various stages of HIV infection before they develop AIDS. Review the arrows below to learn about the stages of infection a person may go through before the AIDS disease develops:

**Stage 1 Infection**

- ▶ In this stage, HIV infects cells and copies itself before the immune system can respond.
- ▶ Flu-like symptoms may occur at this time.

**Stage 2 Response**

- ▶ While during this stage a person may not feel any different, the body is actually trying to fight off the virus by producing antibodies.
- ▶ This is the stage in which a person will go from HIV negative to positive.

**Stage 3 No Symptoms**

- ▶ This stage, in which a person displays no evident symptoms of HIV, is called asymptomatic infection.
- ▶ The infected person does have HIV, but the damage the infection is currently causing damage within their body can't yet be felt.

**Stage 4 Symptoms**

- ▶ During this stage, symptoms such as certain infections like Pneumocystis carinii pneumonia (PCP) develop.

**Stage 5 AIDS**

- ▶ This is the diagnosis of a person who exhibits a variety of symptoms, infections and specific test results.

One of the many dangers of AIDS is that people with this disease are constantly at risk of certain infections that would not typically harm a healthy person. This is because their immune system is weakened and damaged by the disease and therefore cannot fight infections off like a healthy person can. There is a specific name for these infections—opportunistic infections. They are called this because they are infections that provide diseases with the opportunity to develop within a person's body. This is why it is important for those who may have HIV or AIDS to be tested early enough—with the right medication, they will be able to combat these diseases better.

Most of these infections develop within an HIV or AIDS patient without the person even knowing, because these individuals are unwittingly exposed to germs on a daily basis. A variety of infections actually have the potential to be harmful to AIDS patients, and these include—but are not limited to—such infections as:

- ▶ PCP—Pneumocystis carinii pneumonia
- ▶ MAC—Mycobacterium avium complex
- ▶ CMV—Cytomegalovirus
- ▶ TB—Tuberculosis
- ▶ Toxo—Toxoplasmosis

- ▶ Crypto—Cryptosporidiosis
- ▶ Hep C—Hepatitis C
- ▶ HPV—Human papilloma virus

A variety of symptoms may present themselves in the infections listed above. Some of these prominent symptoms may include things like:

- ▶ Breathing problems
- ▶ Mouth problems such as thrush (white spots), sores, taste changes, dryness, trouble swallowing, loose teeth
- ▶ Fever that lasts more than two days
- ▶ Weight loss
- ▶ Changes in vision or “floaters” (meaning that there are moving lines or spots in your vision)
- ▶ Diarrhea
- ▶ Skin rashes or itching

Individuals should consult their doctors immediately if they encounter the symptoms listed above. And, because of their lowered immune system and inability for the body to ward off infections, AIDS patients also sadly have the potential to run a higher risk of developing cancers. People with AIDS may be at more risk to certain types of cancer, especially ones that are the direct result of viruses. These types of cancers include:

- ▶ Kaposi’s sarcoma
- ▶ Cervical cancer
- ▶ Lymphomas

So how are patients with AIDS treated for their cancer symptoms? Well, while doctors can use radiation, chemotherapy, or medical injections to help patients who suffer from both AIDS and cancer simultaneously. The cancer in their bodies is unfortunately usually aggressive and therefore is difficult to treat.

As stated earlier, there is currently no cure for HIV or AIDS. However, if a person is tested early enough, the disease can be treated and the individual may be able to live much longer than they would have if they had not been tested and treated.

Here are some specific methods listed by the CDC that may contribute to the amount of time that an individual goes from an HIV infection to AIDS disease.

**Individuals may have a shorter time period between acquiring HIV and developing AIDS if:**

- ▶ They are older in age.
- ▶ The infection has more than one type of HIV.
- ▶ They do not practice good nutrition.
- ▶ They are under severe stress.

**Patients with HIV may find that their infection does not develop into AIDS disease as quickly if:**

- ▶ They closely follow the orders of their doctor or health care provider.
- ▶ They eat healthy foods.
- ▶ They take care of themselves.

## HIV Testing

What should you do if you think that you may have HIV? Remember that the only way for a person to know for certain if they have HIV is to be tested. There are many places that a person can go to in order to be tested. These places include: the local health department, a private doctor’s office or hospital, or a site that performs anonymous testing.

So what do HIV tests really do? HIV tests actually detect the antibodies produced by the body that are used to fight off infections. As a consequence of this, there may be a period of a few weeks to a few months right after a person is infected where there are not enough antibodies to be detected. The antibody test can take 23 to 90 days after exposure to detect HIV, but sometimes slightly faster if the blood is taken from a vein. There are other tests offered though, like the nucleic acid test (NAT), which can typically detect if you have an HIV infection 10 to 33 days after exposure.

Most people, though, will develop the antibodies for the detectable level, acute HIV infection, in 2 to 4 weeks. In rare cases, this can actually take up to 6 months. So for this reason, the CDC recommends that a person who has an HIV test result that is negative within 3 months of the possible exposure take another test when more than 3 months have passed. All positive test results must be followed up by another test to confirm the positive result.

Explore the table below to learn about the types of HIV tests that can be performed:

### Blood Test

- ▶ The enzyme immunoassay (EIA) blood test is the most commonly used test for detecting the presence of HIV antibodies.
- ▶ For this test, blood is drawn from a vein or finger stick.
- ▶ A positive EIA must be used in conjunction with a follow-up blood test such as the Western blot to confirm diagnosis.
- ▶ This test typically takes a few days for results.



### Urine Test

- ▶ A urine test may be sought by a person who is not comfortable with having blood drawn.
- ▶ Urine testing is not as sensitive or precise as blood testing.
- ▶ A follow-up confirmatory Western blot test is required using the same urine sample.
- ▶ This type of test typically takes a few days in order to gather results.

### Oral Fluid Test

- ▶ An oral test may be sought by a person who is not comfortable with having blood drawn.
- ▶ The oral test is performed by collecting oral fluid (not saliva) from the mouth using a special device.
- ▶ A follow-up confirmatory Western blot test is required using the same oral fluid sample.
- ▶ As with the tests mentioned above, this test also typically takes a few days for results.

### Rapid HIV Test

- ▶ A rapid test can provide results in approximately 20 minutes.
- ▶ This test uses blood from a vein or finger stick, or oral fluid to detect HIV antibodies.
- ▶ A positive test must be followed-up by a confirmatory test before diagnosis is made.



**Home Test Kits**

- ▶ While many home tests for HIV are advertised on the Internet, the only home blood test kit that is approved by the FDA is the Home Access HIV-1 Test System.
- ▶ This particular test can be found at most drug stores.
- ▶ People should not be fooled by the name “home test kit,” however. This test kit is not truly a home test in the same way that the other previous tests were. Rather, this is a home collection kit which requires the user to:
  - ▶ Prick their finger with a special device
  - ▶ Place drops of blood on a specially treated card
  - ▶ Mail the card in to be tested at a licensed laboratory
- ▶ Once the user completes the above steps, he or she is given an identification number that they will use when calling in for results.
- ▶ Users may also have the option to speak to a counselor: before taking the test, while waiting for results or when the results are given.
- ▶ If the user receives a positive result, a referral for a follow-up confirmatory test is provided, along with information about support services for those with HIV.

**RNA Test**

- ▶ RNA tests are utilized in order to search for genetic material of the virus.
- ▶ These types of tests are used in order to screen the blood supply and to detect very early infection cases where other tests are unable to detect antibodies to HIV.

**Negative Test Results**

As stated earlier, a person who has a negative HIV test result within three months of the possible exposure should take another test when more than three months have passed.

If a person tests negative, it is important to remember that this does not indicate the HIV status of a sexual partner. For this reason, a person should ask their sexual partner if he or she has been tested for HIV and if they presently or have ever engaged in risky behaviors.

**Positive Test Results**

On the other hand, if a person tests positive for HIV, early medical treatment and practice of a healthy lifestyle will optimize their life quality significantly. Early care of HIV can delay the onset of AIDS, as well. There are certain measures that a person who is HIV-positive should take. Steps that an HIV-positive person should take immediately include:

- ▶ Seeing a licensed health care provider, even if they do not feel sick.
- ▶ This provider should have experience in treating HIV and be aware of the variety of medications used to manage the illness.

- ▶ Getting a tuberculosis (TB) test.
- ▶ TB can be treated if caught early but can cause serious illness if not addressed.
- ▶ Avoiding, or seeking a program to help quit the use of cigarettes, excessive alcohol, or illegal drugs because these behaviors and habits can weaken a person's immune system further.
- ▶ Getting screened for other sexually transmitted diseases and practice safe sex to avoid getting an STD. STDs can cause serious illness if not addressed.

Again, not having sex is one of the most effective ways to prevent the spread of HIV between individuals. If a person chooses to be sexually active, they should use a latex condom to protect against HIV and other sexually transmitted diseases.

# HIV/AIDS & Other Communicable Diseases

## Treatment for HIV

The recommended treatment for HIV outlined by the CDC for those who have tested HIV-positive is called antiretroviral therapy (or ART). What exactly does this therapy entail? ART involves taking a regimen of at least three anti-HIV medications a day. This combination therapy inhibits the HIV virus from multiplying within the body and destroying CD4 cells, which are the cells that help to ward off infections in the body. Taking this regimen of medications will help support those cells, whose primary purpose is to protect the rest of the body. As noted in the previous sections, HIV and AIDS patients are susceptible to infections and to certain forms of cancer when these CD4 cells do not function properly.

Obviously, before beginning any regimen of medicine, a patient must consult their health care provider in order to obtain these medications. What should you look for in a health care provider? First, find someone who has significant experience dealing with and treating HIV and AIDS. You should always ensure that you feel comfortable with your health care provider since the two of you will be working together. It is also important to ask your healthcare provider any questions that you may have regarding treatment.

Possible topics that you may want to discuss, according to the CDC, include:

- ▶ The benefits and risks of HIV treatment
- ▶ How HIV treatment may affect your lifestyle
- ▶ Lab tests used to monitor HIV
- ▶ How to avoid getting other infections
- ▶ How to avoid transmitting the disease to others

The three tests you will receive at your appointment with your healthcare provide are as follows:

<b>CD4 Count</b>	<ul style="list-style-type: none"><li>▶ This measures the CD4 cells (the disease-combating cells in your body).</li><li>▶ This is key in order to determine how many cells have been destroyed by HIV and helps healthcare professionals know what medicine to</li></ul>
<b>Viral Load Test</b>	<ul style="list-style-type: none"><li>▶ This test measures the amount of HIV that is present in a sample of blood.</li><li>▶ The ultimate goal of HIV treatment is that a person's viral load is kept so low that the virus itself cannot be detected by the test.</li></ul>
<b>Drug-Resistance Testing</b>	<ul style="list-style-type: none"><li>▶ This form of testing helps to identify which anti-HIV medications will be the most useful in treating a particular strain of HIV.</li></ul>

- ▶ Not every HIV-positive individual will require the same exact medication.

Note that an individual diagnosed as HIV-positive may not necessarily need to start treatments for the infection immediately. That is why it is so important that a person follows the directions of their health care provider and works closely with them during all stages of this infection. When an individual begins their regimen may depend on such things as the patient's:

- ▶ overall health.
- ▶ CD4 count.
- ▶ viral load.
- ▶ ability to commit to life-long treatment.

The doctor will also take into account whether the patient is pregnant.

### Recommended HIV Treatment Regimens

As we discussed previously, antiretroviral therapy (ART) is the recommended method used to treat HIV. Anti-HIV medications can actually be classified into six different drug classes. The drugs in these particular classes are organized by how they fight HIV. Listed below are the six different classes that drugs will fall into:

- ▶ Non-nucleoside reverse transcriptase inhibitors (NNRTIs)
- ▶ Nucleoside reverse transcriptase inhibitors (NRTIs)
- ▶ Protease inhibitors (PIs)
- ▶ Fusion inhibitors
- ▶ CCR5 antagonists
- ▶ Integrase inhibitors

Recommended regimens to treat HIV include at least three, if not more, of drugs from at least two different drug categories listed above. This is actually the most effective way to combat HIV - by taking drugs from different classes. Some medications are even available in combinations. This means that two or more medications will be in one pill. There is actually a name for this type of recommendation - HAART, which stands for highly active antiretroviral therapy. As we discussed before, it is recommended that HIV be treated through a combination of medicines. HAART is the specific name for the combination of three or more medicines in a treatment.

All anti-HIV medication must be approved by the United States Food and Drug Administration (FDA) before it is sold on the market. But in addition to understanding what kinds of medications are available on the market for those who are HIV-positive, it is also important to know which type of medications an individual should take. Remember: not every person who has HIV will take exactly the same regimen. This is why it is pertinent that an individual discuss their medication thoroughly with their healthcare provider. There are some general factors that may influence what medication you will take, however.

Such factors may include:

- ▶ Any other diseases or conditions in addition to HIV that you have
- ▶ Your allergic reactions to the ingredients in potential anti-HIV medications
- ▶ Potential drug-to-drug interactions (between any medications that you may be currently taking and the anti-HIV medication)



- ▶ Your personal drug-resistance test results
- ▶ The complexity of the regimen itself: Will it be difficult for an individual to remember to take the necessary pills? How many pills will need to be taken every day? How often? Will these pills need to be taken with or without food?
- ▶ Any other personal issues, including depression, substance abuse, emotional issues, etc.

After you have expressed concerns and discussed them with your healthcare provider, he or she may provide you with one of the following regimens:

- ▶ **Atripla** : a combination of three different anti-HIV medications in one pill.
- ▶ **Reyataz + Norvir + Truvada**: a combination of two different anti-HIV medications in one pill.
- ▶ **Prezista + Norvir + Truvada**
- ▶ **Isentress + Truvada**

HIV-positive women who are in their first trimester of pregnancy—or any woman who is planning on becoming pregnant—should not use Atripla or Sustiva. These medications can harm the child. As always, it is important for any HIV-positive patient to discuss their options with their healthcare provider before beginning a medicine regimen.



Remember, too, that—as with any medication—anti-HIV medications will produce side effects. Because each patient follows a treatment regimen based on their needs, even people taking the same medication may not have the same side effects. That is why it is important to discuss any potential side effects of the medications you will be taking with your pharmacist or healthcare provider. Most of these side effects will be minor, but it is still important to report to your healthcare provider any side effect or anything that makes you feel unusual or uncomfortable. Even side effects such as the ones below that seem essentially harmless may indicate more serious problems:

- ▶ Fever
- ▶ Nausea
- ▶ Fatigue
- ▶ Rash

As always, talk to your healthcare provider should you develop any harmful side effect. This is the most important tool in ensuring your health and progression as you deal with HIV. Remember that side effects will not be the same for all HIV patients, even those who are prescribed the same medication. Your healthcare provider will design a regimen that is specifically designed to fit your needs and symptoms and to successfully combat the HIV within your body.

## Treatment Adherence

Now that we have talked about a variety of medications that individuals may encounter if they are HIV-positive, we will focus on the treatment itself. What exactly is treatment adherence? Quite simply, this means that an individual adheres to, or follows, their regimen. This includes taking the correct medication at the correct time in the correct dosage prescribed. Adherence to medication is a key element in treating HIV fully.

Why is treatment adherence important to the HIV-positive individual, though? The National Institutes of Health details two specific reasons for this:

**Properly adhering to an HIV treatment regimen will help the anti-HIV medications effectively reduce the amount of HIV within the body.**

- ▶ This means that if you skip medications—even just on occasion—you give the HIV virus the opportunity to multiply within your body quite quickly.
- ▶ The simplest and best way to prevent the virus from multiplying, then, is to take medications as instructed.

**Adhering to your regimen not only prevents the HIV virus from multiplying within the body, but also assists in preventing drug-resistance.**

- ▶ Drug resistance occurs when the HIV virus mutates within your body. It may then become resistant to certain medications you are taking. As a result, the anti-HIV medications you are taking can become ineffective.
- ▶ Skipping medications may cause drug-resistance. Also, drug-resistant strains of HIV can then be transmitted to others. This is why patients must always adhere to their regimen.

What difficulties might a patient have in keeping up with their treatment regimen? One of the reasons that following a regimen may be difficult is the need to take multiple pills per day. Other reasons that a person may find it difficult to adhere might include:

- ▶ Difficulty in taking medications—Swallowing pills, etc.
- ▶ Side effects from medications—Fatigue, diarrhea, etc.
- ▶ Issues with scheduling medication daily—Traveling away from home, unstable work schedules, etc.
- ▶ Emotional or physical illness—Depression, colds, flus, etc.
- ▶ Substance abuse—Alcohol or drugs

**Remember:** Proper adherence to a regimen of anti-HIV medication is key in maintaining health, so it is important that a patient do whatever is necessary in order to make that possible.

## Following Treatment Regimens

Staying on track with treatment prevents relapses and prevents the spreading of infection to others. Before a patient starts taking their medication, they must be certain that they are able to follow the regimen.

Discussions with a healthcare provider should cover the following issues:

- ▶ Possible side effects of the anti-HIV medications
- ▶ Possible interactions between the anti-HIV medications and other drugs the patient is taking

- ▶ Work and home schedules
- ▶ Personal issues, such as substance abuse or depression
- ▶ Medical insurance coverage

Discussing these issues with a healthcare provider helps a patient prepare to correctly follow their prescribed regimen.

But how can someone ensure that they adhere to their treatment? Anti-HIV medication regimens are a lifetime commitment, and patients must make sure that they are willing and able to continue with the medication for the long haul. The following are some practical suggestions that may help patients adhere to their regimen:

#### **Use a 7-day Pill Box**

- ▶ Once a week, fill this box with all the necessary medications that you will need throughout the week.

#### **Take the Medication at the Same Time Every Day**

- ▶ This will help to establish a routine for your regimen that will be easier to follow.
- ▶ Use a timer, alarm clock, or cell phone to remind you to take the medication.
- ▶ Scheduling your medication into your daily routine will help establish consistency and will make it less likely to forget medications.



#### **Ask Family, Friends, or Co-workers to Remind You**

- ▶ It is always a good idea to have extra accountability for your medication regimen.

#### **Keep Medications Close to You**

- ▶ This will help aid you in remembering to take them.
- ▶ Keep a back-up supply of medication somewhere close to you as well, such as in a briefcase, purse, etc.

#### **Always Plan Ahead If Your Regimen Will Be Altered**

- ▶ Make sure that if you are going out of town on vacation, or a business trip, or even for a weekend that you pack enough medication with you in order to last the entire duration of the trip.

#### **Begin a Medicine Diary**

- ▶ It may be a good idea to keep a log of the medication that you take: name of the medication, dosage, when you take the pills, etc.
- ▶ Check off the medications as you take them, and review your diary in order to help keep yourself on track.

#### **Do Not Skip Medical Appointments**

- ▶ This is significant because you always want to ensure that communication between you and your healthcare provider is open.
- ▶ If you should happen to run low or completely out of your medications before you are able to meet with a healthcare provider, ask them to renew the prescriptions for you.

**Join a Support Group**

- ▶ Joining a support group for people who are living with HIV is a good way to form community and also accountability

So what happens if you should forget to take your medication? If this happens, take the medication as soon as you remember that you have missed it. However, if it is almost time for you to take the next dose of medicine, do not take the skipped dose. Never take a double dose of medication to “make up” for missed ones. Just continue to follow your scheduled regimen as you usually would. If for some reason you are having difficulty keeping on track with your scheduled regimen, contact your healthcare provider. They can help you discover why you are having difficulty and also find a workable solution to fit your needs.

**Is the Regimen Working?**

One of the most important questions an individual on anti-HIV medication may ask themselves is whether the regimen is actually working. Your healthcare provider will perform two important tests that we covered briefly earlier in this lesson— a CD4 count and a viral load test—to determine whether the prescribed treatment is effective.

As previously discussed, a CD4 count is used in order to measure the infection-fighting CD4 cells within your body. Since HIV destroys these cells, it is important that HIV-positive individuals be tested for these cells. A healthy individual has a CD4 count between 500 and 1,200 cells per millimeters cubed ( $\text{mm}^3$ ). An HIV-positive individual who has a CD4 count of less than 500 cells/ $\text{mm}^3$  will need to begin anti-HIV medications. Any person whose CD4 count is less than 200 cells/ $\text{mm}^3$  is diagnosed with AIDS.

When an individual begins an anti-HIV treatment regimen, they will have a CD4 count once every 3 to 4 months. It is always a good sign if an individual's CD4 count increases. Once the health care provider determines the treatment is working, a patient should need a CD4 count only every 6 to 12 months.

An earlier section explained that a viral load test is the best method to determine whether an individual's treatment is working. This test measures the amount of HIV in a person's blood. It is important to note, however, that an undetectable viral load does not mean that an individual has been cured of HIV. It simply means that their viral load count is so low that it cannot be detected by that test. So, once a patient begins their treatment regimen, they will have a viral load test within 2 to 8 weeks after that date. They will continue to have viral load tests done every 4 to 8 weeks after that until the viral load cannot be detected anymore. After the viral load is undetectable, a person will only need to have their viral load tested every 3 or 4 months. Should an individual have an undetectable viral load for at least 2 or 3 years, their healthcare provider may recommend that the individual be tested once every 6 months instead.

Why might a treatment regimen fail? The major reason this may happen is that the anti-HIV medications cannot properly control the virus or protect the immune system from failing. Often, the medications fail due to uncontrollable circumstances, such as side effects and drug interactions. If this occurs, a healthcare provider may switch an individual's medication in order to properly deal with these issues.

A healthcare provider will most likely consider the following factors before deciding to switch an individual's regimen:

- ▶ How closely did the patient adhere to the regimen?
- ▶ What side effects did the patient experience on the regimen?
- ▶ How well did the body absorb the medications in the regimen?
- ▶ What are the results of the drug-resistance test?



Before prescribing a new medication, the healthcare provider will review a variety of factors including:

- ▶ The patient's medical history
- ▶ Any past side effects from the medications
- ▶ Results of the drug-resistance tests

As was mentioned earlier, all medication available is approved by the FDA before use. However, a healthcare provider may recommend a new medication that is currently being studied if an individual has already taken many of the FDA-approved medicines. Patients may also have the potential to be eligible for a clinical trial—a type of research study that tests how well medical treatments work—using this new medication.

Again, it is always a patient's responsibility to properly adhere to their treatment regimen. If they do not do so, they run the risk of allowing themselves to relapse.

# HIV/AIDS & Other Communicable Diseases

## Living With HIV & AIDS

Daily life may be a struggle for those living with HIV or AIDS. A person living with HIV or AIDS may feel as if there is nowhere to turn for the support (emotional, physical, financial, and medical) they need to make it through from day to day. In truth, there are plenty of places those who are struggling may find solace and information, including: a healthcare provider, a local health or social services department, a local AIDS service organization, or a library.

According to the CDC, those community resources may direct an individual living with HIV or AIDS to the help they need, including:

- ▶ Answers to questions regarding HIV and AIDS
- ▶ Names of doctors, insurance companies, and general help in making medical decisions
- ▶ Food, housing, or transportation
- ▶ Help in managing financial and daily needs
- ▶ Support groups for the individual as well as their families and loved ones
- ▶ Assistance with legal matters, such as claims for the Americans With Disabilities Act (ADA), which we will cover momentarily
- ▶ Confidential help in applying for Social Security disability benefits

Suggested sources of support include:

- ▶ Local service organizations or support groups. Search the National Prevention Information Network site for organizations in your area.
- ▶ Online support groups for those living with HIV and AIDS.
- ▶ National agencies such as the CDC. Explore the resources on the HIV/AIDS & STDs page, or call the CDC at 800-CDC-INFO (800-232-4636).
- ▶ Local hospitals, churches, or chapters of the American Red Cross for referrals.
- ▶ HIV newsletters and other publications.
- ▶ Social events designed to meet and socialize with others who have HIV or AIDS.

Becoming an HIV educator is one way to get involved in the community and offer support to others. You can speak at events, hold informational gatherings, work on newsletters, organize benefits, etc.

The truth of the matter is that many people throughout the world are struggling with either HIV or AIDS, and most of them have the ability to lead normal, productive lives in society. If an individual follows the regimen their healthcare provider prescribes, they will have a better quality of life.

## Behavior Around Those With HIV & AIDS

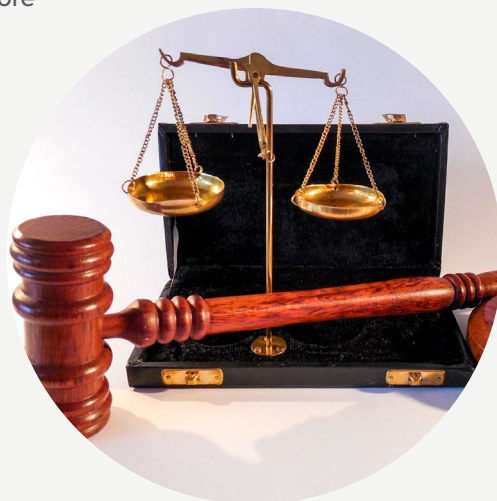
Thanks to medical research and HIV/AIDS-awareness movements, more people are getting tested, being treated, and living longer despite their HIV-positive status. As a result, people who are infected are returning to the workforce. Unfortunately, many people living with HIV are still affected by the stigma associated with the disease.

It is a natural human response to feel anxious about others who might have a communicable disease such as HIV. However, being educated about HIV/AIDS, understanding what it is, how it is spread, how it is not spread, and how it affects an individual who is infected should help put your mind at ease.

### HIV/AIDS and the Law

Sadly, not everyone is educated about HIV. Since the illness first gained national attention, many employers and service providers have discriminated against people with HIV/AIDS. In response, the U.S. has passed laws that protect the rights of people with HIV/AIDS.

The following table provides information about the various acts and laws that protect those living with HIV and AIDS.



**Several federal laws protect the rights of people with HIV/AIDS.**

#### Americans with Disabilities Act (ADA)

On September 16, 1994, Sidney Abbott went to her dental appointment. When she arrived, she disclosed that she was HIV-positive but asymptomatic, meaning that she was infected but experienced no symptoms. The dentist examined Abbott; however, when he found a cavity, he refused to treat her because of her HIV status.

Abbott filed a lawsuit in federal court arguing that she had been discriminated against, which is a violation of the Americans with Disabilities Act (ADA). The ADA defines a disability as “a physical or mental impairment that substantially limits a major life activity.” The case, *Bragdon v. Abbott*, went all the way to the Supreme Court. On June 25, 1998, the Court ruled that an individual who is HIV positive but asymptomatic has a disability within the meaning of the ADA and should be protected under this law.

In 2008, Congress amended the ADA to make it easier for people with HIV/AIDS to demonstrate their eligibility for disability status. Their reasoning was that people with HIV/AIDS can be classified as disabled because their immune systems would be substantially limited if they were to stop taking medication.

#### So what exactly does the ADA do for those living with HIV and AIDS? The ADA:

- ▶ Protects the equal opportunity to work for people with HIV/AIDS who want to work and are qualified to work.
- ▶ Prohibits employers from discriminating against people with HIV/AIDS when hiring, firing, or training as well as when determining pay, promotions, benefits, and leave.

- ▶ Prohibits an employee from being harassed because of their HIV/AIDS status.
- ▶ Protects the right of a person with HIV/AIDS to request a reasonable work accommodation to address their HIV/AIDS - such as requesting time off for treatment.
- ▶ Prohibits an employer from firing or disciplining an employee with HIV/AIDS who asserts their rights under the ADA.
- ▶ Prohibits businesses and non-profit service providers that serve the public from excluding, segregating or treating people with HIV/AIDS unequally.
- ▶ Prohibits the denial of an occupational license or admission to school on the basis of a rumor or assumption that a person has HIV/AIDS.

### Family Medical Leave Act (FMLA)

The Family Medical Leave Act of 1993 protects employees in the private sector who work for an organization with 50 or more employees within 75 miles of the work site.

#### Eligible employees are entitled to:

- ▶ Take leave for a serious medical condition.
- ▶ Take leave to care for an immediate family member with a serious medical condition.
- ▶ Use up to 12 weeks (in a 12-month period) of unpaid medical leave without fear of losing their job.

### Affordable Care Act of 2010

In the past, people living with HIV/AIDS had a hard time getting private health insurance and have been subject to insurance industry abuse. People with HIV/AIDS also had trouble getting quality care from qualified providers. In 2010 the Affordable Care Act (ACA) expanded healthcare access for many Americans, including those at risk of or living with HIV/AIDS. Currently, the ACA:

- ▶ Prohibits insurers from denying coverage to children living with HIV/AIDS.
- ▶ Prohibits insurers from cancelling coverage to adults or children unless they can show evidence of fraud in an application.
- ▶ Prevents insurers from imposing a lifetime limit on insurance benefits.
- ▶ Prohibits insurers from denying coverage to anyone or impose annual limits on coverage.
- ▶ Entitles people with low and middle incomes to be eligible for tax subsidies that will help them buy insurance.
- ▶ Broadens Medicaid eligibility to classify more individuals as low-income individuals so that a person living with HIV who meets requirements will no longer have to wait for an AIDS diagnosis to become eligible for Medicaid.

**Health Insurance Portability and Accountability Act (HIPPA)**

The Health Insurance Portability and Accountability Act of 1996 protects the privacy of people with HIV/AIDS by:

- ▶ Requiring information doctors, nurses, and other health care providers put in medical records to be private.
- ▶ Requiring conversations with health care providers about care and treatment to be private.
- ▶ Requiring any billing information stored at a health clinic to be private.
- ▶ Requiring insurers to keep any health-related information about their customers private.
- ▶ Giving people the right to review and make corrections to their medical records.

While the laws described above cover people nation-wide, many states have their own rules regarding HIV/AIDS. In Florida, the Omnibus AIDS Act requires the following:

- ▶ HIV tests can be performed only if the person being tested has given documented and informed consent.
- ▶ If an initial test result is positive, additional testing must be performed to confirm results before they are released.
- ▶ Test results must be kept confidential.
- ▶ Patients must be informed of their test results.
- ▶ Healthcare providers must notify the county health department of positive test results.

Remember, other states may have different regulations. The best way to become informed about state-specific laws regarding HIV/AIDS is to visit a state's department of health website.

**Anxieties About HIV & AIDS**

It may be a natural human response to feel anxious about others who might have a communicable disease such as HIV. Unfortunately, for many there is still a stigma attached to having a communicable disease such as HIV/AIDS.

However, as educated individuals, it is our responsibility to set an example for others by demonstrating appropriate attitude when interacting with someone with HIV in the workplace.

Click on the cards below to examine some of the anxieties people might feel about others with HIV/AIDS in the workplace:

The following guidelines may help you develop a proper attitude when encountering those who have HIV or AIDS:

- ▶ If you discover someone has HIV/AIDS be supportive, but allow the person to function normally without being singled out.
- ▶ Include the person in the same work and social activities as always, whenever possible.
- ▶ Let the person decide whom to tell about their HIV/AIDS.
- ▶ Do not spread rumors or gossip about someone with HIV/AIDS.
- ▶ If a coworker is absent from work due to treatment, encourage others to plan and restructure work flows until he/she returns to work.

- ▶ A coworker may have a family member or life partner with HIV/AIDS. Be supportive.
- ▶ Respect the person's privacy. Their medical information is confidential, as is yours.

As an educated individual, you can help others by doing the following:

- ▶ Encourage your family and friends to learn about HIV prevention.
- ▶ Promote HIV/AIDS education.
- ▶ Demonstrate consideration and compassion for people affected by HIV.
- ▶ Continue to treat coworkers and friends affected by HIV just as you always have.
- ▶ Get involved by starting or volunteering with an organization whose focus is HIV/AIDS.
- ▶ Know your HIV status. Remember, early intervention reduces risk of transmission to others and increases the length and quality of life for someone with HIV.

## **Conclusion of HIV & AIDS**

We have discussed quite a bit of information regarding HIV and AIDS in this section of the module. At this point, you should be able to:

- ▶ relate the history of both HIV and AIDS.
- ▶ describe how HIV is and is not transmitted.
- ▶ distinguish between HIV and AIDS and explain how HIV develops into AIDS.
- ▶ recognize the importance of early intervention for HIV-positive persons.
- ▶ outline proper guidelines for preventing the spread of HIV and AIDS between individuals.
- ▶ describe the various methods of testing.
- ▶ summarize methods for treating HIV and AIDS.



# HIV/AIDS & Other Communicable Diseases

## Communicable Diseases

HIV and AIDS are not the only infections and diseases that a cosmetologist has the potential to encounter in the workplace. So, now we will spend some time covering communicable diseases other than HIV/AIDS. First, we will define what a communicable disease actually is.

**A communicable disease is a contagious illness that is a result of the infection of a virus, bacteria, fungi, protozoa, or parasites.**

There are many kinds of infectious diseases that affect people across the world. In this section of the module, we will cover the following communicable illnesses that are relevant to the field of cosmetology:

- ▶ Ringworm
- ▶ Head Lice
- ▶ Tuberculosis
- ▶ Viral Hepatitis

## Ringworm

The first communicable disease that we will cover is ringworm. Ringworm is a disease caused by the tinea fungus—not by an actual worm as the name might suggest). This disease affects the scalp and other parts of the skin. On the scalp, ringworm may appear as bald patch of scaly skin. On other parts of the skin, it can appear as a ring-shaped rash. This rash is often red and may possibly be itchy. Ringworm is spread through direct contact with an infected person or an infected person's personal items. While ringworm is common and can affect anyone, it occurs mostly in children.

Ringworm thrives in warm, moist areas. It is more likely to occur when you are wet from sweating or when you have a minor injury on your scalp, skin, or nails.

Ringworm can be transmitted from one person to another by:

- ▶ Touching someone who has the infection.
- ▶ Contacting items contaminated by the fungus including grooming tools, unwashed clothing and shower or pool surfaces.

Symptoms of this disease include:

- ▶ Itchy, raised, red and scaly patches that may blister and ooze.
- ▶ Patches in the shape of a ring with sharply defined, red edges and normal colored skin towards the center.
- ▶ Bald patches on the scalp.
- ▶ Thick, discolored, or crumbly finger/toenails.

So how is ringworm diagnosed? A healthcare provider can make a diagnosis by examining the skin. Sometimes a blue light, also called a Wood's lamp, is used in a dark room to detect the ringworm. If the fungus is present, it will glow under the light.

Ringworm can be treated by applying an over-the-counter antifungal or drying powder or lotion for four weeks. Antifungal pills may be prescribed for severe cases, or cases that occur in a person's hair. Additionally, a doctor may prescribe antibiotic pills to treat a skin infection or staph that was caused due to scratching the affected area.

Cosmetologists frequently work with clients and their hair, so it is important for all cosmetologists to be aware of the symptoms of this disease in order to best protect themselves and their clients. There are certain ways that an individual or cosmetologist may prevent the spread of ringworm within the workplace. These types of precautions include:

Keeping skin and feet clean and dry.

- ▶ Shampooing regularly, especially after haircuts.
- ▶ Not sharing clothing, towels, headgear, or personal care items.
- ▶ Thoroughly cleaning and drying personal care items after use.

## Head Lice

Another common disease that cosmetologists have the potential to encounter in their work environment is head lice. Adult head lice infest the head, eyebrows, eyelashes, and neck of an individual. They are most commonly found on the scalp behind the ears and near the neckline at the back of the head. These lice attach their eggs to the base of the hair shaft. Though they can be found in anyone, head lice most frequently occur among school children. This type of lice does not spread disease but can cause itching that may result in a secondary skin infection.

Head lice are usually transmitted through head-to-head contact with an infected individual. Occasionally, head lice are spread by sharing clothing or articles worn or used on the head, such as hats, hair brushes, and barrettes. That is why cosmetologists are always required to properly sterilize their combs, brushes, and any other tools that may come in contact with a client's hair before they are used on another client.

Symptoms of head lice may include things such as:

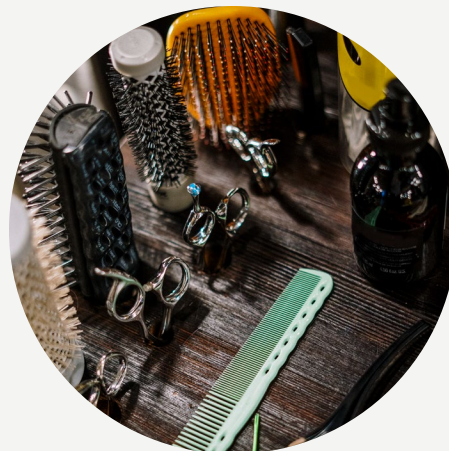
- ▶ A tickling feeling of something moving in the hair.
- ▶ Itching caused by an allergic reaction to the bites of the head lice.
- ▶ Irritability and difficulty sleeping as head lice are most active in the dark.
- ▶ Sores on the head caused by scratching.

Head lice can usually be discovered by using a magnifying glass and fine-toothed comb to find live adult lice on the scalp or hair. If live lice cannot be found, finding eggs attached within 1/4 inch of the hair base strongly suggests that a person should be treated. If no live larvae or lice can be seen, and only eggs are found, it typically indicates that the infestation is old and does not need to be treated.

Treatment for head lice is recommended for anyone who has an active infestation and is also recommended for anyone who shares a bed with someone with an active infestation. These lice can be killed through application of a lice medicine called a pediculicide. This should be used following the directions that accompany the medication. This medication may be over the counter or may also be a prescription drug called malathion.

According to the CDC, infestations of lice can be prevented utilizing the following methods:

- ▶ Avoid head-to-head and hair-to-hair contact.
- ▶ Do not share clothing such as hats, scarves, coats, sports uniforms, hair ribbons, or barrettes.
- ▶ Do not share combs, brushes, or towels.
- ▶ Kill lice on a comb or brush used by an infected person by soaking the grooming tool in hot water (at least 130°F) for 5-10 minutes.
- ▶ Do not lie on beds, couches, pillows, carpets, or stuffed animals that have recently been in contact with an infected person.
- ▶ During the two days before treatment, machine wash and dry clothing, bed linens, and other items worn or used by an infected person. This laundry cycle should use hot water, and the drying cycle should use high heat.
- ▶ Dry-clean clothing and items that cannot be washed or seal them in a plastic bag and store for two weeks.
- ▶ Vacuum floors and furniture where infested person had close contact.



**Tools such as combs and brushes must always be properly sterilized between clients to prevent the spread of head lice.**

Remember that head lice have a hard time attaching to smooth surfaces and cannot live long without a human host. For this reason, it is not useful to use fumigant sprays or toxic fogs in an attempt to eliminate the lice.

## Body Lice

Cosmetologists may also encounter body lice. Adult body lice are between 2.3 and 3.6 millimeters long (about the size of a sesame seed) and are usually tan to grayish white in color. They live and lay eggs on clothing and bedding but move to the skin to feed. The eggs are usually observed on the seams of clothing or on bedding. Body lice frequently occur among people who live under conditions of crowding and poor hygiene. According to the CDC, infestation of body lice in the United States tends to occur only when people do not have access to regular (at least weekly) bathing and changes of clean clothes. This may include such people as the homeless and the transient. Unfortunately, body lice are known to spread disease.

Here are some common questions and answers about body lice:

### How can body lice spread?

Body lice are spread through:

- ▶ Direct physical contact with a person who has body lice.
- ▶ Contact with clothing, bedding or towels used by someone who has body lice.

Unlike head lice, which are harmless and only cause irritation to an individual, body lice can actually carry and spread infections. These lice can spread diseases such as:

- ▶ Epidemic typhus.
- ▶ Trench fever.
- ▶ Louse-borne relapsing fever.

Although these diseases are not widespread, outbreaks can occur where people live together in unsanitary conditions. You cannot get body lice from pets. The lice must feed on human blood. If the lice fall off a person, they will die within 5-7 days at room temperature.

#### What are the symptoms of body lice?

Symptoms of body lice may include:

- ▶ Intense itching that can lead to sores on the body.
- ▶ Rashes caused by an allergic reaction to the lice bites.
- ▶ Thickened and discolored areas of skin in a person's midsection due to prolonged infestation.

#### How is a person diagnosed with body lice?

Diagnosis is made by finding eggs and crawling lice on the seams of clothing. Although the lice are large enough to be seen with the eyes, a magnifying glass is often used to detect the eggs.

If someone is indeed infected by body lice, it is recommended that you:

- ▶ Do not share clothing, bedding and towels used by the infested person.
- ▶ Machine wash and dry clothing, bed linens and other items worn or used by an infested person.
- ▶ The laundry cycle should use hot water and the drying cycle should use high heat.
- ▶ Dry-clean any clothing and items that cannot be washed or seal the items in a plastic bag and store them for two weeks.

To treat body lice, individuals are usually encouraged to improve their personal hygiene, including taking at least weekly showers and changing into clean clothes and bedding. Sometimes a person will additionally need to be treated with a pediculicide. However, this form of treatment is not always necessary.

## Tuberculosis

According to the CDC, tuberculosis (more commonly known as TB) is one of the world's deadliest diseases. It is also one of the most prevalent. One fourth of the world population is infected and, each year, over 10.0 million people around the world become sick with TB. In the United States, a total of 8,916 TB cases (a rate of 2.7 cases per 100,000 people) were reported in 2019.

So what exactly is tuberculosis? TB is a contagious disease caused by the bacterium *Mycobacterium tuberculosis*. This disease primarily attacks a person's lungs, but it can also affect the kidney, spine, and/or brain. When left untreated, TB can be fatal.

TB is spread from one person to another through the air. This means that when a person with active TB coughs, sneezes, speaks, or sings, the bacteria can be released into the air and then inhaled by someone else nearby. TB cannot be spread, however, by: kissing, sharing a toothbrush, sharing bed linens, sharing toilet seats, sharing food/drink, or by shaking someone's hand.

While TB is a contagious disease, it's important to know that not everyone who becomes infected with TB will get sick. When a person is infected but does not develop symptoms, it is called a latent TB infection.

**Facts About Latent TB Infections**

- ▶ The only way to detect a latent TB infection is to do a TB skin test or special TB blood test.
- ▶ A person with a latent TB infection does not feel sick or have symptoms.
- ▶ A person with a latent TB infection is not contagious.
- ▶ Many people with a latent TB infection will never actually develop the TB disease.
- ▶ A person may find themselves to be sick and contagious if the TB bacteria become active and then multiply in the body.
- ▶ A person who has a latent TB infection must be treated in order to prevent the infection from becoming active TB disease.

TB disease, unlike a latent TB infection, occurs when the TB bacteria become active. This happens when a person's immune system cannot stop the TB bacteria from growing. Some people get sick quickly because their immune system could not fight off the bacteria, while others may get sick years later, when their immune system becomes weakened due to other reasons.

**Facts About TB Disease**

- ▶ TB disease will make a person sick.
- ▶ A person with TB disease is contagious.
- ▶ A person with HIV is more at risk of developing TB because they have a weakened immune system

Who is at risk for developing this disease? According to the CDC those who are at high risk for developing TB disease include:

- ▶ People with HIV.
- ▶ People who became infected with TB bacteria in the last two years.
- ▶ Babies and young children.
- ▶ People who inject illegal drugs.
- ▶ People who are sick with other diseases that weaken the immune system.
- ▶ Elderly people.
- ▶ People who were not treated correctly for TB in the past.

**Symptoms of TB**

A person with TB disease may exhibit any of the following symptoms:

- ▶ A bad cough that lasts 3 weeks or longer
- ▶ Chest pain
- ▶ Coughing up blood or sputum

- ▶ Weakness or fatigue
- ▶ Weight loss
- ▶ Loss of appetite
- ▶ Fever
- ▶ Chills
- ▶ Night sweats

The chart below outlines the differences between latent TB infection and TB disease.

	Latent TB Infection	TB Disease
Symptoms	No	Yes
Contagious	No	Yes
Detected by Skin Test	Yes	Yes
Detected by Blood Test	Yes	Yes
Detected by X-Ray	No	Yes
Detected by Sputum Smear	No	Yes
Requires Treatment	Yes	Yes

### Tuberculosis Testing

TB testing can be performed by a doctor or local health department. There are two different types of TB tests: a skin test and a blood test. A positive result for these tests only indicates that the person has been infected with the TB bacteria; it does not indicate whether the person has a latent TB infection or the TB disease. If a person does test positive, a chest x-ray and sputum (phlegm) sample are then required to determine whether the person has the TB disease.

According to the CDC, a person should be tested for tuberculosis if:

- ▶ They have spent time with a person known or suspected to have active TB disease.
- ▶ They have HIV or another condition that weakens the immune system.
- ▶ They have symptoms of active TB disease.
- ▶ They are from a location such as some countries in Latin America, the Caribbean, Africa, Asia, Eastern Europe, and Russia where active TB is more common.
- ▶ They live somewhere in the U.S. where active TB disease is common such as homeless shelters, migrant farm camps, prisons, jails, nursing homes, etc.
- ▶ They inject illegal drugs into their system.

Both the latent TB infection and TB disease require treatment. People with the latent TB infection may have the potential to develop TB in the future. For this reason, these people should be treated with a drug called isoniazid (INH). The purpose of this particular drug is to kill the TB bacteria in the body. INH is usually taken for nine months, however, children and people with HIV may be required to take the drug for a longer period of time.



People with TB disease, on the other hand, should be treated with several drugs for anywhere between 3 and 9 months. If a person with TB disease stops taking the drugs too soon, the bacteria can become resistant and this will, in turn, make the disease harder to treat.

The most important way to stop the spread of TB is for an infected person to cover their mouth and nose when they cough. It is also important for a person who is being treated for TB to take all of their medication(s) as directed by their healthcare provider. Some strains of TB have the potential to become stronger if they are not completely killed by medication.

According to the CDC, TB is one of the leading causes of death among people infected with HIV. This is because, as we stated earlier in the lesson, people with HIV are more likely to get infections and diseases because of their weakened immune systems. However, a person with HIV who either has the latent TB infection or active TB disease can be treated to prevent damage to the body.

#### Facts About TB and HIV

- ▶ Without treatment, HIV and TB can cause damage together and shorten the life of an infected person.
- ▶ A person with both latent TB infection and HIV is more likely to develop TB disease than someone without HIV.
- ▶ Living with both HIV and TB disease together is an AIDS-defining condition.

# HIV/AIDS & Other Communicable Diseases

## Introduction to Viral Hepatitis

Later in the course, we will discuss hepatitis B more in depth as it relates to the field of cosmetology. However, for now, we will now discuss it briefly along with two other forms of hepatitis.

According to the CDC, as many as 96,800 new infections of viral hepatitis occur in the United States each year. After declining for several years, rates of both infections and deaths have recently increased significantly. More than 3 million people in the United States are living with chronic hepatitis, and more than half of these individuals do not know that they are infected.

Hepatitis means “inflammation of the liver.” While heavy alcohol use, toxins, and some medications and medical conditions can cause hepatitis, it can also be caused by viral infections. There are several types of viral hepatitis. The most common types of hepatitis are:

- ▶ hepatitis A
- ▶ hepatitis B
- ▶ hepatitis C

Hepatitis B and C are major contributing factors to liver cancer and the prime reason that a person will need to obtain a liver transplant. While the rates of other types of cancer are going down, liver cancer rates are increasing along with the incidence of viral hepatitis infections.

## Symptoms of Hepatitis

The symptoms of each strain of viral hepatitis vary. However, common symptoms an individual who acquires hepatitis may initially experience include:

- ▶ fatigue,
- ▶ headache,
- ▶ tenderness in the upper right abdomen,
- ▶ sore muscles and joints,
- ▶ loss of appetite,
- ▶ changes in sense of taste and smell,
- ▶ nausea,
- ▶ vomiting,
- ▶ diarrhea,
- ▶ low-grade fever, and
- ▶ malaise.

As this disease progresses, symptoms tend to increase. More severe symptoms may develop, such as:

- ▶ jaundice (yellowish skin and eyes),
- ▶ darkened and/ or foamy urine, and
- ▶ light-colored stool.

### Hepatitis A

Hepatitis A is caused by the hepatitis A virus and results in acute liver disease. This means that, while the disease can last anywhere between a few weeks and several months, hepatitis A does not lead to chronic infection.

According to the CDC, hepatitis A spreads through:

- ▶ ingestion of fecal matter (even microscopic amounts).
- ▶ close person-to-person contact.
- ▶ ingestion of contaminated food or drinks.
- ▶ The hepatitis A vaccination is typically recommended for all children starting at age 1.

### Hepatitis B

A hepatitis B infection may last only a few weeks or may develop into a serious, long-term illness. If it develops into a more serious condition, hepatitis B can lead to liver disease or liver cancer.

According to the CDC, hepatitis B is spread through contact with infectious blood, semen, and other body fluids by:

- ▶ having unprotected sex with an infected person.
- ▶ sharing contaminated needles to inject drugs.
- ▶ passing from infected mother to newborn.

The hepatitis B vaccination is typically recommended for all infants, older children, and adolescents who have not been vaccinated previously. As we will discuss later in this course, it is also recommended for cosmetologists.

### Hepatitis C

A hepatitis C infection can be cured with medication. If left untreated, however, hepatitis C often develops into a chronic disease, which may lead to cirrhosis of the liver (scarring of the liver tissue) as well as liver cancer. In fact, the CDC estimates that more than half of the those who become infected with the hepatitis C virus will develop a chronic infection. This is why it is important for anyone who suspects they may have hepatitis C to be tested as soon as possible.

**Modes of Transmission**

According to the CDC, Hepatitis C:

- ▶ is most likely to spread as a result of direct, through-the-skin exposure to blood with an infected person. This type of spread occurs mostly by means of injecting drugs into the system.
- ▶ may be spread by sharing personal items such as razors and toothbrushes.
- ▶ can survive outside of the body at room temperature, on environmental surfaces, for at least 16 hours. Outside of the body, the virus can survive no longer than 4 days.
- ▶ may be transmitted when poor infection-control practices are used during tattooing or piercing.

Hepatitis C is NOT spread from person to person by any of the following methods:

- ▶ Sharing eating utensils
- ▶ Breastfeeding
- ▶ Hugging
- ▶ Kissing
- ▶ Holding hands
- ▶ Coughing
- ▶ Sneezing
- ▶ Shared food or water
- ▶ Insect bites

Risk of transmission from unprotected sexual contact is believed to be low. Remember that hepatitis C usually spreads through contact with blood from an infected person.

**Treatment of Hepatitis C**

Currently there is no vaccine for hepatitis C. However, treatments are now available that can cure the disease within 12 weeks.

If they have not already done so, people living with chronic hepatitis C should be vaccinated against hepatitis A and B. As an additional precaution, people with this strain of the disease should avoid consuming alcohol. They should also be tested for HIV and monitored regularly for signs of liver disease. It is important for anyone living with hepatitis C to check with their healthcare provider before taking prescription pills, over-the-counter medications, and supplements.

Additionally, according to the CDC, in one recent year almost 16,000 people died from hepatitis C and liver diseases related to the strain. Remember that many people who are infected with hepatitis C will not actually visibly display any symptoms of the disease. In many cases, no symptoms of the disease will manifest themselves until liver problems also begin to occur. Even people with hepatitis C who have no symptoms are not hepatitis-free; they still have the potential to spread the virus to others around them.

Hepatitis C is spread when blood from a person infected with the hepatitis C virus enters the body of someone who is not infected. Therefore, the best way to prevent the spread of this virus as well as HIV/AIDS and other communicable diseases is to avoid sharing needles or other personal items that may be contaminated with blood from any other individual, whether you suspect that they have hepatitis or not.

According to CDC recommendations, a person living with hepatitis C should not be excluded from work, school, play, child care, or other situations simply because they have the disease. There is currently no evidence to suggest that individuals can get hepatitis C from food handlers, teachers, or other service providers through normal contact with them. hepatitis C spreads only through blood-to-blood contact. As we learned with HIV and AIDS, it is important that everyone be educated on the spread of these diseases, not only to prevent them from spreading, but also to prevent discrimination in the workplace and elsewhere.

A hepatitis C infection is challenging enough for a person who was healthy before contracting the disease. When someone who is already living with another disease, such as HIV, contracts hepatitis as well, the situation is much more serious because it can lead to more rapid liver damage.

A co-infection of hepatitis C and HIV is more common in people who inject drugs. It is estimated that between 62 and 80 percent of HIV-positive people who use injection drugs are infected with the hepatitis C virus as well. Such coinfections may affect treatment of both diseases. However, treatment can still be effective when managed by a knowledgeable and experienced healthcare provider.

If you happen to be in a work environment in which a blood spill occurs, the CDC recommends cleaning the spill using a dilution of one part household bleach to 10 parts water. The same holds true for anywhere that there is a dried blood. Dried blood may not seem as dangerous to workers, but it also has the potential to spread disease. Always wear gloves when dealing with any potentially harmful chemical, including when you are cleaning up spilled blood.

### Communicable Diseases and Florida Law

For cosmetologists in Florida, staying home when you are sick and declining service to clients who are visibly ill is not only good hygiene, it's the law!

According to Florida Administrative Code, 61G5-20.007:

*No person engaged in the practice of cosmetology or a specialty in a salon shall proceed with any service to a person having a visible disease, pediculosis, or open sores suggesting a communicable disease, until such person furnishes a statement signed by a physician licensed to practice in the State of Florida stating that the disease or condition is not in an infectious, contagious or communicable stage.*

*No cosmetologist or person registered to practice any specialty in Florida, who has a visible disease, pediculosis, or open sores suggesting a communicable disease, shall engage in the practice of cosmetology or any specialty, until such cosmetologist or registrant obtains a statement signed by a physician licensed to practice in the State of Florida stating that the disease or condition is not in an infectious, contagious, or communicable stage.*



**Appropriate gloves should always be worn when cleaning up blood and other potentially harmful substances.**

## Communicable Diseases Conclusion

In addition to learning about the history of HIV and AIDS, we have spent a significant amount of time in this module discussing various communicable diseases that a cosmetologist (or truly any individual) may encounter within their work establishment. Specifically, we have covered:

- ▶ The definition of a communicable disease.
- ▶ Ringworm—How it is spread, who can contract it, symptoms, treatments, and means of prevention.
- ▶ Head lice—How it is spread, who can contract it, symptoms, treatments, and means of prevention.
- ▶ Body lice—How it is spread, who can contract it, symptoms, treatments, and means of prevention.
- ▶ Tuberculosis—How it is spread, who can contract it, symptoms, treatments, and means of prevention.
- ▶ Viral hepatitis
  - ▶ The three most common strains of the virus: hepatitis A, B, and C.
  - ▶ How it is spread, who can contract it, symptoms, treatments, and means of prevention
  - ▶ Some common misconceptions as they pertain to these communicable diseases.
  - ▶ How HIV has the potential to interact with these other communicable diseases.

By now, you should be quite familiar with the various types of infections and diseases that may spread throughout a work environment from person to person. But what can be done to prevent these infections and diseases from spreading in your salon or cosmetology establishment? This is what we will cover in our final section of this module.



# HIV/AIDS & Other Communicable Diseases

## Practicing Standard Precautions

In this module so far, we have covered the various communicable diseases and infections relevant to your work as a cosmetologist. Each of these diseases can have potential serious health consequences. We have also learned that many people who have these diseases may show no signs of infection or any indication that they may be carrying a disease. Thanks to advances in medical treatment, many of these people are able to live and work longer in normal environments.

But in addition to these diseases, it is important to prevent the spread of common illnesses such as colds and the flu that will inevitably occur in the workplace. So how exactly do you protect yourself and others in from these illnesses? The simplest answer to this is by practicing standard precautions.

Standard precautions are the techniques used in the workplace to protect workers and their clients from infections caused by the spread of blood or any other body fluid.

There are three main types of precaution you, as a cosmetologist, can use to protect yourself and others against infections: barrier protection, personal hygiene, and disinfection.

### Barrier protection

Barrier protection is the use of a physical shield between you and your client. The proper use of barrier protection can include some of the following:



#### Gloves

Always wear gloves whenever you come into contact with your clients. Also be sure to wear the appropriate gloves whenever there is a possibility of contact with body fluids. This includes during tasks such as:

- ▶ Waxing
- ▶ Pedicures/manicures
- ▶ Facials
- ▶ Tweezing

#### Masks

Wear a mask whenever there is a possibility of splashing or splattering of body fluids.

#### Smocks

Both you and your client should wear smocks if clothing or skin are likely to come in contact with chemicals or other contaminants.

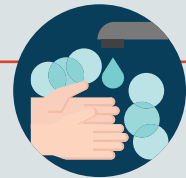
Dry your hands using a clean towel or air dry.

It may seem elementary to discuss handwashing, which most people learn when they are children in elementary school. However, a majority of the many communicable diseases covered in the module can be prevented simply by returning to the basics of hygiene.

We will cover more about handwashing in our section on sterilization and sanitation. Remember that proper handwashing literally can save your life.

### Personal Hygiene

Because cosmetologists typically work in close proximity of their clients and other employees, it is also important to practice proper personal hygiene both individually as in their work establishment. This proper hygiene can include any or all of the following:



- ▶ Do not go to work if you have symptoms of an illness such as a cold, the flu, a stomach virus, or strep throat.
- ▶ Politely decline service to clients who show symptoms of a contagious illness such as the ones listed above. You may then offer to reschedule their appointment for a time when they are feeling better.
- ▶ Avoid direct contact with clients and any equipment that may be potentially contaminated if you have open lesions, dermatitis, or another skin rash on the surface of your skin.
- ▶ Wash your hands:
  - ▶ before you come in contact with a client.
  - ▶ after you come in contact with a client.
  - ▶ after you come in contact with a source of possible contamination.
  - ▶ after you remove gloves.
- ▶ Use the inside of your arm—not the palm of your hand—to cover your mouth when you cough or sneeze, so that you may prevent the spread of germs.
- ▶ Avoid touching your eyes, nose, or mouth in the workplace.
- ▶ Keep your work station clean.

### Handwashing

Proper hand washing is one of the most effective ways to prevent the spread of many types of infections and illnesses. That is why it is important to wash your hands at home, at work, and everywhere else. When and how to wash your hands may seem obvious, but it's important to know the proper technique because clean hands prevent germs from spreading from one person to another, and throughout an entire community or work environment. However, it is not only hands that should be washed; cosmetologists should also wash any exposed part of their arms.

We have already gone over some examples of when cosmetologists should wash their hands, such as before and after working with a client and after wearing gloves. Here are some additional circumstances when it is important to wash your hands:

Before, during, and after preparing food

- ▶ Before eating food
- ▶ After using the restroom
- ▶ After changing diapers or cleaning up a child who has used the restroom
- ▶ Before and after caring for someone who is sick
- ▶ After blowing your nose, coughing, or sneezing
- ▶ After touching garbage
- ▶ Before and after treating a cut or wound

The CDC recommends that everyone wash their hands with soap and water. A cosmetologist's work establishment is required to have both soap and water readily available to use. If, for some reason, soap and water are not available, the CDC recommends that a cosmetologist (or any other individual) use an alcohol-based hand sanitizer that contains at least 60% alcohol.

Hands should always be lathered with antibacterial soap, before being washed thoroughly with soap and water. The steps to proper hand washing are as follows:

1. Wet your hands with clean running water (warm or cold) and apply soap.
2. Rub your hands together to make lather and scrub them well. Be sure to scrub the backs of your hands, between your fingers, and under your nails).
3. Continue rubbing your hands for at least 20 seconds.
4. Rinse your hands well under running water.
5. Dry your hands using a clean towel or air dry.

It may seem elementary to discuss handwashing, which most people learn when they are children in elementary school. However, a majority of the many communicable diseases covered in the module can be prevented simply by returning to the basics of hygiene

We will cover more about handwashing in our section on sterilization and sanitation. Remember that proper handwashing literally can save your life.

### Disinfection

Disinfection is another important practice that will keep your cosmetology establishment clean and sanitary for both yourself and your customers. Disinfection refers to the removal of infectious agents from surfaces including the skin, your tools, and your work station. There are three levels of disinfection:



**Using an Antiseptic**

An antiseptic is the weakest out of the three methods of disinfection listed above. The purpose of antiseptics is to control the growth of bacteria and germs. Note, however, that antiseptics do not kill bacteria. These are not recommended for disinfecting equipment (tools such as clippers, scissors, etc.), but are gentle enough to be used on the skin. Various examples of an antiseptic include:

- ▶ Alcohol - A 50% to 60% solution can be used on the skin
- ▶ Iodine - A tincture of iodine, 2% U.S.P. can be used on the skin
- ▶ Hydrogen Peroxide - A 3% to 5% solution can be used for minor wounds

**Using a Disinfectant**

Disinfectants are actually stronger than antiseptics. They are capable of destroying germs and preventing them from multiplying. Disinfectants can kill a variety of viruses, fungi, and dangerous bacteria. In the workplace it is recommended that a hospital-level disinfectant approved by the EPA is used to clean equipment, work areas, and spills of blood or other body fluids. Some examples of a disinfectant include:

- ▶ Lysol can be used out of the container to wipe surfaces and floors.
- ▶ Quats (Quaternary ammonium compound) can be used to disinfect tools by soaking them in it for anywhere between 10 and 15 minutes. Quats can also be used to clean surfaces and work areas.

**Sterilizing**

We have previously discussed methods of practicing standard precautions that were beneficial to the work environment. We will now discuss the most powerful type of disinfectant that cosmetologists can utilize—sterilization.

Sterilization is the strongest level of disinfection because it is the process of destroying all bacteria, whether it is harmful to people or not. Now we will discuss some typical methods of sterilization that can be utilized within the cosmetology environment. The most common methods of sterilization used in the workplace include:

- ▶ Boiling—Towels, linens and heat/water resistant instruments can be submerged in water that is heated to 212°F.
- ▶ Steaming—Special equipment can be used to steam-sterilize equipment. The manufacturer's instructions should be followed for this method in order for it to be effective.
- ▶ Chemical Solutions—A hospital-level disinfectant can be used to sterilize equipment. To sterilize, the solution should be mixed according to sterilization instructions on the container, and the instruments should be immersed for an instructed length of time (typically 10 minutes).

**Guidelines for Disinfecting Specific Tools**

In a later section regarding sanitation and disinfection, we will reiterate some of the principles that you have just learned. However, since disinfection and sanitation are integral parts of the cosmetologist's work environment, the sections below introduce various methods for disinfecting specific tools within your workplace.

In Florida, all salons must be equipped with and use disinfecting solutions with hospital-level or EPA-approved

disinfectant adequate to allow for disinfecting practices. A wet disinfection container is any receptacle that contains a disinfectant solution and is large enough to allow for complete immersion of the equipment or tool. A cover for the wet disinfection container must be provided. For complete details about Florida salon sanitation requirements, see Florida Administrative Code, 61G5-20.002.

### Disinfecting Combs and Brushes

Combs and brushes are important in the field of cosmetology and have specific guidelines governing their disinfection practices. In Florida for example, it is prohibited to use a brush, comb, or other article on more than one patron without disinfection in between.

To properly clean these tools:

- ▶ Remove hair from combs and brushes.
- ▶ Clean combs and brushes with soap and water.
- ▶ Fill a clean, sterilized container with a solution of hospital-level disinfectant as directed by the product's instructions.
- ▶ Immerse combs and brushes in the solution for a minimum of 20 minutes or as otherwise instructed.
- ▶ Remove combs and brushes and rinse in clean water.
- ▶ Dry thoroughly with a clean towel.
- ▶ Store in a clean, closed cabinet or container until needed.



**Like other cosmetology tools, combs and brushes must be properly cleaned and disinfected regularly.**

### Disinfecting Metal Tools

Now that we have discussed disinfecting important implements such as combs and brushes, we will cover some other important tools within the work environment—metal tools. Metal tools such as scissors, razors, etc. have specific guidelines in regards to cleaning. The process of disinfection for these tools includes the following steps:

- ▶ Fill a clean, sterilized container with a solution of hospital-level disinfectant as directed by the product's instructions.
- ▶ Immerse non-electric metal tools, such as shears and tweezers, in the solution for a minimum of 10 minutes or as otherwise instructed.
- ▶ Remove tools and rinse in clean water.
- ▶ Dry thoroughly with a clean towel.
- ▶ Store disinfected tools in a clean, closed cabinet or container until needed.
- ▶ If the tools could be damaged from immersing in a solution, wipe cutting blades and/or other areas of contact with a hospital-level disinfectant.

**Important:** Never reuse needles used for tattoos or piercing. Discard these items in a puncture resistant sharps container designed specifically for this purpose.

### Disinfecting Manicure and Pedicure Tools

Cosmetologists frequently use tools for manicures and pedicures in addition to dealing with tools for hair. Tools and devices such as nail files and foot basins have guidelines for cleaning that maintain the health and safety of both cosmetologists and clients. General guidelines to follow regarding manicure tools include:

- ▶ Scrub nail files to remove debris before immersing them in a hospital-level disinfectant that is used according to the product's instructions.
- ▶ Throw away items that cannot be disinfected—such as emery boards, cotton balls, and orange wood sticks—after each manicure.

Diseases can be spread through a variety of means, and it is important that you take all precautions possible to protect yourself and your clients from infection. The following rules apply to any pedicure equipment that holds water, including sinks, bowls, basins, pipeless spas, and whirlpool spas.



**Tools such as emery boards that cannot be properly disinfected must be discarded after each manicure.**

### When to Clean Pedicure Equipment That Holds Water:

#### After Each Client

- ▶ Clean with a low-foaming soap or detergent with water to remove all visible debris.
- ▶ Disinfect with an EPA registered hospital level disinfectant used according to manufacturer's instructions for at least 10 minutes.
- ▶ Remove foot plates on pipeless spas to clean, rinse, and wipe dry the areas beneath.

#### At the End of Each Day

- ▶ Disinfect all filter screens in whirlpool pedicure spas or basins.
- ▶ Remove all visible debris in the screen and inlet, and clean with a low-foaming soap or detergent and water.
- ▶ On pipeless systems, remove jet components or foot plates, clean, and remove any debris.
- ▶ Completely immerse screens, jets, or foot plates in an EPA registered, hospital level disinfectant used according to manufacturer's instructions.
- ▶ After replacing screens, jets or foot plates, flush the system with warm water and low-foaming soap for 5 minutes before rinsing and draining.

#### Once Each Week

- ▶ Fill the basin with a solution of water containing one teaspoon of 5.25% bleach for each gallon of water.
- ▶ All the solution to circulate through the spa system for 5-10 minutes and then to sit in the basin for at least 6 hours.



- ▶ Drain and flush the system before using it again.
- ▶ Maintain a log book with the dates and times of on which all pedicure equipment is cleaned. This book must be kept in the pedicure area of a salon and be available for review upon request by a client or Department of Health inspector.

### **Additional Salon Guidelines**

- ▶ To prevent accidents, the workplace should be well lit.
- ▶ The air should be well ventilated to prevent the concentration of potentially toxic chemicals.
- ▶ Keep floors clean by:
  - ▶ Sweeping away hair and other waste from the floor often.
  - ▶ Storing waste in a closed container.
- ▶ Do not use objects dropped on the floor until they have been properly disinfected.
- ▶ Do not place tools such as combs or hairpins in your mouth.
- ▶ Do not store combs or other tools in your pocket.
- ▶ Keep premises free of vermin such as rodents and flies.
- ▶ Do not allow animals in salon, except fish in closed aquariums and animals specifically trained to assist someone with a disability.
- ▶ Do not eat at your work station.

### **Module Conclusion**

Now that you have completed this lesson, you should have more knowledge of HIV and AIDS. You learned how HIV and AIDS are contracted, how they are transmitted, and how they can be prevented. We have discussed what happens to an HIV-positive patient, including: what types of treatment regimens they may be given, what tests they will encounter, and how to adhere to a treatment regimen. We've also discussed proper attitudes regarding those who have these diseases, and what HIV and AIDS patients can do in order to live functional and productive daily lives.

Additionally, we have discussed what other kinds of communicable diseases may be found in the workplace. Finally, we concluded our discussion on HIV and AIDS by covering how cosmetologists may protect both themselves and their clients from being infected by any disease or illness in the workplace. We presented methods for properly sterilizing and sanitizing the tools and equipment cosmetologists encounter on a daily basis.

**Module 2:**

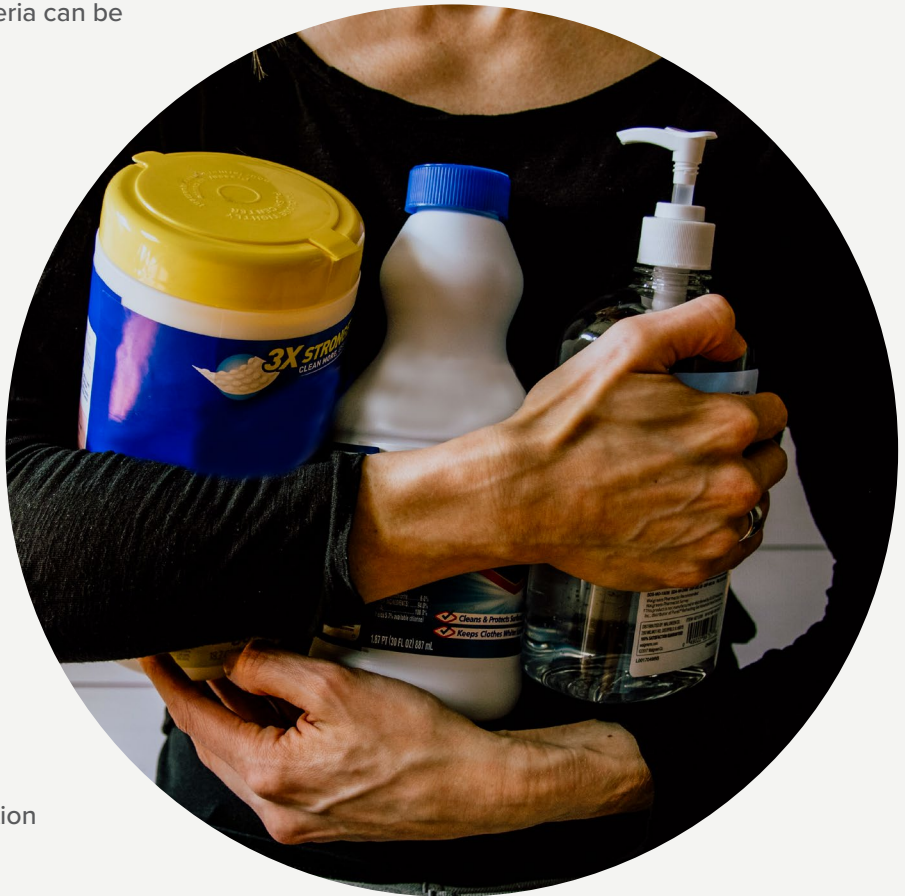
# Sanitization & Sterilization

**Module Objectives**

Next, we will discuss universal sanitation and sterilization precautions, how to distinguish between disinfectants and antiseptics, how to sanitize hands, and how to disinfect tools used in the practice of cosmetology.

In general practice, all places where cosmetology or any other sort of work is practiced must adhere to certain standards of cleanliness. Throughout this lesson, we will:

- ▶ Briefly discuss bacteria as it pertains to the workplace, including various ways that it may be spread, as well as ways in which the spread of bacteria can be controlled.
- ▶ Discuss sanitation and sterilization as it pertains to cosmetology establishments.
- ▶ Focus on some general standards of cleanliness that are necessary for establishments and employees in a workplace.
- ▶ Define what a disinfectant is, and what an antiseptic is, as well as the guidelines for use regarding both.
- ▶ Focus on bloodborne pathogens in the workplace, including general housekeeping preventions, a brief discussion regarding Hepatitis B, as well as a discussion regarding an exposure control plan.
- ▶ Discuss some specific requirements for cleanliness as outlined by the United States Environmental Protection Agency.



## Overview of Safety Guidelines and Services

The Florida Board of Cosmetology is part of the Department of Business and Professional Regulation. The Board regulates the profession of cosmetology (including skin and nail care) as well as the establishments (salons, shops, studios, spas, etc.) where these services are performed.

Anyone who provides the following services to consumers for a fee must be licensed by the Board:

- ▶ Hairdressing and styling
- ▶ Haircutting
- ▶ Manicuring
- ▶ Removing unwanted hair
- ▶ Skin care
- ▶ Application of cosmetics

In order to be licensed, individuals must complete an approved number of hours of coursework and practical training and pass a written and practical (hands-on) test.

The Board licenses the salons where these services are provided and also regulates health and safety and coursework issues in approved cosmetology schools. The Board handles the following consumer complaints:

- ▶ Gross negligence and/or incompetence
- ▶ Unsanitary conditions in salons and schools of cosmetology
- ▶ The unlicensed practice of cosmetology
- ▶ The operation of unlicensed salons
- ▶ Misrepresentation or false advertising of services

The Board's safety and health guidelines are important to know and will be listed later in this module. The laws and regulations from which these guidelines are taken are printed on Health and Safety posters. These posters must be displayed in the reception area of all licensed salons and schools. Every licensee must follow the health and safety laws in order to ensure consumer protection. When these laws are not followed, consumers may face health risks, such as contracting various infections, parasites, fungi, or other communicable diseases.

## Client Focused

As a cosmetologist, it is important to always focus on the clients you are serving. You should know what exactly clients are looking for in a salon or shop and how the cosmetologists will be able to satisfy their—often unspoken—requirements. Cosmetologists should keep in mind that when customers choose a cosmetology establishment, they will generally be looking out for specific health and safety guidelines. These guidelines will often determine whether a customer returns to the establishment, whether they tell their friends and co-workers about their experience, etc. Clients will usually be looking out for the following:

### Is the overall appearance of the shop clean?

- ▶ Are the sinks dirty?
- ▶ Are the trash cans overflowing?

### Are the establishment license and Health and Safety poster displayed in clear view in the reception area?

- ▶ Is the establishment license current?

**Are current operator licenses posted in plain view at individual work stations?**

- ▶ Photocopies of these licenses are not acceptable.

**Are the operators performing only those services for which they are licensed?**

- ▶ For example, manicurists and estheticians cannot provide hair services, and cosmetology licensees are not allowed to perform certain procedures, such as laser hair removal, which is considered a medical procedure.

**Are the operators properly disinfecting their instruments between clients?**

- ▶ Does the cosmetologist/operator properly disinfect the tools as they are being used from client to client?
- ▶ To properly disinfect the instruments: Instruments must be cleaned with soap and water and then totally immersed in an EPA-registered disinfectant that has demonstrated bactericidal, fungicidal, and virucidal activity.
- ▶ The disinfectant container must be covered. The disinfectant itself must be properly used according to the manufacturer's guidelines.

**Does the basin of the foot spa look clean?**

- ▶ It is perfectly acceptable for a client to ask the operator if the jets and screen are removed during cleaning. Make certain that this has been done in between clients.

**Are items that cannot be disinfected, such as emery boards, cotton pads, nail files, nail buffers, etc., immediately thrown away after use on clients?**

- ▶ **Note:** Some nail files may actually be able to be disinfected and will not need to be thrown away. However, that this will likely not be the case for the majority of files.

**Are clean items stored separately from soiled ones at the cosmetologist/operator's work station?**

- ▶ Are these items labeled to identify whether they are clean or dirty?
- ▶ Are all combs and brushes clean, regardless of if they are in use or not?
- ▶ Are any instruments used for manicures stored in a clean place and not hanging on the side of a cup or jar?

**Note:** Clients may make mental notes as to where you place the items that were just used on them. They make think: did the cosmetologist/operator place the dirtied items back with the clean ones?

**Are clean towels stored in a closed, clean cabinet?**

- ▶ Are soiled towels put in a separate covered receptacle?
- ▶ Does the cosmetologist/operator provide each client with a fresh, clean towel?

**Did the cosmetologist/operator wash their hands before beginning services on the client?**

- ▶ As we will discuss later in this module, hand-washing is an integral part of maintaining a healthy work environment.

Are the cosmetologists or operators using prohibited instruments such as Credo blades, cheese grater-type metal scrapers, or lancets?

**Remember:** Clients are concerned with the cleanliness and service provided to them within the establishment. Cosmetologists and operators should never provide clients with anything less than exceptional service.

Explore the table below to learn about the guidelines for which clients will likely examine your salon before accepting any cosmetology services:

**The establishment and all operators must have licenses issued by the Florida Cosmetology Board.**

- ▶ All operators must display their licenses in plain view at their work stations.
- ▶ The salon license and the Health and Safety Poster must be displayed in the reception area.

**The establishment must have clean, working equipment and a clean work area.**

- ▶ Regulations require licensees to wash and disinfect all tools and instruments, including whirlpool foot spas, before they can be used on customers.
- ▶ Some cosmetologists and manicurists may use steam sterilizers or dry heat sterilizers to disinfect their metal instruments.
- ▶ Note: Ultraviolet light sterilizers are not adequate for disinfectant purposes.
- ▶ An operator should never use the same tools on a client that were just used on someone else without first disinfecting them.
- ▶ If an item cannot be disinfected (such as a nail buffer block or an emery board), a cosmetologist or operator must throw it away immediately after use.
- ▶ If a clean set of tools is not available for a cosmetologist or operator to use on the client, he or she should not perform that service.
- ▶ Improper disinfection of tools and implements can spread disease and bacteria from one person to another. For example, the nail fungus may be spread from one client to another if the operator does not properly disinfect their tools.

**Note:** A potential client has every right to ask the cosmetologist, operator, or owner of the salon to explain the disinfection procedures before they begin any service at the establishment. Many viruses—include things such as HIV and Hepatitis B—can be transmitted with dirty instruments. Clients should never have to risk their health in a salon or an establishment, which is why it is extremely important for cosmetologists to follow safety and health guidelines. A client has every right to walk away from an establishment if they feel that it does not meet these requirements.

**Whirlpool foot spas must be cleaned and disinfected after each use by a client, at the end of each day, and every other week.**

- ▶ A log must be kept recording the date and time of each cleaning and disinfecting, and whether the cleaning was daily or bi-weekly. This record will be made available to clients and to Board representatives upon request.
- ▶ Keeping a cleaning log of foot spa cleaning is important because there have been cases of clients contracting bacterial infections from foot spas. These individuals have often been left with permanent scars covering their legs from the infections.

**In addition to disinfecting tools and instruments, operators are required to wash their hands in between clients.**

- ▶ Before beginning nail care services, operators should also ask their clients to wash their hands.

When a client pays for the service, be sure to provide a receipt. If something goes wrong and the client files a complaint, the receipt will determine what service actually took place and may help identify the operator who performed it.

Cosmetology services should never be painful for your clients, and it should be noted that they have the right to report any side effects or unpleasant experiences associated with a service to both you, as cosmetologist or operator, and additionally to the Board if necessary.

### Client Communication

Customers will be in communication with the cosmetologist/operator regarding the desired results of their appointment. Clients will be honest with their cosmetologist or operator—as they should be. For example, clients should tell the cosmetologist, manicurist, or operator:

- ▶ if they already have color or other chemicals in their hair.
- ▶ if they have had problems in the past with artificial nails.
- ▶ if they are taking any medications, since this could affect the outcome of the service.

### Cosmetologists and Manicurists

It needs to be reasserted that all beauty services must be provided in licensed salons by licensed individuals who have received state-required training and have passed a state test in their specialty. It should be noted that there are specific requirements for cosmetologists.

- ▶ Cosmetologists can provide hair, skin, and nail care services.
- ▶ Manicurists can provide only nail care services.
- ▶ Estheticians can provide only skin care services.



**Manicures and pedicures may be performed only by state-licensed professionals in state-licensed establishments.**

All licensees are required to display their licenses at their primary work stations. It should also be noted that clients have every right to ask to see a license if none is visible in the salon or establishment. The various licensed cosmetology services are described below, along with special requirements and consumer precautions regarding each.

## Cosmetology Services

The practice of cosmetology includes all or any combination of the following:

*Arranging, dressing, curling, waving, machineless permanent waving, permanent waving, cleansing, cutting, shampooing, relaxing, singeing, bleaching, tinting, coloring, straightening, dyeing, brushing, applying hair tonics, beautifying, or otherwise treating by any means the hair of any person.*

Cosmetology services may be legally performed only by state-licensed cosmetologists in state-licensed salons or barbershops. In addition, licensed cosmetologists may also perform manicuring and esthetics as described in the following sections.

## Manicuring and Pedicuring

Manicuring is defined as the practice of cutting, trimming, polishing, coloring, tinting, or cleansing the nails, or massaging, cleansing, treating, or beautifying the hands or feet of any person. Manicuring and pedicuring services may be legally performed only by state-licensed manicurists and cosmetologists in state-licensed salons or barbershops.

A lot of clients may come in with—or request to get—artificial nails, so it is important to realize certain sanitary hazards that cosmetologists have the potential to encounter regarding these. Sometimes, the artificial nail begins to lift around the edges, allowing moisture to get trapped under it. If the situation is left untreated, mold or fungus (causing a green or brown discoloration) may begin to grow. If this occurs, manicurists or cosmetologists should remove the artificial nails immediately and refer a client to their doctor.

Manicurists and cosmetologists should never apply artificial nails on clients whose nails are anything but healthy. Later in this course, we will discuss what constitutes a healthy nail. Without proper treatment, these nail conditions could result in a permanent deformity of the nail.

**Important:** It should never be painful to have artificial nails removed. If, as a cosmetologist or manicurist, you notice that a client seems to be in pain when having their artificial nails removed, you should refer them to their doctor for further assessment.

Electric nail drills are often used to file artificial nails. A licensed manicurist or cosmetologist may sometimes use a drill on natural nails, but only if the drill is designed for use on natural nails and the operator follows the manufacturer's directions. The drill bits on these devices must be properly disinfected before use on a client. A cosmetologist or manicurist should never use a drill bit (or any other implement) that has not been properly disinfected. If they do so, they run the high risk of infecting their client with an infection or even a disease. Additionally, sandpaper-type drill bit coverings, if used, must be thrown away after use on each client.

Now that we have discussed the process of manicuring, we will discuss another process regarding nails—pedicures. Pedicures can be a great source of pleasure for consumers, and a welcome relief to those who have trouble tending to their own feet. However, it is important to be aware of what a manicurist may and may not legally do. Pedicuring falls under the practice of manicuring (nail care) and includes cutting, trimming, polishing,



coloring, tinting, or cleansing the toenails. It also includes massaging, cleansing, treating, or beautifying the feet. A licensed manicurist cannot perform any type of waxing, however. Waxing can be performed only by a cosmetologist or esthetician.

**Note:** Laws and regulations prohibit licensed operators and students from working on a person with an infection or communicable disease. The law also prohibits massaging any person's skin if it is inflamed or infected. Thus, if a client has athlete's foot, eczema, or other similar condition, the manicurist must, by law, refuse the service in order to protect other customers.

### Client Communication

Before receiving any nail care service, a client should inform the cosmetologist if he or she is a diabetic, has a peripheral vascular disease (such as arteriosclerosis), or is taking any blood-thinning medication, including daily doses of aspirin. Cosmetologists and manicurists must then be aware that they will need to take special precautions regarding the safety and health of that client during their appointment.

### Health Issues

When proper sanitization and sterilization are not used during manicures and pedicures in a cosmetology establishment, there may be unpleasant consequences. For example, bacteria can thrive in the screens and tubes of foot spas. These bacteria can then enter a client's body through any cuts or abrasions on their legs—even a wound as small as a bug bite.

Fortunately, such infections are relatively rare, but the consequences can be very serious when they do. When it enters through the skin, one bacterium, *Mycobacterium fortuitum*, causes boils that fill with pus and can leave scarring.

This is why it is imperative that every manicurist and cosmetologist properly disinfect and sanitize their work environment. Doing so will prevent illnesses from being spread in the workplace. A salon's whirlpool foot spas should be cleaned and disinfected properly and in accordance with the new regulations adopted by the Board to minimize the risk of these infections.

If a client does happen to notice a skin infection occurring after using a foot spa at a salon, it is recommended that they go to their doctor immediately and tell him/her that they have had their legs in a whirlpool foot spa. The doctor will then be able to take a small biopsy of a boil to test for mycobacterial culture. Thankfully, these types of infections can be treated with antibiotics.



**A foot spa is a single piece of equipment made up of a chair and a built-in tub. Foot spas often come with vibrating and heating pads built into the chair.**

# Sanitization & Sterilization

## Client Precautions

Here are some of the client precautions that cosmetologists and others practicing in this industry should be aware of and share with their clients:

**Clients should never receive a pedicure if they have shaved their legs within 24 hours of receiving the service or if they have any open sores or cuts on their feet or legs.**

- ▶ This will help prevent the contraction of any bacteria.
- ▶ It is perfectly acceptable for clients to ask whether the foot spa they are using has been cleaned and disinfected in between customers.
- ▶ The *Mycobacterium fortuitum* leaves permanent scars and can be very painful, and thus both clients and cosmetologists should take every precaution necessary to prevent the spread of such bacteria.

**Clients should know what certain terms mean within an establishment.**

- ▶ For example, esthetics is the practice of performing facials, applying makeup, giving skin care, or beautifying the face, neck, arms, or upper part of the human body by use of cosmetic preparations, antiseptics, tonics, lotions, or creams.
- ▶ It also includes applying eyelashes or removing hair by tweezing, depilatories, or waxing. (It is illegal for estheticians to pierce the skin during any service or to administer any medications for pain control.)

Note: People who only demonstrate, recommend, or sell cosmetics are not required to be licensed by the board and may not receive (or expect) any compensation from clients for product application.

**Clients should be cautioned that chemical services such as permanent waving, straightening, and hair lightening or coloring all cause permanent changes to the hair.**

- ▶ When done correctly, these services can make clients look terrific. When done incorrectly, these same services can make an individual look and feel terrible. Chemical hair care services, then, may be legally performed only by state-licensed cosmetologists in state-licensed salons.

- ▶ It is perfectly acceptable for a client to ask the cosmetologist or other operator to do the proper test on the hair before performing the service. For permanent wave services, a preliminary test curl may be done. This type of test will help determine how the hair will react to a permanent. It is usually done on tinted, bleached, or overporous hair, or on hair that shows signs of damage. A test curl also indicates actual processing time and curl results based on rod size and the product used.
- ▶ For color services, the operator may perform a strand test. This pretest is given before the treatment to determine development time, color result, and the ability of the hair to withstand the effects of chemicals. A cosmetologist encountering a new client may ask for a strand test to ensure the quality of service and the desired result. If the product is an aniline derivative (which includes all permanent haircoloring), the FDA requires a predisposition test (also known as a “patch test”) before use.
- ▶ A predisposition test involves applying a small amount of the product to the skin to determine if the client may be sensitive to the chemicals. Nearly all manufacturers of chemical products recommend that a predisposition test be performed 24 hours before the desired chemical service to determine whether or not the client could be allergic to the product. A cosmetologist may require a fee before performing this service.

Note: We will discuss more regarding hair and hair dyes in our section regarding the chemical makeup of hair, skin, and nails.

**For all chemical services, a towel and/or other sanitary neck strip must be used to keep the full-length protective covering (i.e., shampoo cape, drape, smock, etc.) from coming in direct contact with a client's skin.**

- ▶ The towel also protects the client from solution that may drip during the service. (The operator may also spread petroleum jelly on the skin to help protect it.)
- ▶ The towel must be changed frequently. If it is too wet, it cannot absorb more liquids. If it has absorbed chemical drips, prolonged exposure to it can burn the skin. The chemical solution must be removed from the skin immediately on contact. A cosmetologist should make certain not to drip any chemicals on their clients.

**Although some chemicals may have strong odors, salons should have ventilation adequate to keep the odors from lingering within the environment.**

- ▶ If the chemical odor causes any discomfort, the client should immediately inform the operator.

**Because the chemical application causes a change to the client's hair, it is imperative that the hair be allowed to adjust before it is shampooed by the cosmetologist.**

- ▶ Clients should always heed a cosmetologist's advice regarding the number of days (or hours) to wait before shampooing or using any hot implements on the hair. Otherwise, the hair could be severely damaged.

## Chemical Exfoliation

Chemical exfoliation (also known as a “skin peel”) is a process by which layers of facial skin are removed with commercially available products. Various acids are applied to the face for a few minutes a day over several days. The skin reddens as if sunburned, then darkens and peels away, revealing a layer of sensitive, new skin. Cosmetologists who practice skin peels should advise their clients that recovery time varies from days to weeks or even longer, depending upon the depth of the peel.

- ▶ Chemical exfoliation is done to smooth wrinkles, reduce scars and blotchy areas, and improve the overall appearance of normal skin.
- ▶ Chemical exfoliation services may be legally performed only by state-licensed cosmetologists and estheticians in state-licensed salons and barbershops, or by plastic surgeons and dermatologists in medical offices.
- ▶ Chemical exfoliation is not the same as “deep cleaning” facials, also known as masks or facial packs. Deep cleaning facials simply clean the pores and slough off dead surface cells, leaving the skin in a softer condition.
- ▶ Board licensees are restricted by law to the use of commercially available (prepackaged) products designed for removing only the uppermost (dead) layers of the skin. Any service requiring greater skin penetration must be done by a medical practitioner.



**Estheticians may apply eyelashes or remove hair by tweezing, depilatories, or waxing in addition to performing facials and other skin care.**

**Note:** The chemicals used by physicians are usually stronger than those used in salons and penetrate deeper layers of the skin. Any skin peel product with a strength greater than 40% by volume should be used only by medical professionals.

Cosmetologists and estheticians are prohibited by law from mixing or combining skin removal products, unless specifically required by the manufacturer’s directions on the commercially available (prepackaged) product.

When performed properly by a well-trained practitioner, chemical exfoliation is usually safe. However, a significant potential for harm does exist. The chemicals used for the exfoliation procedure usually consist of one or more active ingredients, such as: resorcinol, phenol, alpha and beta hydroxy acids, lactic acid, and salicylic acid. These acids act by destroying skin tissue. Even a fairly mild acid left in contact with the skin for a prolonged period may do considerable damage.

Because of the potential for skin damage, especially if exfoliation is done improperly, it is essential that anyone who practices chemical exfoliation is licensed to do so.

Before a client agrees to a chemical exfoliation, they should always be fully informed about what to expect. Thoroughly discuss all aspects of the procedure, including:

- ▶ what changes will occur in the skin during each phase of the procedure and how it will feel.
- ▶ safety issues, hazards, skin types, and any conditions that may increase risks.

- ▶ what product you will use, and whether it is a commercially prepared product. (Make sure to have a copy of the product manufacturer's instructions available in case the client asks to see it.)
- ▶ whether you will be mixing any chemicals before they are applied to the skin.

Be prepared to provide clients with the names of satisfied customers who have received the procedure and to show photographs of actual clients (not just pictures from advertising brochures) during each phase of the exfoliation process.

If the client has any reservations regarding the procedure, you may advise them that it is okay to not go through with it.

**Important:** Clients should let you as the cosmetologist know of any medications that they are currently taking, particularly Accutane, Retain A, or other acne medications.

It is recommended that clients call their doctor immediately after the procedure if they experience any symptoms that are more severe than expected. That is why it is extremely important for you to inform your clients of possible reactions to the treatment. If a client must seek medical attention, they may take photos of the affected area as proof in case it turns out they have been harmed.

## Waxing

Only licensed cosmetologists and estheticians may perform waxing on clients. Manicurists cannot perform waxing. Cosmetologists and estheticians should ensure that all wax is kept in sanitary conditions before use on any client. For example, never re-dip the instrument (stick) into one big container of wax and then apply that wax onto a client's skin. Anything that cannot be disinfected before it comes into direct contact with a person needs to be disposed of in a waste receptacle immediately after use. This includes the wax and the instrument(s) used to apply the wax.

## Illegal Items

It is important for cosmetologists and other operators to differentiate between appropriate and inappropriate items in their work environment. Licensees, for example, are prohibited from using needle-like instruments, such as lancets, to extract skin blemishes or to perform similar procedures. It is illegal for these instruments to even be in a salon. Such acts, and any other services that affect the structure or function of living tissue of the face or body, are considered invasive procedures and should be performed only by medical professionals or by the clients themselves outside the licensed salon.

Licensees also cannot legally give injections or apply any topical prescription medications to a client.

## Illegal Chemicals

Some manicurists and cosmetologists who perform artificial nail services use a product known as liquid methyl methacrylate monomer (LMMM/MMA). It is illegal to use this chemical in fingernail products, and the FDA discourages its use. LMMM/MMA is difficult to detect because it is not visually distinguishable from other regular nail acrylic products. There are, however, warning signs that something may contain LMMM/MMA, which include:

- ▶ a very strong and strange odor different from regular acrylic nail products.
- ▶ very hard nails that may be difficult to file.
- ▶ artificial nails that will not easily soak off in solvents.

Cosmetologists should be aware of these products because many products that contain LMMM/MMA can cause severe allergic reactions in clients. When LMMM/MMA is used, the acrylic nail adheres so strongly to the natural nail that it may cause the natural nail to be removed from the nail bed under extreme pressure. Use of LMMM/MMA is illegal, and the Board recommends that you, as a cosmetologist, do not allow this chemical to be used in your establishment.

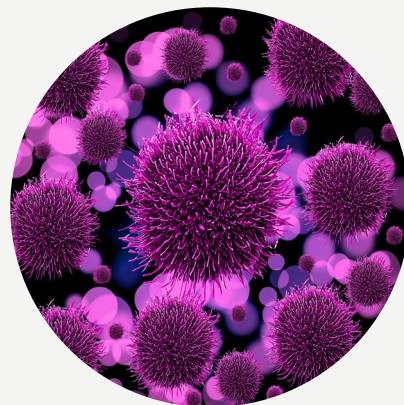
## Bacteria

Before we begin our thorough discussion of sterilization in the workplace, it is important to define exactly what we are fighting against—bacteria.

Bacteria are one-celled microorganisms that are present everywhere in the world. Under microscopes, they may look like balls, rods, or spirals. Less than 1% of bacteria are harmful to humans. In fact, most bacteria are beneficial in some way; they help us digest food, destroy disease-causing cells, and provide the body with necessary vitamins. Bacteria are present in foods like yogurts and cheese.

But certain bacteria can cause illness. These bacteria often reproduce quickly within the body and give off toxins that damage a body's tissue and organs. Some examples of harmful bacteria that can infect the human body include E. coli and Streptococcus.

To control the spread of bacteria within the workplace, it is important to follow specific guidelines which include, but are not limited to, the practices described below.



### Properly Washing Hands

- ▶ Wash your hands thoroughly before working with a customer (especially if you have just completed working on a previous customer), after using the bathroom, and before eating.

### Keeping Up to Date With Proper Immunizations

- ▶ Getting your annual flu vaccine, as well as keeping up to date with immunizations against hepatitis B and other communicable diseases, is a good way to stay healthy while working as a cosmetologist.

### Using Gloves and Masks

- ▶ Wear gloves and a mask whenever you work with a customer.
- ▶ Change your gloves before beginning work with the next client.

**Having Tissues Readily Available**

- ▶ When possible, use a tissue to cover your nose and mouth when sneezing or coughing.
- ▶ Always wash your hands after using a tissue to sneeze or cough into before continuing work.
- ▶ Remember to wash your hands after sneezing or coughing into a tissue.



**Remember to wash your hands after sneezing or coughing into a tissue.**

**Not Touching Your Eyes, Nose, or Mouth**

- ▶ This will not only aid in preventing the spread of bacteria but will also minimize opportunities for you to unintentionally transfer cosmetology chemicals or other harmful substances in your eyes, noses, or mouths.

**How Bacteria Grow**

Knowing how bacteria can grow and form in a workplace can help you effectively combat its spread. Review the table below to learn about the environments required by different strains of bacteria to grow.

<b>Aerobic Bacteria</b>	These bacteria require oxygen to form.
<b>Anaerobic Bacteria</b>	These bacteria do not require oxygen.

Bacteria grow and reproduce through binary fission, a process in which one cell divides into two. When conditions are right, each of those two cells divides again, and the process continues.

Here are a few factors that can promote the growth of bacteria:

**Moisture**

Bacteria need enough moisture to grow in an environment, which is why bacteria usually grow quickly on foods.

**Temperature**

Bacteria can be classified based on the temperature range in which they are able to grow:



Psychrophiles	Mesophiles	Thermophiles
<ul style="list-style-type: none"><li>▶ Need low temperatures (20 degree Celsius or lower) to form</li></ul>	<ul style="list-style-type: none"><li>▶ The most common bacteria</li><li>▶ Thrive in warmer environments, usually between 5 and 63 degrees Celsius</li><li>▶ Cease forming at temperatures higher than 63 degrees Celsius</li></ul>	<ul style="list-style-type: none"><li>▶ Need high temperatures (45 degrees Celsius or higher) to form</li></ul>

### Time

In ideal conditions, bacteria can grow by dividing itself every 20 to 30 minutes. This means that after a mere seven hours, one bacterial cell can become 2,097,152 bacteria.

### Bacterial Skin Infections

As you learned earlier in this module, bacteria are found widely in soil and water, even in chlorinated municipal water systems. Mycobacteria can cause localized skin infections, such as cellulitis (a potentially serious bacterial infection of the skin that appears as a swollen, red area and feels hot and tender) and soft-tissue abscesses.

Foot spas used for pedicures, when not properly cleaned and sanitized, provide an ideal breeding ground for mycobacteria.

Over the past two decades, bacterial outbreaks affecting hundreds of people have been traced back to cosmetology establishments. Many of these cases are related to strains of rapidly growing mycobacteria such as *Mycobacterium fortuitum*, *Mycobacterium chelonae*, and *Mycobacterium bolletii*/*Mycobacterium massiliense*. Clients have suffered from severe and persistent pustules and boils that required months on antibiotics to resolve and sometimes left the clients with permanent scars.

In some especially unfortunate cases, clients with underlying conditions have even died from complications related to bacterial infections acquired in salons. For example:

- ▶ A woman who was cut on her heel with a pumice stone during a pedicure died of a heart attack from a blood infection caused by a staphylococcal infection on her foot.
- ▶ Another woman who had the autoimmune disease Lupus suffered for more than a year from a mycobacterial infection linked to a pedicure before dying.
- ▶ A third woman, who suffered from rheumatoid arthritis, died after more than a year of fighting a staphylococcus infection she apparently acquired during a pedicure.

All the clients described above had pre-existing medical conditions that made it more difficult to fight off an infection. This is why, in addition to taking special care with cleaning and sanitizing the cosmetology environment, it is vital to communicate openly and clearly with clients about any health issues that might affect the services you provide.

**MRSA**

*Methicillin-resistant Staphylococcus aureus* (MRSA) is a type of bacteria that is resistant to some antibiotics. This makes skin infections caused by MRSA especially difficult to treat. Public health officials have found MRSA in locker rooms, jails, fitness centers and anywhere else skin-to-skin contact or common supplies such as towels are used.

MRSA may also be transmitted in the salon setting if cosmetologists do not follow the appropriate health, safety, and infection control standards. Simple precautions such as thorough hand washing (which is a state requirement of practitioners between each client) help prevent such infections from occurring. We will discuss proper handwashing techniques later on in this course.

# Sanitation & Sterilization

## General Standards

In addition to the specific practices aimed at preventing the spread of bacteria, there are some more general standards of cleanliness necessary to keep your workplace safe. In a cosmetology establishment, this means ensuring all work surface areas are kept free from excessive dust, dirt, or debris. Walls, woodwork, ceilings, furniture, and fixtures should also be kept in good repair. Additionally, all equipment must be in safe and working order and must also be kept clean. Keeping the shop clean will help prevent the spread of bacteria, fungi, and other viruses that can be passed from person to person through hair and nail tools, other implements, and even towels.

In general, no cosmetology establishment should accumulate excessive waste. Make sure to properly dispose of all waste in the appropriate waste receptacles. Both employees and employers must always adhere to their building's specific standards and codes.

Spaces in which cosmetology is practiced often contain many chemicals, hair and nail products, and other products that have the potential to be highly flammable. Therefore, it is extremely important to prohibit smoking in these establishments.

**Important:** No workplace, whether practicing cosmetology or not, should contain any product that includes hazardous materials banned by the U.S. Food and Drug Administration. This prohibits the use of any cosmetic products with such ingredients.

In general, employers and employees should be certain that their appearance meets general universal standards of cleanliness and sanitation. Remember that Florida Administrative Code 61G5-20.007 prohibits cosmetologists who are visibly ill from serving clients.

## Employee Hygiene

As was discussed in Module 1, there are three types of precaution cosmetologists can use to protect themselves and others against infections. They are:

- ▶ **Barrier protection**, using physical shields such as gloves and masks.
- ▶ **Personal hygiene**, including washing your hands and keeping your workstation clean.
- ▶ **Disinfection**, removing infectious agents from your tools and workstation.

The following sections cover these basic protections in more detail.

## Handwashing

Handwashing is one of the basics of good hygiene. According to the Centers for Disease Control and Prevention, washing hands is one of the best ways to keep yourself and everyone you interact with healthy. In a cosmetology setting, it not only prevents the spread of bacteria and diseases such as the common cold or flu but also protects clients from exposure to potentially harmful chemicals.

You must always wash your hands:

- ▶ before serving a client,
- ▶ after eating or using the restroom, and
- ▶ whenever it is possible you have any potentially harmful substances on your hands.

Proper handwashing means using anti-bacterial soap to sanitize not only your hands, but also any portion of your arms that may be exposed to clients.

Remember that the first step is when washing your hands is to wet your hands with water. Then, apply the amount of soap recommended by the manufacturer, and rub hands together for at least 20 seconds, being certain to cover all surfaces of the hands and fingers. Rinse your hands with water, then dry them thoroughly with a disposable towel, and use the towel (not your hands) to turn off the faucet.

The table below identifies some of the reasons people may not follow guidelines about washing their hands in the salon and strategies to overcome those obstacles.

Obstacle	Solution
▶ Handwashing facilities are not conveniently located.	▶ Make sure sinks are easily accessible for both cosmetologists and clients.
▶ Soap, paper towels, and other supplies are not easily available.	▶ Keep handwashing stations well stocked with plenty of soap, paper towels, and/or hand sanitizer.
	▶ Make sure dispenser systems always function properly and deliver an appropriate volume of product. <b>Note:</b> To avoid bacterial contamination of the soap, never add soap to a partially empty dispenser.
▶ Frequent handwashing may cause irritation and dry skin.	▶ Consider supplying hand lotions or creams cosmetologists can use to minimize irritant contact dermatitis and dryness.
▶ Cosmetologists do not understand, forget about, or disagree with the guidelines.	▶ Educate cosmetologists about the science behind the recommendations.
	▶ Make it clear that maintaining appropriate hand hygiene is required in your establishment.

Washing hands with soap and water is a more effective approach to hand hygiene in a cosmetology environment. However, when soap and water are not available you may use a hand sanitizer containing at least

60% alcohol. Although these types of sanitizers are very effective at inactivating many types of microbes, they work only when used properly.

To decontaminate your hands with an alcohol-based sanitizer:

- ▶ Apply the product to the palm of one hand.
- ▶ Rub your hands together, covering all surfaces of hands and fingers.
- ▶ Continue rubbing until your hands are completely dry.
- ▶ You must use enough of the product on your hands and make sure not to wipe it off before it has dried.

Always store alcohol-based sanitizers away from high temperatures or flames, because the chemicals in these products are highly flammable. In the section on Storing Chemicals below, you will learn what other chemicals in the salon should be kept away from heat and direct sunlight.

### Nail Hygiene

Even after careful handwashing, the spaces beneath your nails (known as subungual) can harbor bacteria and yeast as well as viruses including hepatitis B and hepatitis C.

- ▶ Keeping your nails at an appropriate length makes handwashing more effective. Always keep your natural nails no longer than  $\frac{1}{4}$  inch beyond the tips of your fingers.
- ▶ If you choose to wear nail polish, make sure to promptly remove polish when it chips or is otherwise damaged. Those gaps may also collect pathogens.
- ▶ Some evidence suggests that wearing artificial nails or gel nails contributes to the transmission of certain pathogens.



### Gloves



It is the duty of employees to ensure that their establishment is kept a safe, disease, and infestation-free environment for their customers. Cosmetologist should follow these practical guidelines, also:

- ▶ Wear disposable gloves when handling potentially hazardous products, and replace these gloves if there are noticeable holes, rips, or tears in them.
- ▶ Never wear the same pair of gloves for the care of more than one customer.
- ▶ Do not wash or reuse gloves.
- ▶ Wear appropriate clothing. Long sleeves may help protect your arms against chemicals that drip or spill. Close-fitting clothing may help avoid accidental spills.
- ▶ Do not keep excessive amounts of product in your work environment. Consider keeping refillable, small-sized containers of product at your workstation.
- ▶ Once you finish using a product, store it in a safe, tightly closed container.

## Antiseptics vs. Disinfectants

Chemicals that can be used to sanitize the workplace fall into one of two categories: antiseptics or disinfectants. These chemicals are similar in that they are both used to kill, or at least control, the growth of microbes. However, there are important differences between antiseptics and disinfectants, and they are used in different ways in the cosmetology environment.

Click on the cards below to review the differences between antiseptics and disinfectants.

Antiseptics		Disinfectants	
<p>Antiseptics may be used on living tissue, including human skin. Antiseptics commonly used for cosmetology procedures include alcohol, hydrogen peroxide, iodine, or really anything that is not toxic or harmful to humans when used properly.</p> <ul style="list-style-type: none"><li>▶ For alcohol, a 50-60% solution can be used on the skin.</li><li>▶ For iodine, a 2% U.S.P can be used on the skin.</li><li>▶ For hydrogen peroxide, a 3-5% solution can be used for minor wounds.</li></ul>		<p>Disinfectants are used on non-living things. They are usually too toxic or even potent to be used on living tissue but can be used to clean floors, countertops, or equipment. Common disinfectants include bleach and cleaners such as Lysol.</p>	

While different in how and where they are used, disinfectants and antiseptics are similar in how they function. Both antiseptics and disinfectants work by interfering with a cell wall and preventing the cells from reproducing. This is why it is so important to take appropriate precautions whenever you work with any chemical that may be damaging to your skin.

- ▶ Never directly inhale any fumes from either antiseptics or disinfectants, as they can be harmful to humans.
- ▶ Make sure that antiseptics and disinfectants are always properly labeled so they will not be confused for one another.
- ▶ Wear gloves and other personal protective equipment (PPE) when appropriate.

**Note:** For nail salons, nitrile gloves are preferable because chemicals used in these establishments may permeate latex or vinyl.

Your establishment should have available a Safety Data Sheet (SDS) for every chemical used in that workplace. The SDS lists information about the chemical's properties including its ingredients, potential hazards, first aid measures, appropriate PPE, and more. The SDS for each chemical must be readily available to employees. To verify the type of PPE you should use when working with a certain antiseptic or disinfectant, you can refer to the SDS for that chemical.

## Storing Chemicals

Below are some general guidelines for safely storing and using hazardous chemicals in the workplace:

- ▶ Store chemicals that may interact with one another separately so they do not accidentally mix.
- ▶ Keep chemicals away from any heat or direct sunlight to prevent heat and light from degrading the contents.
- ▶ Do not store any chemicals except cleaners under sinks.
- ▶ Always securely close the caps on chemicals or cleaners.
- ▶ Store any liquid hazards in a secondary containment. For example, store squeeze or wash bottles in an additional bin or basin.
- ▶ Avoid stockpiling chemicals.
- ▶ Make sure it's easy to move chemicals around in the storage area without the potential for them to tip or spill over.

## A Clean Workplace

A sanitary workplace is vital to preventing the spread of disease and protecting yourself and your clients from hazardous materials. Therefore, cosmetologists must ensure that the worksite is maintained in a clean and sanitary condition.

In order to do this, employers must determine and implement an appropriate written schedule for cleaning, including the method of decontamination for each location, type of surface to be cleaned, type of soil present, and tasks or procedures being performed in the area.

## Sterilization and Sanitization

Sterilization is the strongest level of disinfection because it is the process of destroying all bacteria whether it is harmful or not. Common methods of sterilization used in the cosmetology environment include:

### Boiling

Towels, linens, and heat/water resistant instruments can be submerged in water that is heated to 212°F.

### Steaming

Special equipment can be used to steam-sterilize equipment. The manufacturer's instructions should be followed for this method to be effective.

### Chemical Solutions

A hospital-level disinfectant can be used to sterilize equipment. To sterilize, the solution should be mixed according to instructions on the container, and the instruments should be immersed for an instructed length of time (typically 10 minutes).

Individual establishments will define their own procedures; however, the following are universal standards regarding sanitizing equipment:

- ▶ Contaminated work surfaces must be decontaminated with an appropriate disinfectant after the completion of appointments (immediately or as soon as feasible when surfaces are overtly contaminated), or at the end of the work shift if the surface may have become contaminated since the last cleaning.
- ▶ All bins, pails, cans, and similar receptacles intended for reuse that could potentially become contaminated with any infectious material must be inspected and decontaminated on a regularly scheduled basis and



also immediately or as soon as possible upon recognizing they are noticeably contaminated.

- ▶ If broken glassware is present, do not pick up the pieces directly with your hands. Always use a brush and dustpan, tongs, forceps, or some other mechanical means that protects your hands from sharp edges.

### **Regulations Regarding Disinfection**

In addition to cleaning and sanitizing the establishment, cosmetologists must sanitize and disinfect the tools they use when working with clients.

Each of the many tools you use daily must be disinfected with either disinfectants or antiseptics. Any item that has not been properly cleansed and disinfected may not be used, and any item that has been soiled or previously used must be disposed of in a proper waste receptacle.

**Remember!** Always make sure your hands are properly cleaned before serving any client.

# Sanitation & Sterilization

## Disinfecting Tools and Supplies

In Florida, all salons must be equipped with and utilize wet disinfectant containers with hospital level disinfectant or EPA approved disinfectant, sufficient for disinfecting practices. A wet disinfectant container is any receptacle that contains a disinfectant solution and is large enough to allow for a complete immersion of the articles. A cover for the wet disinfectant container must be provided. For complete details about Florida salon sanitation requirements, see Florida Administrative Code, 61G5-20.002.

Other minimum requirements for the sanitation and disinfection of tools and equipment in cosmetology establishments in Florida include:

- ▶ One covered waste receptacle that is used to dispose of hair only.
- ▶ An additional closed receptacle used for any soiled towels, gowns, or sheets.
- ▶ Closed and clean cabinets that are designed to only hold fresh towels.
- ▶ Containers used to store only disinfectant solutions for instruments and equipment. Each of the containers of disinfecting solution must be large and deep enough to fully submerge all necessary tools and instruments.

## Disinfecting Non-Electrical Tools

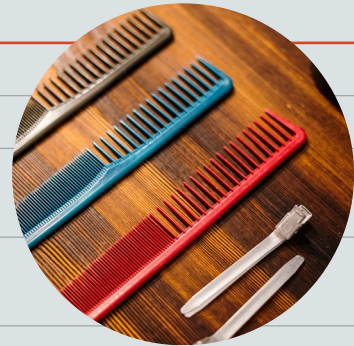
Any cosmetology tools that are non-electrical must be cleaned with soap, detergent, and water and then completely immersed in an EPA-registered disinfectant for at least 10 minutes before use, per the manufacturer's instructions. These disinfected instruments must then be kept in a safe, clean, covered place and labeled as clean.

The disinfectant solutions must be covered at all times and changed at least once a week or whenever they appear to be dirty or cloudy. Any single-use item such as cotton balls, sponges, emery boards, etc., that has come into contact with a client and cannot be disinfected must be properly discarded in a waste receptacle after use.

Review the information below to make sure you are familiar with the procedures for cleaning and disinfecting different kinds of non-electrical tools.

### Disinfecting Combs and Brushes

- Step 1 ▶ Remove hair from combs and brushes.
- Step 2 ▶ Clean combs and brushes with soap and water.
- Step 3 ▶ Fill a clean, sterilized container with a solution of hospital-level disinfectant as directed by the product's instructions.
- Step 4 ▶ Immerse combs and brushes in the solution for a minimum of 20 minutes or as otherwise instructed.
- Step 5 ▶ Remove combs and brushes and rinse in clean water.
- Step 6 ▶ Dry thoroughly with a clean towel.
- Step 7 ▶ Store in a clean, closed cabinet or container until needed.



**Florida law requires all combs and similar tools to be disinfected before they are used on another client.**

### Disinfecting Metal Tools

- Step 1 ▶ Fill a clean, sterilized container with a solution of hospital-level disinfectant as directed by the product's instructions.
- Step 2 ▶ Immerse non-electric metal tools, such as shears and tweezers, in the solution for a minimum of 10 minutes or as otherwise instructed.
  - ▶ Remember: If the tools could be damaged from immersing in a solution, wipe cutting blades and/or other areas of contact with a hospital-level disinfectant.
- Step 3 ▶ Remove tools and rinse in clean water.
- Step 4 ▶ Dry thoroughly with a clean towel.
- Step 5 ▶ Store disinfected tools in a clean, closed cabinet or container until needed.



**Non-electrical metal tools must be immersed in a hospital-level disinfectant for at least 10 minutes.**

**Important!** Never Reuse needles used for tattoos or piercing. Discard these items in a puncture-resistant sharps container designed specifically for this purpose.

### Disinfecting Manicure Tools

- |        |   |
|--------|---|
| Step 1 | ▶ Scrub nail files to remove debris.  |
| Step 2 | ▶ Immerse tools in a hospital-level disinfectant that is used according to the product's instructions                         |
| Step 3 | ▶ Throw away items that cannot be disinfected—such as emery boards, cotton balls, and orange wood sticks—after each manicure. |

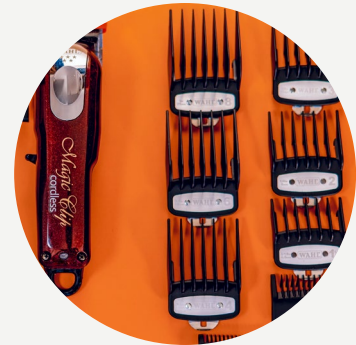


**Non-disposable manicure and pedicure tools must be cleaned and properly disinfected before they are used on another client.**

### Disinfecting Electrical Tools

The following are a few additional, specific guidelines you should implement when disinfecting electrical equipment:

- ▶ Clean electric tools such as curling irons and electric clippers as instructed by the manufacturer. Typically, a cotton pad dipped in a solution of 70% alcohol can be used to clean the surfaces of unplugged electric tools.
- ▶ Store dry, disinfected tools in a sterile place or in individual clean containers until they are ready for use.
- ▶ After electrical instruments are turned off and unplugged, remove all foreign matter them.
- ▶ Then, disinfect the instruments with an EPA-registered disinfectant for at least 10 minutes.
- ▶ Keep disinfected electrical instruments other than hot combs and curling irons, in a clean, covered place just as you do with non-electrical tools.



### Disinfecting Foot Spas and Air-Jet Basins

In addition to the general tools covered above, many cosmetology establishments (especially if they are salons) have manicure/pedicure equipment such as foot spas and air-jet basins that have their own EPA-specific guidelines for cleaning and sanitation. Improperly cleaned and disinfected foot spas can allow biofilm such as skin, hair, oils, lotions, and other residues to build up. The biofilm, in turn, provides a breeding ground for mycobacteria.

Cleaning foot spas with surfactant or enzymatic soaps or detergents before disinfecting will help prevent the build-up of biofilm. These types of cleaners than other types of cleaners are much better at breaking down biofilm and, thus, improve the effectiveness of disinfectants.

### Why Disinfection Is Important

When foot spas are not properly cleaned and disinfected, high concentrations of mycobacteria growing in biofilm and circulating through foot spas put your clients at serious risk for infection. Specifically, clients with breaks or cuts in their skin are most vulnerable to infection.

Breaks or cuts in the protective layers of the skin already provide an easy opportunity for the mycobacteria to enter the body. Another route that bacteria may enter is through shaving. Hair removal may create smaller, even microscopic, breaks or cuts in the skin that are not readily visible but that are still large enough to allow mycobacteria to gain entry.

### Symptoms of Infection

Mycobacterial infections appear initially as small bumps or wounds that may look like insect bites. Over time, they grow and often fill with pus.

These sores usually do not heal very well and may cause scarring in the future. The sores themselves may appear as thick, knotted areas that resemble a spider or insect bite.

A skin infection lasting at least two weeks may be considered to be a mycobacterial infection if it includes at least one of the following features:

- ▶ Negative routine bacterial culture (taken by a physician or other appropriate medical professional)
- ▶ Failure to respond to antibiotic treatment
- ▶ The physician's suspicion of a mycobacterial infection

Although these infections can be very harmful to clients and it is important to take the problem seriously, it is very rare to see outbreaks of these types of infections associated with cosmetology establishments as long as the salon's whirlpool footbaths are cleaned and disinfected properly. Foot spas must be cleaned and disinfected between each use, at the end of the workday, and every week.

### Between Use Cleaning

Follow these steps to clean foot spas and air-jet basins between uses:

- ▶ When cleaning whirlpool foot spas, always drain all water from the basins after each customer uses the spa.
- ▶ Next, scrub and clean the inside wall of the basin.
- ▶ Ensure that all previous residue is gone. Use a clean brush and liquid soap in addition to water.
- ▶ Rinse the basin before refilling it with clean water.
- ▶ Add the correct amount of EPA-registered hospital liquid disinfectant and let it circulate, as specified in the manufacturer instructions.
- ▶ Remove foot plates on pipeless spas so you can clean and rinse the area beneath, then wipe it dry.
- ▶ Allow the disinfectant to soak in the basin for at least 10 minutes before draining, rinsing, and drying with a paper towel.

**Daily Cleanings**

After the last client has left for the day, follow the steps below to disinfect the foot spas.

- ▶ Remove any screen or other removable parts from the spas and basins.
- ▶ Scrub any and all residue from the screens, walls, and other parts of the basin. Use a clean brush, liquid soap, and water.
- ▶ Reinsert the screens (and any other parts that have just been removed and cleaned) before refilling the basin with warm water and detergent.
- ▶ Let this mixture circulate for at least 10 minutes before draining and rinsing the basin again.
- ▶ Add the correct amount of EPA-registered hospital liquid disinfectant and let it circulate, as specified in the manufacturer instructions.
- ▶ Allow the disinfectant to soak in the basin for at least 10 minutes before draining and rinsing.
- ▶ Allow the basin to dry completely.

**Weekly Cleaning**

In addition to the between uses and daily cleanings described above, foot spas and air-jet basins must also be cleaned and disinfected weekly.

- ▶ To complete these weekly cleanings, start by following the steps for daily cleanings, but do not drain the disinfectant solution. Instead, turn off the spa and allow the solution to soak for between 6 and 10 hours.
- ▶ After the mixture has sat for the proper amount of time, drain the basin and rinse it with clean water.
- ▶ Refill and flush the basin before use by a customer.

**Remember These Salon Guidelines**

- ▶ Keep the workplace well lit to prevent accidents.
- ▶ Make sure air is well ventilated to prevent the concentration of potentially toxic chemicals.
- ▶ Keep floors clean by sweeping away hair and other waste from the floor often and storing waste in a closed container.
- ▶ Do not use objects dropped on the floor until they are sterilized.
- ▶ Do not place tools such as combs or hairpins in your mouth.
- ▶ Do not store combs or other tools in your pocket.
- ▶ Keep premises free of vermin such as rodents and flies.
- ▶ Do not allow animals in salon, except fish in closed aquariums and animals specifically trained to assist someone with a disability.
- ▶ Do not eat at your workstation.



**Maintaining a clean salon helps keep cosmetologists and clients healthy.**

## Exposure Control Plans

An exposure control plan (ECP) is outlined by the employer and explains what they will do to minimize exposure to bloodborne pathogens. The plan describes how the employer will:

- ▶ annually review exposure determination.
- ▶ utilize work practice controls.
- ▶ handle exposure incidents.
- ▶ provide training.
- ▶ maintain housekeeping.
- ▶ use signs, labels, and personal protective equipment.

The ECP is updated annually to ensure that any recent changes are reflected. It must also be updated as necessary to reflect changes in technology, employee positions, job duties, etc.

***Occupational exposure is defined as any duty or situation that could potentially expose an employee to blood or other potentially infectious material.***

While it might not immediately seem like a term that is relevant to cosmetology, working closely with clients and other cosmetologists on a daily basis can put you in contact with blood or potentially other bodily fluids. In addition, cosmetologists also work with and around sharp instruments that have the potential to transmit pathogens. Some employees may have more exposure to these kinds of pathogens than others, but it is important for all employees to be aware of such hazards.

Therefore, everything in the work environment that includes potentially infectious materials must be labeled accordingly. Any materials that are infectious and can be considered biohazards (for example, any item that comes in contact with blood or body fluid), must be discarded into a biohazard box only. These boxes have fluorescent orange or red-orange labels with lettering and symbols in a contrasting color.



## Hepatitis B in the Workplace

Anyone who works in an environment in which they may be exposed to blood or other bodily fluids can be susceptible to hepatitis B. Though, as mentioned above, cosmetologists and salons may not immediately seem to be associated with bloodborne pathogens, do encounter people on a daily basis who may be known or unknown carriers of this disease. Thus, it is recommended that every cosmetologist get an HBV vaccine to reduce their risk of being infected and that they receive this vaccination prior to attending cosmetology school.

The HBV vaccine is now becoming more integrated into the normal childhood vaccine schedule, meaning many people have the vaccine as children. However, the CDC recommends that adults who have not completed the vaccine series get a universal HBV vaccine if they are in environments where they are susceptible to HBV.

Employees will likely have to sign a declination form if they decline the vaccine. This will be evidence that they know about the vaccine but have chosen not to have it administered.



## Methods of Controlling Hazards

As we have discussed throughout the module, there are several methods of control for bloodborne pathogens in the workplace.

- ▶ Universal precautions include such practices as keeping the working environment clean and regularly washing and disinfecting all tools and instruments.
- ▶ Engineering controls are designed to minimize exposure to hazards and include things such as making biohazard bins readily available.
- ▶ Work practice controls focus on practices such as washing hands and disposing of instruments properly. These are actions employees must perform consciously in order to minimize hazards.
- ▶ Finally, making sure to always wear personal protective equipment (including gloves for cosmetologists) is vital to minimize the hazards of bloodborne pathogens in the workplace. Appropriate personal protective equipment should be readily accessible in the workplace and provided by the employer at no charge to the employee.

## How to File/Resolve a Complaint

Although cosmetologists take every precaution to protect their clients and themselves, it is important to know what to expect if a client is harmed in your salon.

- ▶ Any client who is injured by a licensed cosmetologist, should first discuss what happened with the operator and salon owner.
- ▶ The client should take photographs of the injury and have another professional look at it to provide independent confirmation.
- ▶ If necessary, the client should seek medical attention.
- ▶ The client should always file a complaint with the state board.

Board representatives will review the complaint and determine the appropriate course of action to resolve the issue and/or obtain salon/operator compliance with the laws and regulations. Clients may also file a complaint to report unlicensed activity, false advertising, or fraud.

## Module Conclusion

Throughout this lesson, we have discussed what it means to work in a properly sanitized and disinfected work environment. We have outlined proper standards of cleanliness for all establishments, including but not limited to:

- ▶ Discussion of bacteria: what it is, how it grows, and how it can be controlled within the workplace.
- ▶ Standards of cleanliness for establishments, employers, and employees.
- ▶ Differences between disinfectants and antiseptics.
- ▶ Proper precautions when dealing with these chemicals.
- ▶ Bloodborne pathogens in the workplace, housekeeping standards, hepatitis B, and exposure control plans.
- ▶ Proper disinfection techniques of common tools and equipment that may be found in cosmetology workplaces.

**Module 3:**

# Occupational Safety and Health Administration Regulations

**Module Objectives**

Since its creation in 1970, the Occupational Safety and Health Administration (OSHA) has provided national leadership in occupational safety and health. OSHA helps employers and employees reduce on-the-job-injuries, illnesses, and deaths. OSHA is responsible for over 130 million workers at 8 million worksites.

Our objectives in this module are to:

- ▶ Explain the importance of OSHA to workers.
- ▶ Explain worker rights under OSHA.
- ▶ Discuss employer responsibilities under OSHA.
- ▶ Discuss the use and importance of OSHA standards.
- ▶ Explain how OSHA inspections are conducted.
- ▶ Explain the worker safety and health resources available.

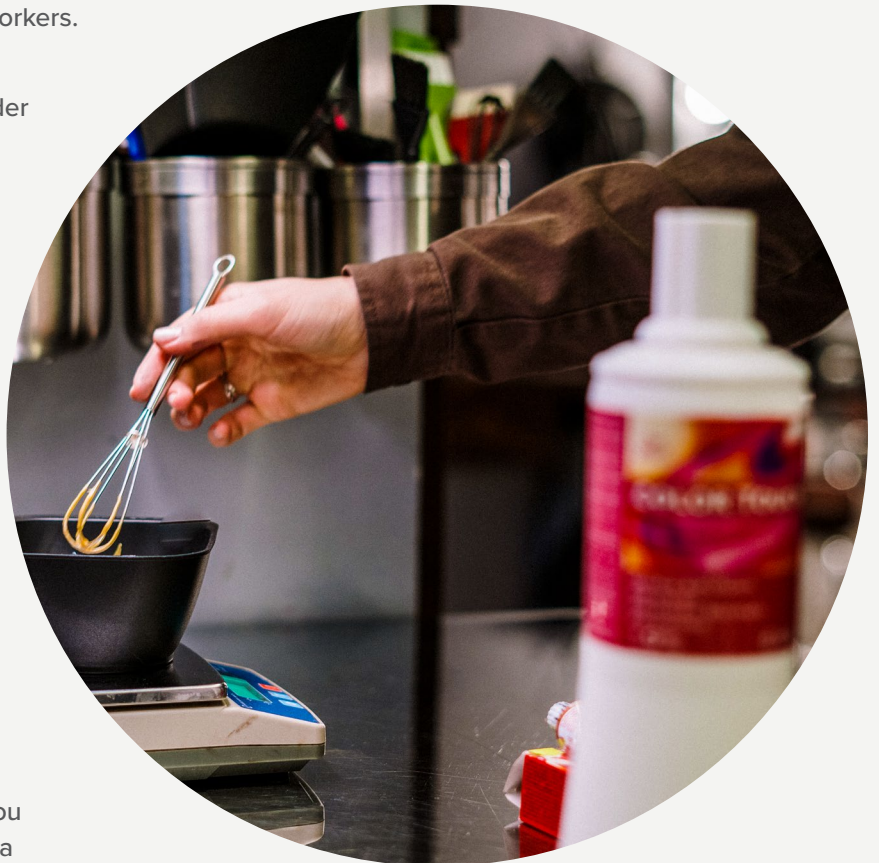
This module consists of the following sections:

**▶ OSHA's History and Mission**

In this section we will be looking at the history of OSHA and how it came to be, including OSHA's mission and the importance of understanding OSHA.

**▶ Your Rights Under OSHA**

In this section, we will cover the rights you have under OSHA such as, your right to a safe and healthful workplace and the right to file a complaint with OSHA. We will also look at worker/employee responsibilities.



► **Employer Responsibilities Under OSHA**

Here, we will study the responsibilities employers have in providing a workplace that is free from hazards and is in compliance with OSHA.

► **OSHA Standards**

In this section, we will look at the types of standards and how OSHA organizes standards.

► **OSHA Inspections**

This section covers inspection priorities including the stages of an inspection, citations and penalties, and the appeals process.

► **Where You Can Go for Help**

This section covers the resources available both inside and outside of the workplace/worksites. In addition, we will look at how to file a complaint with OSHA.

Once you have read through this module, you will be able to explain the importance of OSHA in providing a safe and healthful workplace to workers covered by OSHA.

## Weekly Fatality/Catastrophe Report

Before we begin this section, we will define OSHA's Weekly Fatality/Catastrophe Report. These reports provide weekly summaries of fatalities and catastrophes resulting in the hospitalization of three or more workers. The fatalities listed are only those that initially appear to be work related. For example, the apparent heart attack of a worker with a previously existing heart condition would not be included. It is important to emphasize that this report represents only one week of worker fatalities reported to OSHA.

**Remember:** Hazard prevention is OSHA's priority. If workers know their rights and employers meet their responsibilities, lives and limbs can be saved. This is why training such as this is very important, it is the primary way to train workers on the basics of occupational safety and health issues to reduce workplace fatalities, injuries and illnesses.

## History and Mission of OSHA

An agency of the U.S. Department of Labor, the Occupational Safety and Health Administration (OSHA) was created through the Occupational Safety and Health Act of 1970. Congress established OSHA "to assure so far as possible every working man and woman in the nation safe and healthful working conditions and to preserve our human resources." Since OSHA was created, workplace fatalities have been reduced by over 60%, with injury and illness rates declining by 75%.

The timeline below details some of the events that led to the creation of OSHA.

<p><b>1911: Triangle Shirtwaist Fire</b></p>	<ul style="list-style-type: none"> <li>▶ In one of the worst work-related disasters in U.S. history, 146 of the 500 employees at the Triangle Shirtwaist factory—including many young immigrant women—died in a fire. The factory doors were locked, and there were no fire escapes.</li> </ul>
<p><b>1913-1919: The Department of Labor and World War I</b></p>	<ul style="list-style-type: none"> <li>▶ The resulting outrage led to calls for safety and health reforms.</li> <li>▶ In 1913, the bill establishing the Department of Labor was signed, describing the Department’s mission as being “to foster, promote and develop the welfare of working people.”</li> <li>▶ When the need for increased production during WWI caused a crisis in workplace safety and health conditions, the Department of Labor was put in charge of the War Labor Administration.</li> <li>▶ Eventually, the government created a Working Conditions Service to promote the health and safety of workers as well as to help states inspect plants and reduce hazards.</li> </ul>
<p><b>1930-1950: The New Deal and After</b></p>	<ul style="list-style-type: none"> <li>▶ A number of laws passed as part of President Franklin D. Roosevelt’s New Deal increased the federal government’s role in protecting workers’ health and safety. However, these laws often covered only specific industries.</li> </ul>
<p><b>1960s: Response to a National Crisis</b></p>	<ul style="list-style-type: none"> <li>▶ Research was released highlighting increasing workplace hazards.</li> <li>▶ Over 2 million workers were unable to work and 14,000 people died every year from work-related illnesses and injuries.</li> <li>▶ Links between new chemicals entering the workplace and cancer were discovered.</li> <li>▶ In response to what President Lyndon B. Johnson declared a “national crisis,” the first draft of what would become the OSH law was submitted to Congress.</li> </ul>

## The OSH Act

Many thought that the only solution to the issues shown above was a federal law that applied the same rules and enforcement for everyone. President Nixon signed the OSH Act creating the Occupational Safety and Health Administration (OSHA) in late 1970. OSHA formally came into being on April 28, 1971, as an agency of the U.S. Department of Labor responsible for worker safety and health protection. With the creation of OSHA, for the first

time all employers in the United States had the legal responsibility to provide a safe and healthful workplace for employees. Now, there were uniform regulations that applied to all workplaces.

### **Who OSHA Covers**

The OSH Act covers most private sector employers and their workers throughout the U.S. and its territories and jurisdictions. Employers and workers in many fields—such as manufacturing, construction, longshoring, agriculture, law, medicine, charity, and disaster relief—are also covered by OSHA. Religious groups that employ workers for secular purposes—such as maintenance or gardening—are also covered.

### **Who OSHA Does Not Cover**

While OSHA conducts inspections of federal agencies in response to complaints, they cannot propose monetary fines against these agencies.

The following groups do not come under OSHA:

- ▶ The self-employed
- ▶ Immediate members of farming families not employing outside workers
- ▶ Mine workers, certain truckers and transportation workers, and atomic energy workers who are covered by other federal agencies
- ▶ Public employees in state and local governments (Some states have their own plans that cover these workers.)

### **OSHA's Mission**

According to OSHA, its mission is to “ensure safe and healthful working conditions for men and women by setting and enforcing standards and by providing training outreach, education and assistance.”

To achieve this, OSHA sets standards describing the methods employers must follow to protect their workers. These standards include limiting the amount of hazardous chemicals workers can be exposed to, specifying safe practices and equipment for different environments, and requiring employers to monitor hazards in the workplace.

OSHA also protects workers by:

- ▶ conducting worksite inspections and, when necessary, issuing fines or citations.
- ▶ maintaining a reporting and recordkeeping system to keep track of job-related injuries and illnesses.
- ▶ offering services to employers such as free consultations for small businesses and access to assistance compliance specialists.
- ▶ providing training to increase knowledge about occupational safety and health.

OSHA also assists states that operate their own job safety and health programs. There are currently more than 20 OSHA-approved job safety and health programs operated by individual states covering most private sector employees as well as state and local government workers in the state. Several other states and territories have OSHA-approved state plans that do not cover private sector workers. State plan programs respond to accidents and employee complaints and conduct unannounced inspections, just like federal OSHA.

## Hazards and Conditions

Even though OSHA has had an impact on worker safety and health, significant hazards and unsafe conditions still exist in U.S. workplaces. Each year:

- ▶ On average, 14 workers die every day from on-the-job injuries.
- ▶ Over 5,200 Americans die from workplace injuries annually.
- ▶ Over 3.5 million non-fatal workplace injuries and illnesses were reported.
- ▶ The estimated costs—including workers' compensation and other indirect costs—of occupational injuries and illnesses are close to \$200 billion, almost \$4 billion per week.

## Employee Rights Under OSHA

Protecting workers is a big responsibility. OSHA is a small agency, with approximately 2,100 federal inspectors and 1,400 state inspectors to cover about eight million workplaces.

OSHA cannot be everywhere. That is why it is important for you to know your rights and for employers to be aware of their responsibilities under OSHA. Being able to recognize whether your employer is complying with OSHA standards, understanding your rights related to job safety and health, and knowing where you can go if you need help are keys in making sure OSHA's standards are implemented and enforced.

Under OSHA, you have the following rights:

- ▶ You have the right to notify your employer or OSHA about workplace hazards.
- ▶ You have the right to request an OSHA inspection if you believe that there are unsafe and unhealthful conditions in your workplace.
- ▶ You can file a complaint with OSHA within 30 days of retaliation or discrimination by your employer for making safety and health complaints or for exercising your rights under the OSH Act.
- ▶ You have a right to see OSHA citations issued to your employer.
- ▶ Your employer must correct workplace hazards by the date indicated on the citation and must certify that these hazards have been reduced or eliminated.
- ▶ You have the right to copies of your medical records or records of your exposure to toxic and harmful substances or conditions.
- ▶ Your employer must post this notice in your workplace.

Along with those rights come some responsibilities. You must comply with all occupational safety and health standards issued under the OSH Act that apply to your own actions and conduct on the job.

## Right to Information About Hazardous Chemicals

An important right is the right to know about hazardous substances in your workplace. Employers must have a written, complete hazard communication program that includes information on:

- ▶ Container labeling
- ▶ Safety Data Sheets (SDSs)
- ▶ Worker training. The training must include the physical and health hazards of the chemicals and how workers can protect themselves, including specific procedures the employer has implemented to protect workers, such as work practices, emergency procedures, and personal protective equipment.

The hazard communication program must also include a list of the hazardous chemicals in each work area and the means the employer uses to inform workers of the hazards of non-routine tasks. In addition, the program must explain how the employer will inform other employers of hazards to which their workers may be exposed, for example, contract workers.

### Safety Data Sheet (SDS)

OSHA's Hazard Communication Standard (HCS) requires the manufacturers, distributors, or importers of chemicals to provide safety data sheets (SDSs) to communicate information about hazardous chemicals. These sheets provide workers and emergency personnel with information about potential chemical hazards and safe handling procedures.

Chemical manufacturers and importers must develop or obtain a safety data sheet for each hazardous chemical they produce or import. Employers must have an SDS in the workplace for each hazardous chemical they use and must ensure that the SDSs are readily accessible during each work shift to employees when they are in their work area(s).

Electronic access and other alternatives to maintaining paper copies of the safety data sheets are permitted as long as such options do not create barriers to immediate employee access in each workplace.

The SDS includes information such as the properties of each chemical, the physical, health, and environmental health hazards, protective measures, and safety precautions for handling, storing, and transporting the chemical.

Information on the SDS must be in English. However, it may be in other languages as well. To make the SDS easy for workers handling potentially hazardous chemicals to use and understand, the information on each sheet must be presented in a consistent 16-section format.

Review the table below to learn about the mandatory sections of the SDS.

#### Section 1—Identification

This section gives the name of the chemical as well as its recommended uses. It also provides the supplier's contact information. The required information for this section consists of:

- ▶ the product identifier used on the label and any other common names or synonyms by which the substance is known;
- ▶ the name, address, phone number, and emergency phone number of the manufacturer, importer, or other responsible party; and
- ▶ the recommended use of the chemical (e.g., a brief description of what it actually does, such as acting as a flame retardant) and any restrictions on use, including recommendations given by the supplier.

1. Product and company identification	
Product name	: Potassium Chloride, GR
Product code	: PX1405
Supplier	: EMD Millipore Corp. 280 Concord Rd. Billerica, MA 01821 1-878-715-1335 Technical Service Monday - Friday, 8:00 - 6:00 PM EST
Synonym	: Potassium Muriate
Material uses	: Other non-specified industry: Analytical reagent.
Validation date	: 3/10/2012.
In case of emergency	: 800-424-9300 CHEMTREC (USA) 613-886-8695 CANUTEC (Canada) 24 Hours/Day, 7 Days/Week



## Section 2—Hazards Identification

This section identifies the hazards of the chemical and the appropriate warning information associated with those hazards. The required information for this section consists of:

- ▶ the hazard classification of the chemical (e.g., flammable liquid, category),
- ▶ the signal word,
- ▶ the hazard statement(s),
- ▶ the pictograms presented as graphical reproductions of the symbols in black and white or as a description of the name of the symbol (e.g., skull and crossbones, flame),
- ▶ the precautionary statement(s),
- ▶ the description of any hazards not otherwise classified, and
- ▶ for a mixture that contains an ingredient(s) with unknown toxicity, a statement describing how much (by percentage) of the mixture consists of ingredient(s) with unknown acute toxicity. Please note that this is a total percentage of the mixture and not tied to the individual ingredient(s).

2. Hazards identification	
Emergency overview	: WARNING! CAUSES EYE IRRITATION. MAY BE HARMFUL IF SWALLOWED. MAY CAUSE SKIN IRRITATION. MAY CAUSE DAMAGE TO THE FOLLOWING ORGANS: GASTROINTESTINAL TRACT, EYES.  Do not ingest. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.
Physical state	: Solid, [Crystals. Granular solid. Powder.]
OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Routes of entry	: Inhalation, Ingestion.
<b>Potential acute health effects</b>	
Inhalation	: Slightly irritating to the respiratory system.
Ingestion	: May be harmful if swallowed.
Skin	: May cause skin irritation.
Eyes	: Irritating to eyes.
<b>Potential chronic health effects</b>	
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.
Target organs	: May cause damage to the following organs: gastrointestinal tract, eyes.
Medical conditions aggravated by over-exposure	: Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.
See toxicological information (section 11)	

## Section 3—Composition/Information on Ingredients

This section identifies the ingredient(s) contained in product, including impurities and stabilizing additives. This section includes information on substances, mixtures, and all chemicals where a trade secret is claimed.

For substances, the information must include:

- ▶ the chemical name,
- ▶ the common name and synonyms,
- ▶ the Chemical Abstracts Service (CAS) number and other unique identifiers, and
- ▶ the impurities and stabilizing additives, which are, themselves, classified and which contribute to the classification of the chemical.

For mixtures, the information must include:

- ▶ the same information required for substances,
- ▶ the chemical name and concentration (i.e., exact percentage) of all ingredients that are classified as health hazards and that present a health risk either above or below their cut-off/concentration limits.

3. Composition/Information on ingredients		
Name	CAS number	% by weight
Potassium Chloride	7447-40-7	100

- ▶ the concentration (exact percentages) of each ingredient.

Note: Concentration ranges may be used when a trade secret claim is made, when there is batch-to-batch variation, or when the SDS is used for a group of substantially similar mixtures.

- ▶ When chemicals are claimed as a trade secret, there must be a statement that the specific chemical identity, and/or exact percentage (concentration) of composition, has been withheld as a trade secret. This is required.

#### Section 4—First-Aid Measures

This section describes the initial care that any untrained responders should provide to an individual who has been exposed to the chemical. The required information consists of:

- ▶ necessary first-aid instructions by relevant routes of exposure (inhalation, skin and eye contact, and ingestion),
- ▶ a description of the most important symptoms or effects, and any symptoms that are acute or delayed, and
- ▶ recommendations for immediate medical care and special treatment needed, when necessary.

4. First aid measures	
Eye contact	: Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
Skin contact	: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
Inhalation	: Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
Ingestion	: Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

#### Section 5—Fire-Fighting Measures

This section provides recommendations for fighting a fire caused by the chemical. The required information consists of:

- ▶ recommended suitable extinguishing equipment and information about extinguishing equipment that is not appropriate,
- ▶ advice on specific hazards related to this chemical during a fire, such as any hazardous combustion products created when the chemical burns, and
- ▶ recommended special protective equipment or precautions for firefighters.

5. Fire-fighting measures	
Flammability of the product	: No specific fire or explosion hazard.
Extinguishing media	: Use an extinguishing agent suitable for the surrounding fire.
Not suitable	: None known.
Special exposure hazards	: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Hazardous thermal decomposition products	: Decomposition products may include the following materials: halogenated compounds, metal oxides/oxides.
Special protective equipment for fire-fighters	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

#### Section 6—Accidental Release Measures

This section recommends appropriate responses to spills, leaks, or releases, including containment and cleanup practices to prevent or minimize exposure to people, properties, or the environment. It may also distinguish between responses for large and small spills, where the spill volume has a significant impact on the hazard. The required information may consist of recommendations for:

6. Accidental release measures	
Personal precautions	: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
Environmental precautions	: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
<b>Methods for cleaning up</b>	
Spill	: Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

- ▶ personal precautions (such as removing ignition sources or providing sufficient ventilation) and protective equipment to prevent contamination of skin, eyes, and clothing;
- ▶ emergency procedures, including instructions for evacuations, consulting experts when needed, and appropriate protective clothing;
- ▶ methods and materials used for containment (e.g., covering the drains and capping procedures); and
- ▶ cleanup procedures (e.g., appropriate techniques for neutralization, decontamination, cleaning, or vacuuming; adsorbent materials as well as equipment required for containment/cleanup).

### Section 7—Handling and Storage

This section describes safe handling practices and conditions for safe storage of chemicals. The required information consists of:

- ▶ precautions for safe handling, including recommendations for handling incompatible chemicals, minimizing the release of the chemical into the environment, and providing advice on general hygiene practices (e.g. prohibiting eating, drinking, and smoking in work areas); and
- ▶ recommendations for safe storage, including any incompatibilities and advice on specific storage requirements (e.g., ventilation requirements).

#### 7. Handling and storage

Handling	: Do not ingest. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Storage	: Store in accordance with local regulations. Store in original container, protected from direct sunlight. Keep container tightly closed and sealed until ready for use.

### Section 8—Exposure Controls/Personal Protection

This section details the exposure limits, engineering controls, and personal protective measures that can be used to minimize worker exposure. The required information consists of:

- ▶ OSHA Permissible Exposure Limits (PELs), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLVs), and any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the safety data sheet, where available;
- ▶ appropriate engineering controls (e.g., use local exhaust ventilation, or use only in an enclosed system);
- ▶ recommendations for personal protective measures to prevent illness or injury from exposure to chemicals, such as personal protective equipment (PPE) (e.g., appropriate types of eye, face, skin, or respiratory protection needed based on hazards and potential exposure); and
- ▶ any special requirements for PPE, protective clothing, or respirators (e.g., type of glove material, such as PVC or nitrile rubber gloves, and breakthrough time of the glove material).

#### 8. Exposure controls/personal protection

Consult local authorities for acceptable exposure limits.	
Engineering measures	: Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
Hygiene measures	: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
<b>Personal protection</b>	
Respiratory	: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Hands	: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Recommended: nitrile rubber
Eyes	: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Recommended: safety glasses with side-shields
Skin	: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: lab coat
Environmental exposure controls	: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## Section 9—Physical and Chemical PropertiesNew Tab

This section identifies physical and chemical properties associated with the substance or mixture. The minimum required information consists of the substance or mixture's:

- ▶ appearance (physical state, color, etc.).
- ▶ upper/lower flammability or explosive limits.
- ▶ odor.
- ▶ vapor pressure.
- ▶ odor threshold.
- ▶ vapor density.
- ▶ pH.
- ▶ relative density.
- ▶ melting point/freezing point.
- ▶ solubility(ies).
- ▶ initial boiling point and boiling range.
- ▶ flash point.
- ▶ evaporation rate.
- ▶ flammability (solid, gas).
- ▶ partition coefficient: n-octanol/water.
- ▶ auto-ignition temperature.
- ▶ decomposition temperature.
- ▶ viscosity.

The SDS may not contain every item listed above because information may not be relevant or is not available. When this occurs, a notation to that effect must be made for that chemical property. Manufacturers may also add other relevant properties, such as the dust deflagration index (Kst) for combustible dust, used to evaluate a dust's explosive potential.

9. Physical and chemical properties	
Physical state	: Solid. [Crystals. Granular solid. Powder.]
Flash point	: [Product does not sustain combustion.]
Color	: White.
Odor	: Odorless.
Molecular weight	: 74.55 g/mole
Molecular formula	: KCl
pH	: Not available.
Boiling/condensation point	: Not available.
Melting/freezing point	: 773°C (1423.4°F)
Relative density	: Not available.
Vapor pressure	: Not available.
Vapor density	: Not available.
Odor threshold	: Not available.

## Section 10—Stability and Reactivity

This section describes the reactivity hazards of the chemical and the chemical's stability information. This section is broken into three parts: reactivity, chemical stability, and other. The required information consists of the following:

10. Stability and reactivity	
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Hazardous polymerization	: Under normal conditions of storage and use, hazardous polymerization will not occur.
Conditions to avoid	: No specific data.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

#### For Reactivity

- ▶ a description of the specific test data for the chemical(s). This data can be for a class or family of the chemical if such data adequately represents the anticipated hazard of the chemical(s), where available.

#### For Chemical Stability

- ▶ an indication of whether the chemical is stable or unstable under normal ambient temperature and conditions while in storage and being handled,
- ▶ a description of any stabilizers that may be needed to maintain chemical stability,
- ▶ an indication of any safety issues that may arise should the product change in physical appearance

#### For Other,

- ▶ an indication of the possibility of hazardous reactions, including whether the chemical will react or polymerize—which could release excess pressure or heat or create other hazardous conditions. Also, a description of the conditions under which hazardous reactions may occur;
- ▶ a list of all conditions that should be avoided (e.g., static discharge, shock, vibrations, or environmental conditions that may lead to hazardous conditions);
- ▶ a list of all classes of incompatible materials (e.g., classes of chemicals or specific substances) with which the chemical could react to produce a hazardous situation;
- ▶ a list of any known or anticipated hazardous decomposition products that could be produced because of use, storage, or heating. (Hazardous combustion products should also be included in the SDS Section 5—Fire-Fighting Measures.)

### Section 11—Toxicological Information

This section identifies toxicological and health effects information or indicates that such data is not available. The required information consists of:

- ▶ likely routes of exposure (inhalation, ingestion, skin, and eye contact). The SDS should indicate if the information is unknown;
- ▶ delayed, immediate, or chronic effects from short- and long-term exposure;
- ▶ numerical measures of toxicity (e.g., acute toxicity estimates such as the LD50 (median lethal dose))—the estimated amount [of a substance] expected to kill 50% of test animals in a single dose;
- ▶ symptoms associated with exposure to the chemical, including symptoms from the lowest to the most severe exposure; and

11. Toxicological information				
<b>Acute toxicity</b>				
Product/ingredient name	Test Route	Species	Result	
Potassium Chloride	LD50	Rat	660 mg/kg	
	Intraperitoneal			
	LD50 Intravenous	Rat	142 mg/kg	
	LD50 Oral	Rat	2600 mg/kg	
	LD50 Oral	Mouse	1500 mg/kg	
	LDLo Oral	Guinea pig	2500 mg/kg	
	LDLo Oral	Man	20 mg/kg	
	TDLo	Rat	272.7 mg/kg	
	Intracerebral			
<b>Irritation/Corrosion</b>				
Product/ingredient name	Result	Species	Score	Observation
Potassium Chloride	Eyes - Mild Irritant	Rabbit	-	-
<b>Carcinogenicity</b>				
No known significant effects or critical hazards.				
<b>Mutagenicity</b>				
No known significant effects or critical hazards.				
<b>Teratogenicity</b>				
No known significant effects or critical hazards.				

- ▶ a notation of whether the chemical is listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition) or has been found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest editions) or found to be a potential carcinogen by OSHA.

In addition to the mandatory information described above, an SDS may contain additional sections of information that is helpful but not mandatory. Read through the table below to learn about these additional sections of the SDS.

### Section 12—Ecological Information (Non-Mandatory)

This section evaluates the environmental impact of the chemical(s) if released to the environment. The information may include:

- ▶ data from toxicity tests performed on aquatic and/or terrestrial organisms, where available (e.g., acute or chronic aquatic toxicity data for fish, algae, crustaceans, and other plants; toxicity data on birds, bees, plants).
- ▶ potential for the chemical to persist and degrade in the environment either through biodegradation or other processes, such as oxidation or hydrolysis.
- ▶ results of tests of bioaccumulation potential, making reference to the octanol-water partition coefficient (Kow) and the bio concentration factor (BCF), where available.
- ▶ potential for a substance to move from the soil to the groundwater (indicate results from adsorption studies or leaching studies).
- ▶ other adverse effects (e.g., environmental fate, ozone layer depletion potential, photochemical ozone creation potential, endocrine disrupting potential, and/or global warming potential).

12. Ecological information			
Aquatic ecotoxicity			
Product/ingredient name	Result	Species	Exposure
Potassium Chloride	Acute EC50 141.46 mg/L	Daphnia	48 hours
	Acute EC50 166000 ug/L	Daphnia - Water flea -	48 hours
	Fresh water	Daphnia magna - 12 hours	
	Acute EC50 149000 ug/L	Daphnia - Water flea -	48 hours
	Fresh water	Daphnia magna - 12 hours	
	Acute EC50 141460 to	Daphnia - Water flea -	48 hours
	170700 ug/L, Fresh water	Daphnia magna	
	Acute EC50 93000 ug/L	Daphnia - Water flea -	48 hours
	Fresh water	Daphnia magna - 12 hours	
	Acute EC50 93000 ug/L	Daphnia - Water flea -	48 hours
	Fresh water	Daphnia magna - 12 hours	
	Acute LC50 2010 mg/L	Fish	96 hours
	Acute LC50 880 mg/L	Fish	96 hours
	Acute LC50 550 mg/L	Crustaceans - Opossum	48 hours
	Marine water	shrimp - Americamysis	

### Section 13—Disposal Considerations (Non-Mandatory)

This section provides guidance on proper disposal practices, recycling or reclamation of the chemical(s) or container(s), and safe handling practices. To minimize exposure, this section should also refer the reader to Section 8 (Exposure Controls/Personal Protection) of the SDS. The information may include:

- ▶ a description of appropriate disposal containers to use.
- ▶ recommendations of appropriate disposal methods to employ.
- ▶ A description of the physical and chemical properties that may affect disposal activities.
- ▶ language discouraging sewage disposal.
- ▶ any special precautions for landfills or incineration activities.

13. Disposal considerations
The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national, and international regulations.



## Section 14—Transport Information (Non-Mandatory)

This section provides guidance on classification information for shipping and transporting of hazardous chemical(s) by road, air, rail, or sea. The information may include:

- ▶ the UN number (i.e., four-figure identification number of the substance).
- ▶ the UN proper shipping name.
- ▶ the transport hazard class (es).
- ▶ the packing group number, if applicable, based on the degree of hazard.
- ▶ the environmental hazards (e.g., whether the chemical is a marine pollutant according to the International Maritime Dangerous Goods Code (IMDG Code)).
- ▶ guidance on transport in bulk (according to Annex II of MARPOL 73/78 and the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (International Bulk Chemical Code (IBC Code))).
- ▶ any special precautions an employee should be aware of or needs to comply with concerning transport or conveyance inside or outside their premises (indicate when information is not available).

14. Transport information					
Regulatory information	UN number	Proper shipping name	Classes	PG* Label	Additional information
DOT Classification	-	CHEMICALS, N.O.S.	-	-	-
PG* : Packing group					

## Section 15—Regulatory Information (Non-Mandatory)

This section identifies the safety, health, and environmental regulations specific for the product that are not indicated anywhere else on the SDS. The information may include:

- ▶ Any national and/or regional regulatory information of the chemical or mixtures (including any OSHA, Department of Transportation, Environmental Protection Agency, or Consumer Product Safety Commission regulations).

15. Regulatory information	
<b>United States</b>	
HCS Classification	: Irritating material Target organ effects
U.S. Federal regulations	: TSCA 8(a) IUR: Partial exemption United States inventory (TSCA 8b): This material is listed or exempted. TSCA (Toxic Substances Control Act): This product is listed on the TSCA inventory. SARA 302/304/311/312 extremely hazardous substances: No products were found. SARA 302/304 emergency planning and notification: No products were found. SARA 302/304/311/312 hazardous chemicals: Potassium Chloride SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Potassium Chloride: Immediate (acute) health hazard Clean Water Act (CWA) 307: No products were found. Clean Water Act (CWA) 311: No products were found. Clean Air Act (CAA) 112 accidental release prevention: No products were found. Clean Air Act (CAA) 112 regulated flammable substances: No products were found. Clean Air Act (CAA) 112 regulated toxic substances: No products were found.
DEA List I Chemicals (Precursor Chemicals)	: Not listed
DEA List II Chemicals (Essential Chemicals)	: Not listed
<b>Canada</b>	
WHMIS (Canada)	: Class D-2B: Material causing other toxic effects (Toxic).
Canadian lists	: CEPA Toxic substances: This material is not listed. Canadian ARET: This material is not listed. Canadian NPRI: This material is not listed. Alberta Designated Substances: This material is not listed. Ontario Designated Substances: This material is not listed. Quebec Designated Substances: This material is not listed.
CEPA DSL / CEPA NDSL	: This material is listed or exempted. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.
<b>EU regulations</b>	
Risk phrases	: This product is not classified according to EU legislation.
<b>International regulations</b>	
International lists	: Australia inventory (AICS): This material is listed or exempted. China inventory (IECSC): This material is listed or exempted. Japan inventory: This material is listed or exempted. Korea inventory: This material is listed or exempted. New Zealand inventory of Chemicals (NZIoC): This material is listed or exempted. Philippines inventory (PICCS): This material is listed or exempted.



Section 16—Other Information

This section indicates when the SDS was prepared and when the last known revision was made. The SDS may also state where changes were made to the previous version. You may wish to contact the supplier for an explanation of the changes. Other useful information also may be included here.

16 . Other information

National Fire Protection Association (U.S.A.)

Health

2

0

Flammability

Instability

Special

Notice to reader

The statements contained herein are based upon technical data that EMD Millipore Corp. believes to be reliable, are offered for information purposes only and as a guide to the appropriate precautionary and emergency handling of the material by a properly trained person having the necessary technical skills. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use, storage and disposal of these materials and the safety and health of employees and customers and the protection of the environment. EMD MILLIPORE CORP. MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE, WITH RESPECT TO THE INFORMATION HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS.

# Occupational Safety and Health Administration Regulations

## Right to Information About Illnesses and Injuries

OSHA's recordkeeping rule requires most employers with more than 10 workers to keep a log of injuries and illnesses. The log, which is also called the OSHA 300, must contain all work-related injuries and illnesses resulting in lost workdays, restricted work or transfer to another job, as well as any incident requiring more than first aid treatment.

You have the right to review the current log, as well as logs stored for the past 5 years. If asked, the employer must provide this by the end of the next workday. The names and other information on the log may not be removed unless the case is a "privacy concern case." A "privacy concern case" may involve an injury or illness to an intimate body part or, an injury or illness resulting from a sexual assault, mental illnesses or other illnesses where the employee voluntarily requests that his or her name not be entered on the log. You also have the right to view the annually posted summary of injuries and illnesses, OSHA 300A.

## Right to Complain or Request Hazard Correction

Workers may raise safety and health concerns about the workplace with their employers without fear of discharge or discrimination, as long as the complaint is made in good faith. OSHA regulation 29 CFR 1977.9 protects workers who complain to their employer about unsafe or unhealthful conditions in the workplace. You cannot be transferred, denied a raise, have your hours reduced, be fired, or punished in any other way because you have exercised any right afforded to you under the OSH Act.

Specifically, 29 CFR 1977.9(c) states, "the salutary principles of the Act would be seriously undermined if employees were discouraged from lodging complaints about occupational safety and health matters with their employers. Such complaints to employers, if made in good faith, therefore would be related to the Act, and an employee would be protected against discharge or discrimination caused by a complaint to the employer."

Since employees are often closest to potential safety and health hazards, they have a vested interest in reporting problems so that the employer gets them fixed. If a hazard is not getting corrected, you should then contact OSHA.

## Right to Training

You have a right to get training from your employer on a variety of health and safety hazards and standards that your employer must follow. The training required under OSHA's Hazard Communication (Right to Know) standard is covered above. Other required training includes anything that may specifically pertain to your job or workplace.

## Right to Hazardous Exposure Records and Medical Records

Under OSHA standard 1910.1020, you have the right to examine and copy exposure and medical records, including records of workplace monitoring or measuring of a toxic substance. This is important if you have been exposed to toxic substances or harmful physical agents in the workplace, as this regulation may help you detect, prevent, and treat occupational disease.

Examples of toxic substances and harmful physical agents you might encounter in a workplace are:

- ▶ Metals and dusts, such as, lead, cadmium, and silica.
- ▶ Biological agents, such as bacteria, viruses, and fungi.
- ▶ Physical stress, such as noise, heat, cold, vibration, repetitive motion, and ionizing and non-ionizing radiation.

OSHA standards require employers to measure exposure to harmful substances, and workers or their representatives have the right to observe the testing and examine the results. If the exposure levels are above the limit set by the standard, the employer must tell workers what will be done to reduce their exposure.

### Right to File a Complaint With OSHA

You may file a complaint with OSHA if you believe a violation of a safety or health standard or other imminently danger situation exists in your workplace, and you may request that your name not be revealed to your employer. You can file a complaint on OSHA's website, in writing, or by telephone to the nearest OSHA office. You may also call the office and speak with an OSHA compliance officer about a hazard, violation, or the process for filing a complaint. If you file a complaint, you have the right to find out OSHA's action on the complaint and request a review if an inspection is not made. The specifics of filing a complaint are covered later in this module.

### Right to Participate in an OSHA Inspection

If OSHA conducts an inspection in your workplace, you have the right to have your representative accompany the inspector on the inspection. You also have the right to talk to the inspector privately. You may:

- ▶ point out hazards.
- ▶ describe injuries, illnesses, or near misses that resulted from those hazards.
- ▶ describe any concern you have about a safety or health issue.

In addition, you have the right to:

- ▶ learn the results of the inspection results.
- ▶ know what abatement measures will be taken.
- ▶ be involved in any meetings or hearings related to the inspection.
- ▶ object to the date set for the violation to be corrected.

If an employer disagrees with the results of the OSHA inspection, they may submit a written objection to OSHA called a Notice of Contest. You have the right to be notified if the employer files a contest.

### Right to Be Free From Retaliation

Workers have a right to seek safety and health on the job without fear of punishment. This right is spelled out in Section 11(c) of the OSH Act. The employer must not punish or discriminate against employees for exercising the right to complain to the employer, union, OSHA, or any other government agency about job safety and health hazards.

These rights include:

- ▶ complaining to OSHA and seeking an OSHA inspection.
- ▶ participating in an OSHA inspection.
- ▶ participating or testifying in any proceeding related to an OSHA inspection.

OSHA has a [website](#) summarizing your rights as a whistleblower. This resource covers the laws enforced by OSHA, unfavorable personnel actions, the process of filing a complaint, how OSHA determines whether

retaliation took place, and applicable whistleblower protections. There are also printable fact sheets available on OSHA's [website](#) detailing protections for whistleblowers in a variety of industries. These sheets are available in English and Spanish.

Workers also have the right to refuse to do a job if they believe in good faith that they are exposed to an imminent danger. "Good faith" means that even if an investigation determines the danger does not exist, the worker had reasonable grounds to believe that it did exist. Since the conditions necessary to justify a work refusal are very stringent, refusing work should be an action taken as a last resort.

If time permits, any potentially dangerous condition should be reported to OSHA or the appropriate government agency. If you believe you have been punished for exercising your safety and health rights, you must contact OSHA within 30 days.

### Refusing to Work Because Conditions Are Dangerous

In its landmark 1979 ruling, *Whirlpool Corp v. Marshall*, the United States Supreme Court more clearly defined a worker's right to refuse work where they have reasonable apprehension that death or serious injury or illness might occur as a result of performing the work.

In general, you do not have the right to walk off the job because of unsafe conditions. According to the *Whirlpool* ruling, your right to refuse to do a task is protected only if all of the following conditions are met:

- ▶ Where possible, you have asked the employer to eliminate the danger, and the employer failed to do so;
- ▶ You refused to work in "good faith." This means that you must genuinely believe that an imminent danger exists. Your refusal cannot be a disguised attempt to harass your employer or disrupt business;
- ▶ A reasonable person would agree that there is a real danger of death or serious injury; and
- ▶ There isn't enough time, due to the urgency of the hazard, to get it corrected through regular enforcement channels, such as requesting an OSHA inspection.

When all these conditions are met, you need to do the following:

- ▶ Ask your employer to correct the hazard;
- ▶ Ask your employer for other work;
- ▶ Tell your employer that you won't perform the work unless and until the hazard is corrected; and
- ▶ Remain at the worksite until ordered to leave by your employer.

You have the right to refuse work when you have reasonable apprehension that death or serious injury or illness might occur while performing the work. If you refuse work, you are protected as long as the criteria above are met. Talk to your employer about fixing a hazard when you believe you are working in unsafe or unhealthful conditions. Remember, if nothing is done to correct a hazard you can file a complaint or, if you are discriminated against, contact OSHA directly.

### Employer Responsibilities Under OSHA

The creation of OSHA ensured workers the right to a safe and healthful workplace. Section 5(a)(1) of the OSH Act, also known as the general duty clause, assigns employers the following primary responsibilities:

Employers must furnish employees a place of employment free from recognized hazards that cause or are likely to cause death or serious physical harm; and

Employers must comply with the occupational safety and health standards issued under the OSH Act.

The best way to maintain a safe and healthful workplace is to remove hazards and make sure that workers are properly trained. If a hazard cannot be removed completely, appropriate protection such as respirators or earplugs must be provided.

Some of the other key responsibilities for employers include:

- ▶ making sure workplace conditions conform to OSHA's standards.
- ▶ providing employees with safe tools and equipment.
- ▶ establishing and effectively communicating operating procedures to ensure that employees follow safety and health requirements.
- ▶ providing safety training in languages and vocabulary their workers understand.
- ▶ when hazardous chemicals are in the workplace, developing and implementing a written hazard communication program and training employees on the hazards and precautions.
- ▶ providing medication examination as required by OSHA standards.
- ▶ posting the OSHA poster (or the state plan equivalent) in a prominent location in the workplace.
- ▶ keeping records of work-related illnesses and injuries, making the log available to employees, former employees, and their representatives.
- ▶ not discriminating against employees who make complaints or otherwise exercise their rights.
- ▶ adopting a safety and health program.

**Note:** The above list does not include all of an employer's responsibilities under the OSH Act. A more detailed summary with links to the application standards is available on OSHA's website.

Some examples of a safe and healthful workplace include:

- ▶ Training is provided and required on job sites.
- ▶ Noise levels are controlled. When levels are still high, workers are given hearing tests and are provided training and hearing protection.
- ▶ Protection from chemical hazards is provided, including an evaluation of chemicals used, a written program, Safety Data Sheets, worker protection such as protective gloves, and information and training.

### Employer Training Responsibilities

As mentioned above, employers have a responsibility under OSHA standards to provide employees with certain kinds of training. Many OSHA standards specifically require training in the safety and health aspects of workers' jobs. Other standards make employers responsible for limiting certain job assignments to "certified," "competent," or "qualified" workers who have had appropriate previous training in or out of the workplace.

Training is essential to protect workers from injuries and illnesses, and this significance is reflected in OSHA's standards. For example, OSHA construction standards include a general training requirement, stating: "The employer shall instruct each employee in the recognition and avoidance of unsafe conditions and the regulations applicable to his work environment to control or eliminate any hazards or other exposure to illness or injury."

## Personal Protective Equipment

The preferred way to protect workers from hazards is always to eliminate the hazard. When eliminating or effectively isolating employees from the hazard is not possible, OSHA requires employers to reduce workers' exposure to potential harm by providing personal protective equipment (PPE).

Employers are required to determine if their workers need PPE. If PPE is required, employers must provide and pay for the PPE and then implement a PPE program to:

- ▶ complete a hazard assessment to identify the hazards in the workplace;
- ▶ outline how PPE is selected, maintained, and used;
- ▶ describe how workers are trained; and
- ▶ monitor the effectiveness of PPE in their workplace.

Even when a worker provides their own PPE, the employer must ensure that the equipment is adequate to protect the worker from hazards at the workplace.

Worker training must address:

- ▶ the need for PPE;
- ▶ the type of PPE required;
- ▶ how to put on, adjust, wear, and remove the PPE; and
- ▶ the proper use, limitations, maintenance, and disposal of the equipment.

## Recordkeeping

Many employers are also responsible for keeping records of serious injuries and illnesses, which includes:

- ▶ setting up and maintaining a reporting system.
- ▶ maintaining records for at least five years.
- ▶ providing copies of logs upon request.
- ▶ posting the annual summary.
- ▶ reporting within eight hours any accident resulting in a fatality or the hospitalization of three or more workers.

Recordkeeping is an important part of an employer's responsibilities. Keeping records allows OSHA to collect survey material, helps OSHA identify high-hazard industries, and informs you, the worker, about the injuries and illnesses in your workplace.

There are two exemptions to OSHA's recordkeeping rule:

- ▶ Employers with 10 or fewer employees at all times during the previous calendar year are exempt from routinely keeping OSHA injury and illness records.
- ▶ Employers in industries on OSHA's list of low-hazard industries are exempt from routinely keeping OSHA injury and illness records. A list of these industries is available on OSHA's website.

**Note:** Even employers who are not required to keep these forms must report to OSHA any work-related incidents that result in death, in-patient hospitalization, amputation, or the loss of an eye.

- ▶ fatalities.
- ▶ injuries or illnesses that result in loss of consciousness or time away from work, as well as those that require restricted work or transfer to another position.
- ▶ injuries or illnesses that require medical treatment beyond first aid.
- ▶ cases of cancer, chronic irreversible disease, fractured or cracked bones or teeth, and punctured eardrums.
- ▶ sharps injuries and needle sticks that involve contamination with another person's blood or other potentially infectious material.
- ▶ hearing loss (under certain conditions).
- ▶ cases of tuberculosis (only when the diagnosed employee has been occupationally exposed to someone with a known active case).

## Form 300: Log of Work-Related Injuries and Illnesses

- ▶ Lists work-related injuries and illnesses as described above.
- ▶ Tracks days away from work resulting from work-related injuries and illnesses as well as when a worker must be on restricted duties or transferred to another position.
- ▶ Allows employers to determine information about illnesses and injuries in their workplaces such as the number incidents, the most common types of injury, the jobs and departments that experience the most severe incidents.

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**Note:** When the nature of an injury or illness requires confidentiality, employers should not enter the worker's name on the log. Instead, they should write "privacy cast" in the space in which they would normally enter the employee's name. Employers must then keep a separate list of the case numbers and worker names for these confidential incidents.

### Form 300A: Summary of Work-Related Injuries and Illnesses

Shows the totals for the year in each category.

- ▶ Must be reviewed and signed by a company executive.
- ▶ Must be posted from February 1 to April 30 of each year in a place where notices to workers are usually posted, such as an employee bulletin board.

OSHA's Form 300A (Rev. 04/2004)

**Summary of Work-Related Injuries and Illnesses**

All establishments covered by Part 1904 must complete this Summary page, even if no work-related injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete and accurate before completing this summary.

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the Log. If you had no cases, write "0."

Employees, former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR Part 1904.35, in OSHA's recordkeeping rule, for further details on the access provisions for these forms.

**Note: You can type input into this form and save it.**  
Because the forms in this recordkeeping package are "fillable/writable" PDF documents, you can type into the input form fields and then save your inputs using the [free Adobe PDF Reader](#).

Year 20

**U.S. Department of Labor**  
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

**Number of Cases**

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
(G)	(H)	(I)	(J)

**Number of Days**

Total number of days away from work	Total number of days of job transfer or restriction
<input type="text" value="0"/>	<input type="text" value="0"/>
(K)	(L)

**Injury and Illness Types**

Total number of . . . (M)			
(1) Injuries	<input type="text" value="0"/>	(4) Poisonings	<input type="text" value="0"/>
(2) Skin disorders	<input type="text" value="0"/>	(5) Hearing loss	<input type="text" value="0"/>
(3) Respiratory conditions	<input type="text" value="0"/>	(6) All other illnesses	<input type="text" value="0"/>

Post this Summary page from February 1 to April 30 of the year following the year covered by the form.

Public reporting burden for this collection of information is estimated to average 58 minutes per response, including time to review the instructions, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any other aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistical Analysis, Room N-3644, 200 Constitution Avenue, NW, Washington, DC 20210. Do not send the completed forms to this office.

**Establishment information**

Your establishment name

Street

City  State  Zip

Industry description (e.g., *Manufacture of motor truck trailers*)

North American Industrial Classification (NAICS), if known (e.g., 336212)

**Employment information** (If you don't have these figures, see the Worksheet on the next page to estimate.)

Annual average number of employees

Total hours worked by all employees last year

**Sign here**

**Knowingly falsifying this document may result in a fine.**

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

Company executive  Title

Phone  Date

**Reset**

## Form 301: The Injury and Illness Report

- ▶ Used to record information about each case.
- ▶ May be replaced with a workers' compensation or insurance form if it contains equivalent information.

**OSHA's Form 301** (Rev. 04/2004)  
**Injury and Illness Incident Report**

Note: You can type input into this form and save it. Because the forms in this recordkeeping package are "fillable/writable" PDF documents, you can type into the input form fields and then save your inputs using the free Adobe PDF Reader. In addition, the forms are programmed to auto-calculate as appropriate.

Attention: This form contains information relating to employee health and must be used in a manner that protects the confidentiality of employees to the extent possible while the information is being used for occupational safety and health purposes.

U.S. Department of Labor  
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

This *Injury and Illness Incident Report* is one of the first forms you must fill out when a recordable work-related injury or illness has occurred. Together with the *Log of Work-Related Injuries and Illnesses* and the accompanying *Summary*, these forms help the employer and OSHA develop a picture of the extent and severity of work-related incidents.

Within 7 calendar days after you receive information that a recordable work-related injury or illness has occurred, you must fill out this form or an equivalent. Some state workers' compensation, insurance, or other reports may be acceptable substitutes. To be considered an equivalent form, any substitute must contain all the information asked for on this form.

According to Public Law 91-596 and 29 CFR 1904, OSHA's recordkeeping rule, you must keep this form on file for 5 years following the year to which it pertains.

If you need additional copies of this form, you may photocopy the printout or insert additional form pages in the PDF, and then use as many as you need.

**Information about the employee**

1) Full name \_\_\_\_\_

2) Street \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_

3) Date of birth \_\_\_\_\_  
Month Day Year

4) Date hired \_\_\_\_\_  
Month Day Year

5) ☐ Male ☐ Female

**Information about the physician or other health care professional**

6) Name of physician or other health care professional \_\_\_\_\_

7) If treatment was given away from the worksite, where was it given?  
Facility \_\_\_\_\_  
Street \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_

8) Was employee treated in an emergency room?  
☐ Yes ☐ No

9) Was employee hospitalized overnight as an in-patient?  
☐ Yes ☐ No

**Information about the case**

10) Case number from the Log \_\_\_\_\_ (Transfer the case number from the Log after you record the case.)

11) Date of injury or illness \_\_\_\_\_  
Month Day Year

12) Time employee began work (HH:MM) \_\_\_\_\_ ☐ AM ☐ PM

13) Time of event (HH:MM) \_\_\_\_\_ ☐ AM ☐ PM ☐ Check if time cannot be determined

**\* Re fields 14 to 17: Please do not include any personally identifiable information (PII) pertaining to worker(s) involved in the incident (e.g., no names, phone numbers, or Social Security numbers).**

14) **What was the employee doing just before the incident occurred?** Describe the activity, as well as the tools, equipment, or material the employee was using. Be specific. Examples: "climbing a ladder while carrying roofing materials"; "spraying chlorine from hand sprayer"; "daily computer key-entry."  
\_\_\_\_\_  
\_\_\_\_\_

15) **What Happened?** Tell us how the injury occurred. Examples: "When ladder slipped on wet floor, worker fell 20 feet"; "Worker was sprayed with chlorine when gasket broke during replacement"; "Worker developed soreness in wrist over time."  
\_\_\_\_\_  
\_\_\_\_\_

16) **What was the injury or illness?** Tell us the part of the body that was affected and how it was affected. Examples: "strained back"; "chemical burn, hand"; "carpal tunnel syndrome."  
\_\_\_\_\_  
\_\_\_\_\_

17) **What object or substance directly harmed the employee?** Examples: "concrete floor"; "chlorine"; "radial arm saw." If this question does not apply to the incident, leave it blank.  
\_\_\_\_\_  
\_\_\_\_\_

18) If the employee died, when did death occur? Date of death \_\_\_\_\_  
Month Day Year

**Completed by** \_\_\_\_\_  
Title \_\_\_\_\_  
Phone \_\_\_\_\_ Date \_\_\_\_\_  
Month Day Year

Public reporting burden for this collection of information is estimated to average 22 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Persons are not required to respond to the collection of information unless it displays a current valid OMB control number. If you have any comments about this estimate or any other aspects of this data collection, including suggestions for reducing this burden, contact US Department of Labor, OSHA Office of Statistical Analysis, Room N-3644, 200 Constitution Avenue, NW, Washington, DC 20210. Do not send the completed forms to this office.

**Add a Form Page** **Reset**

**Note:** All the OSHA Recordkeeping forms can be downloaded from OSHA's website. Forms 300, 300A, and 301 will download together with instructions on how to fill out each form.

## Medical Exams

Other employer responsibilities are providing medical exams when required by OSHA standards and providing workers access to their exposure and medical records. (Access to medical records was covered earlier in the module in the section of worker rights.) Under certain circumstances, employers may be required to conduct monitoring or provide medical examinations for workers who handle chemicals or other hazardous substances. Employers must give these employees copies of their medical or exposure records.

## Employer Responsibilities Regarding Discrimination

Employers must never discriminate against workers who exercise their rights. Section 11(c) of the OSH Act prohibits employers from discharging or in any manner retaliating against any worker for exercising your rights under the Act.

Depending upon the circumstances of the case, “discrimination” can include:

- ▶ firing or laying off.
- ▶ demoting.
- ▶ denying overtime or promotion.
- ▶ disciplining.
- ▶ reducing pay or hours.

If you believe your employer has discriminated against you because you exercised your safety and health rights, contact your local OSHA office right away. The OSH act gives you only 30 days to report discrimination.

### **OSHA Citations and Abatement Verification Notices**

Employers have the responsibility to post OSHA citations and abatement verification notices. An OSHA citation informs the employer and workers of:

- ▶ the standards violated.
- ▶ the length of time set for correction.
- ▶ proposed penalties resulting from an OSHA inspection.

Employers must post a copy of each citation at or near places where the violations occurred for three days, or until the violation is fixed—whichever is longer.

Employers must also:

- ▶ inform workers what has been done to fix the violation.
- ▶ allow workers to examine and copy abatement documents sent to OSHA.
- ▶ tag cited movable equipment to warn workers of the hazard.

# Occupational Safety and Health Administration Regulations

## OSHA Standards

Previous sections of this module have included a number of references to specific OSHA standards that protect employee rights to work in a safe and healthy environment. This section covers additional information about OSHA:

- ▶ What OSHA standards cover
- ▶ How the standards are organized
- ▶ How OSHA inspections are completed
- ▶ Citations and penalties OSHA may issue
- ▶ How citations and penalties may be appealed
- ▶ OSHA resources available to you
- ▶ Filing a complaint with OSHA

OSHA issues standards for General Industry, Construction, Maritime, and Agriculture. These standards cover a wide variety of workplace hazards, including:

- ▶ Toxic substances
- ▶ Electrical hazards
- ▶ Fall hazards
- ▶ Hazardous waste
- ▶ Machine hazards
- ▶ Infectious diseases
- ▶ Fire and explosion hazards
- ▶ Dangerous atmospheres

Where there are no specific OSHA standards, employers must comply with the OSH Act's "general duty clause." As was discussed in the earlier sections on Worker Responsibilities Under OSHA and Employer Responsibilities Under OSHA, the general duty clause of the OSH Act requires that each employer provide a place of employment "free from recognized hazards that are causing or are likely to cause death or serious physical harm."

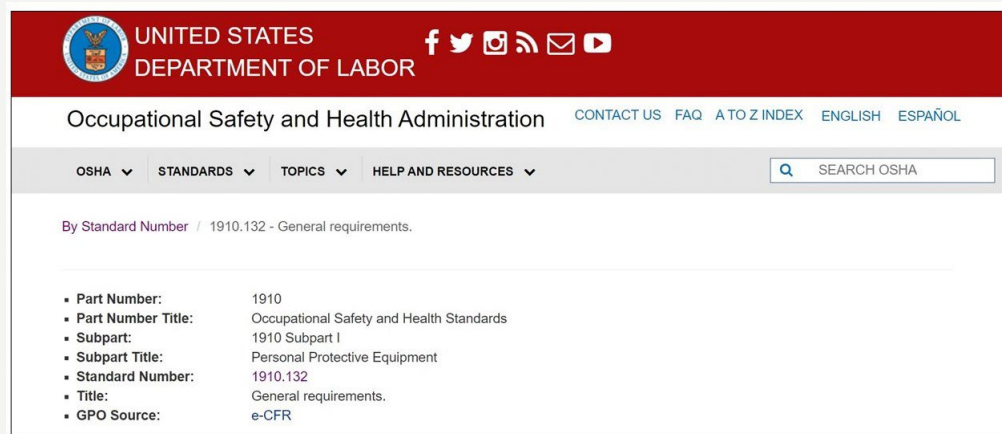
## Organization of OSHA Standards

OSHA standards appear in the Code of Federal Regulations (CFR), which collects and organizes all the general and permanent rules published by the various departments of the U.S. government. The CFR is divided into sections called titles. OSHA standards are in Title 29. OSHA standards consist of several parts.

- ▶ Part 1910 is known as the General Industry Standards. Some of the types of industries covered by the General Industry standards are manufacturing, the service sector, and health care.

- ▶ Part 1926 covers the Construction industry.
- ▶ Parts 1915, 1917 and 1918 are Maritime Industry standards.

Major blocks of information within each part are organized into subparts. For example, Subpart C is named General Safety and Health Provisions. Each subpart is further broken down into sections.



OSHA standards are organized and identified by a system of numbers and letters. For example, OSHA standard CFR 29 1910.132(f) was mentioned earlier in this module. This standard concerns an employer's responsibility to provide PPE training to workers. In this case:

- ▶ CFR is the Code of Federal Regulations
- ▶ 29 refers to the title, General Requirements
- ▶ 1910 refers to the part, Occupational Safety and Health Standards
- ▶ .132 is the section, which concerns personal protective equipment
- ▶ (f) identifies the subtopic, in this case training

Arabic numbers and Roman numerals identify subjects and specific rules within the training subtopic. For example, in CFR 29 1910.132(f)(1)(iv):

- ▶ (1) is the requirement that employers provide training.
- ▶ (iv) specifies that the required training must cover the limitation of the PPE.

1910.132(f)

*Training.*

1910.132(f)(1)

The employer shall provide training to each employee who is required by this section to use PPE. Each such employee shall be trained to know at least the following:

1910.132(f)(1)(i)

When PPE is necessary;

1910.132(f)(1)(ii)

What PPE is necessary;

1910.132(f)(1)(iii)

How to properly don, doff, adjust, and wear PPE;

1910.132(f)(1)(iv)

The limitations of the PPE; and,

1910.132(f)(1)(v)

The proper care, maintenance, useful life and disposal of the PPE.

**Note:** You can look up any OSHA standard by the standard number or do a search by topic on OSHA's website.

## How OSHA Inspections Are Conducted

The OSH Act authorizes OSHA compliance safety and health officers (CSHOs) to conduct workplace inspections at reasonable times. OSHA conducts inspections without advance notice, except in rare circumstances. In fact, anyone who tells an employer about an OSHA inspection in advance can receive fines and a jail term.

## Inspection Priorities

Since not all 8 million worksites covered by OSHA can be inspected, the agency has a system of inspection priorities. Review the table below to see how OSHA prioritizes issues for inspections.

<b>Priority 1</b>	<b>Imminent Danger</b>
<p>OSHA assigns top priority to situations in which there is reasonable certainty a danger exists that can be expected to cause death or serious physical harm immediately or that such harm is likely to occur before the danger can be removed through normal enforcement. In such cases, OSHA may contact the employer and try to have workers removed from the danger right away. In any case, a CSHO will conduct an inspection no later than one day after the report was received.</p>	
<b>Priority 2</b>	<b>Fatalities and Catastrophes</b>
<p>Next in priority are reports from employers to OSHA of any worker fatalities or the hospitalization of three or more employees. OSHA starts these investigations as soon as possible after getting the report. CSHOs gather evidence and interview the employer, workers, and others to determine the causes of the event and whether violations occurred.</p>	
<b>Priority 3</b>	<b>Complaints and Referrals</b>
<p>OSHA's third priority includes complaints filed by workers or worker representatives about safety or health hazards in the workplace. Generally, a complaint must be written and signed for OSHA to conduct an inspection. In other cases, OSHA may contact the employer by phone, email, or fax. Referrals from government agencies such as NIOSH or a local health department are handled the same way as worker complaints.</p>	
<b>Priority 4</b>	<b>Programmed Inspections</b>
<p>Inspections covering industries and employers with high injury and illness rates, specific hazards, or other exposures are OSHA's fourth priority. There may also be special emphasis programs in just one OSHA region or certain area offices, based on knowledge of local industry hazards. States with OSHA-approved occupational safety and health programs may use somewhat different systems to identify high-hazard industries for inspection within their states.</p>	

OSHA also conducts Follow-up and Monitoring Inspections. These inspections are made as needed and take priority over Programmed Inspections. A follow-up is made to determine whether violations cited on an earlier inspection have been fixed. Monitoring inspections are made to make sure hazards are being corrected and workers are protected whenever a long period of time is needed for a hazard to be fixed.

OSHA's priority system for conducting inspections is designed to distribute available OSHA resources as effectively as possible to protect the working men and women of this country.



## Stages of an Inspection

There are four major stages of an OSHA inspection. Click on the tabs below to learn about each stage.

### Stage 1 Presenting Credentials

The first stage begins when the compliance safety and health officer (CSHO) arrives at the workplace, determines who is in charge, and presents their credentials. An employer can require OSHA to get a warrant before an inspection is made.

### Stage 2 The Opening Conference

The second stage of an OSHA inspection is the opening conference. The CSHO finds out if workers are represented and, if so, makes sure that the worker representative participates in all phases of the inspection. If the employer or worker representative objects to a joint conference, separate conferences are held. The opening conference is generally brief so that the CSHO may quickly start the walkaround.

In the opening conference, the CSHO:

- ▶ explains why OSHA selected the worksite for inspection;
- ▶ obtains information about the company, including a copy of the hazard assessment to see what personal protective equipment is necessary;
- ▶ explains the purpose of the visit, scope of the inspection, walkaround procedures, worker representation, private worker interviews, and the closing conference; and
- ▶ determines whether the facility falls under any inspection exemption through a voluntary compliance program (for example, if an OSHA-funded consultation visit is in progress).

At the start of the inspection, the CSHO checks the injury and illness records. They will also check that the OSHA poster is displayed and that the OSHA Summary of Injuries and Illnesses is posted from February 1 to April 30 each year. Other records related to safety and health issues may be requested.

### Stage 3 The Walkaround

The third stage of an OSHA inspection is the walkaround. Following the opening conference, the CSHO, along with the employer and worker representatives, proceeds through the workplace, inspecting work areas for potentially hazardous working conditions. If the CSHA observes any violations, they document the issue and bring it to the attention of the employer and worker representatives. The CSHO may also interview workers, take photographs or video, and monitor worker exposure to noise, air contaminants, or other substances. The CSHO will conduct all worker interviews in private, although workers may request that a union representative be present.

#### Stage 4 The Closing Conference

The last part of an OSHA inspection is the closing conference. After the walkaround, the CSHO holds a closing conference with the employer and the worker representatives, either jointly or separately. When the employer does not want to have a joint conference, the CSHO will normally hold the conference with the worker representative first, so that worker input is received before employers are informed of proposed citations.

During the closing conference, apparent violations that have been observed on the walkaround and estimated times for correction are discussed. Employers are informed of their rights and responsibilities related to the inspection. Both employer and worker representatives are told of their rights to take part in any future meetings and their contest rights. No citations are given out at this time. They are sent in the mail no later than 6 months after the inspection.

### Citations and Penalties

Once the CSHO has completed the closing conference, they take their findings back to the office and write up a report. The Area Director reviews it and makes the final decision about any citations and penalties. Citations inform the employer and workers of:

- ▶ regulations and standards the employer allegedly violated.
- ▶ any hazardous working conditions covered by the OSH Act's General Duty Clause.
- ▶ The proposed length of time set for abatement of hazards.
- ▶ any proposed penalties.

Citations are sent by certified mail to the facility. The employer must post a copy of each citation at or near the place the violation occurred for 3 days or until it is fixed. Employers must also inform workers and their representatives of the corrections they make.

Penalties are based on violation type. Explore the table below to learn about how OSHA may cite violations and propose penalties:

Willful Violation	Serious Violation	Other-Than-Serious Violation	Repeated Violation
The employer intentionally and knowingly commits a violation or do so with plain indifference to the law. OSHA may propose a penalty of at least \$9,600 and up to more than \$134,000 for each willful violation.	The employer knew, or should have known, of a hazard causing a substantial probability of death or serious physical harm. For example, if an employer did not provide guarding or fall protection for workers on a 25-foot scaffold, there would be a substantial probability one or more workers would fall and that the resulting fall would most likely result in death, broken bones and/or other serious injury. The mandatory penalty for serious violations ranges from \$960 to more than \$134,000.	A violation that has a direct relationship to safety and health but probably would not cause death or serious physical harm is considered “other than serious.” For example, an area with poor housekeeping creates a tripping hazard. Assuming there are no sharp objects, broken glass, or similar items—workers at risk of nothing more serious than abrasions or bruises. OSHA may propose a penalty of over \$13,000 for each other-than-serious violation.	A violation is found that is the same as or similar to a previous violation. The mandatory penalty for repeated violations ranges from \$9,600 to more than \$134,000.

**Note:** OSHA Penalties adjust annually for inflation. Fines for the current year are available on OSHA’s website.

Review the following penalties that OSHA may assess employers for additional violations:

Failure to Abate	Falsifying Information	Violation of Posting
OSHA may propose an additional penalty of over \$13,000 for each day an employer fails to correct a previously cited violation beyond the required date, generally up to 30 days maximum.	Under the OSH Act, an employer providing false information to OSHA can receive a fine of up to \$10,000 or up to 6 months in jail, or both.	The employer must post citations and abatement verification for three days or until the hazard is corrected. The posting must be near the violation or at a central location. Failure to follow these instructions can result in a penalty of up to \$7,000 for each violation.

OSHA may reduce a penalty based on the gravity of the violation, whether the employer is making a good faith effort to comply with the Act, the employer's history of previous violations, and the size of the business.

## Appeals Process

Employers and workers both have rights to disagree with or appeal parts of an OSHA citation.

- ▶ Workers and their representatives may request an informal conference with OSHA to discuss the inspection, citations, penalties, or a notice of contest (if filed by the employer).
- ▶ Workers may also contest the abatement time for any violation and an employer's petition for modification of abatement (PMA), but they cannot contest citations or penalties.
- ▶ Workers who plan to contest an abatement time, should provide information to support their position.
- ▶ Employers have more rights than workers regarding citations and appeals.
- ▶ Employers may request an informal conference with OSHA to discuss the case.
- ▶ Employers have the right to request an extension of time for an abatement date if they cannot meet the time stated on the citation for a cited item. If a violation or abatement date is contested by the employer, the situation does not have to be fixed until there is a final legal order. If only the penalty is contested, the violation must be fixed by the date in the citation.
- ▶ Employers can also reach a settlement agreement with OSHA that adjusts citations and penalties in order to avoid prolonged legal disputes.

If an employer decides to contest the citation, the abatement date, and/or the proposed penalty, this must be done in writing within the 15-working day contest period. The area director forwards the notice of contest to the Occupational Safety and Health Review Commission (OSHRC) where an administrative law judge decides the case.

Both workers and the employer have the right to participate in the hearing and request a further review of the judge's decision by the commission.

## Resources Available to You

There are many resources available to you in your workplace if you want to find out more information about a safety and health issue or if you need to file a complaint with OSHA. Review the table below to read about some of these resources:

### Employer or Supervisor, Co-workers, and Union Representatives

OSHA encourages workers and employers to work together to reduce hazards. If possible, you should discuss safety and health problems with your employer. You can also talk over your concerns with other workers or, if there is a union, your union representatives.

### Safety Data Sheet (SDS)

If you are working with a chemical, the SDS can give you important information about its hazards and the precautions and personal protective equipment needed to work safely with it.

### Labels and Warning Signs

Labels and signs can make workers aware of potential safety or health hazards and provide helpful additional information. However, signs are not intended to take the place of actual hazard correction. The employer must make sure that each sign or label posted can be understood by all workers, so the signs must be bilingual if workers do not understand or read English.

### Employee Orientation Manuals and Other Training Materials

Orientation manuals and training materials specific to your job should include information about how to work safely. All manuals and training materials should be written clearly and spell out what you need to know about your job hazards. They can also serve as a resource if you have questions or concerns after training ends.

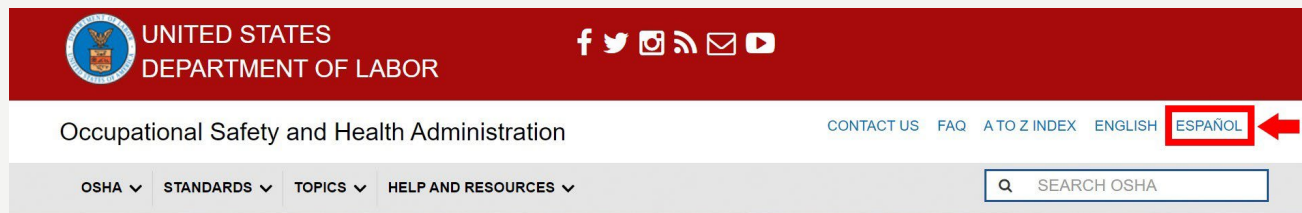
### Work Tasks and Procedures Instruction

A written job aid or task instruction can provide information about the proper and safe way to perform a job. OSHA considers some jobs and tasks very hazardous and requires employers to have written procedures. If you have questions about a new job or task, or a job or task that has changed, be sure to ask for the written procedures and for additional training on them.

## OSHA Website

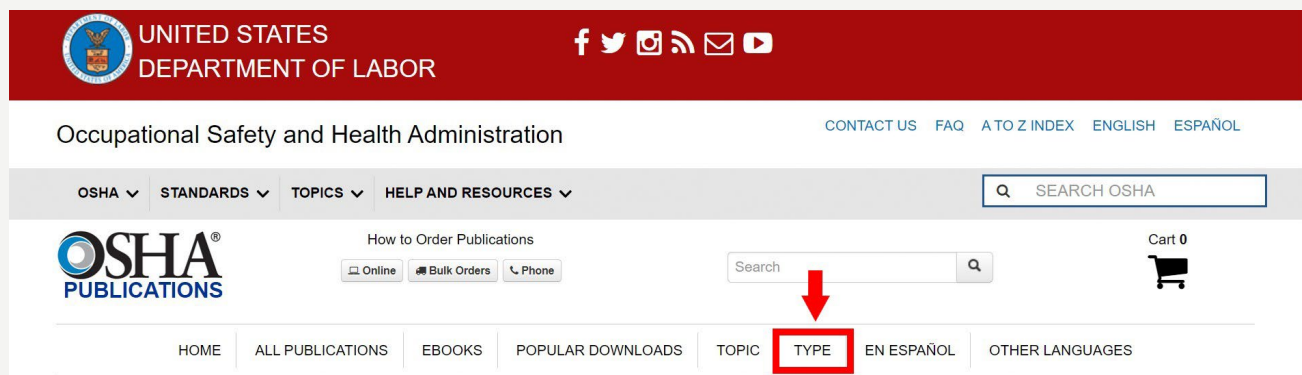
The OSHA website has a lot of safety and health information and links to resources that can help you. For example, you can:

Find information in Spanish by selecting Español on the home page.

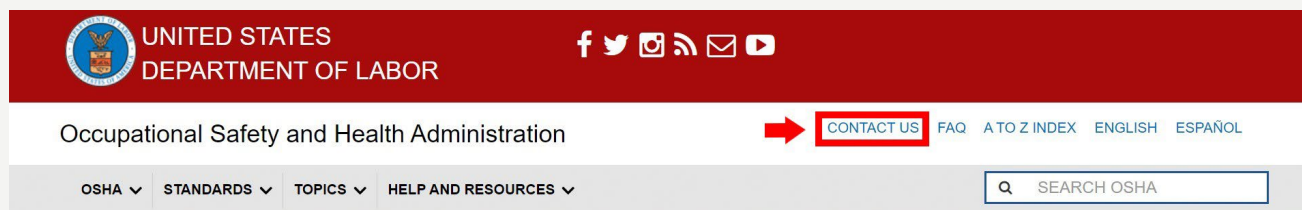


Locate printable information, including fact sheets, posters, and QuickCards—including many in Spanish—on the [OSHA Publications](#) page. To locate a particular type of publication, select Type from the menu at the top of the page.

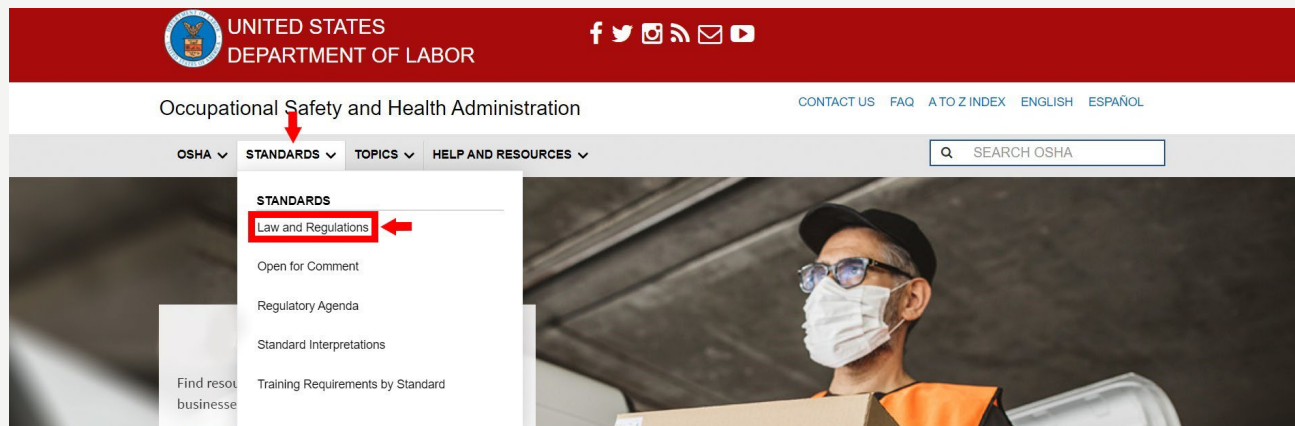
Most of these resources can be downloaded in PDF format so you can save and print them at your convenience.



Contact OSHA by calling or visiting your local area or regional office for safety and health information or to discuss filing a complaint.



On OSHA's home page, locate and view regulations. Select Standards, then Law and Regulations.



## NIOSH Website

The [National Institute for Occupational Safety and Health \(NIOSH\)](#) is OSHA's sister agency and can be a great resource for workers as it focuses on research and training. NIOSH also conducts Health Hazard Evaluations (HHEs) of workplaces in cases where workers are getting sick from an unknown cause or are exposed to an agent or working condition that is not regulated by OSHA. A worker who is currently employed in an environment of concern can request an HHE with the signatures of two other workers.

## Additional Resources

Other resources outside the workplace that can help you get information on safety and health concerns include:

- ▶ [OSHA Training Institute Education Centers \(OTIEC\)](#) and other university occupational and environmental health programs OSHA courses and a variety of safety and health programs including community outreach efforts, Spanish-language courses, and youth initiatives.
- ▶ Doctors, nurses, and other health care providers can be a resource on the health effects of toxic substances, proper medical and first aid treatment, and other health-related issues.

**Note:** If you are discussing a health concern with your healthcare provider, try to provide them with as much information about the chemical or substance as possible.

- ▶ Public libraries have books, journals and magazines and offer access to the internet.

Other local, community-based resources, such as the [National Council for Occupational Safety and Health \(COSH\)](#) and local COSH groups in California, New England, the northeast, the midwest, and the south can be a valuable resource. COSH organizations around the U.S. are committed to promoting worker health and safety through training, education, and advocacy.



## Filing a Complaint with OSHA


If you, your co-workers, and/or union representative believe that an OSHA inspection is needed to get workplace hazards corrected, you have several options:

- **Download** the [complaint form](#) from OSHA's website, complete it, and mail or fax it to OSHA.

U. S. Department of Labor  
Occupational Safety and Health Administration  
Notice of Alleged Safety or Health Hazards

Complaint Number	
Establishment Name	
Site Address	
Site Phone	Site FAX
Mailing Address	
Mail Phone	Mail FAX
Management Official	Telephone
Type of Business	
HAZARD DESCRIPTION/LOCATION. Describe briefly the hazard(s) which you believe exist. Include the approximate number of employees exposed to or threatened by each hazard. Specify the particular building or worksite where the alleged violation exists.	
SAMPLE	
Has this condition been brought to the attention of: <input type="checkbox"/> Employer <input type="checkbox"/> Other Government Agency(specify)	
Please Indicate Your Desire: <input type="checkbox"/> Do NOT reveal my name to my Employer <input type="checkbox"/> My name may be revealed to the Employer	
The Undersigned believes that a violation of an Occupational Safety or Health standard exists which is a job safety or health hazard at the establishment named on this form. (Mark "X" in ONE box) <input type="checkbox"/> Former Employee <input type="checkbox"/> Current Employee <input type="checkbox"/> Federal Safety and Health Committee <input type="checkbox"/> Representative of Employees <input type="checkbox"/> Other (specify)	
Complainant Name	Telephone
Address(Street, City, State, Zip)	
Signature	Date
If you are an authorized representative of employees affected by this complaint, please state the name of the organization that you represent and your title: Organization Name: Your Title:	

- **File** a complaint online.

 UNITED STATES DEPARTMENT OF LABOR

CONTACT US FAQ A TO Z INDEX ENGLISH ESPAÑOL

Occupational Safety and Health Administration

OSHA ▼ STANDARDS ▼ TOPICS ▼ HELP AND RESOURCES ▼

Q SEARCH OSHA

Language ▼

### OSHA Online Complaint Form

Notice of Alleged Safety or Health Hazards

**EMERGENCY NOTICE** ⚠  
Do Not Report an Emergency Using this Form or Email!

To report an emergency, fatality, or imminent life threatening situation please contact our toll free number immediately:  
 1-800-321-OSHA (6742)  
 TTY 1-877-889-5627

Please fill out sections 1 through 19, but **READ THIS FIRST!** Items noted with an asterisk (\*) are required in order to accept your submission.

\* 1. Establishment Name:

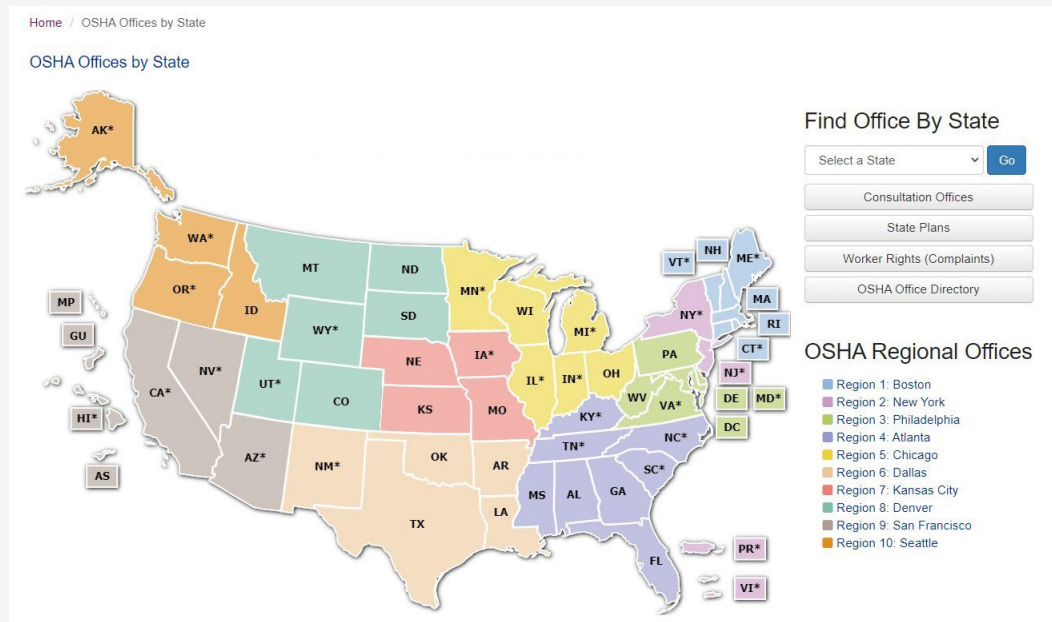
Note: In order for OSHA to fully process your complaint, complete and accurate information about the worksite is necessary.

\* 2. Site Street:

\* 3. Site City:

\* 4. Site State:

- **Call or visit** your local regional or area office to discuss your concerns. After the discussion, OSHA staff can give or send you a complaint form if you wish to file. The complaint will be evaluated by OSHA to determine if an inspection will be conducted. For OSHA to conduct an inspection there must be reasonable grounds to believe that a violation of the OSH Act or an OSHA standard exists.



**Note:** If a hazard is life-threatening, call your regional or local office or 1-800-321-OSHA immediately.

## Identifying Safety and Health Problems in the Workplace

To determine whether there are health and safety problems that need to be addressed in your workplace, use these questions:

- Do you or your co-workers have injuries or health complaints? If so, what types?
- Who has been hurt or is having symptoms?
- When do you or your co-workers feel these symptoms?
- Where in the workplace are safety or health problems occurring?
- What are the conditions that are causing problems?

## Module Conclusion

In this module, we have discussed the history of the Occupational Safety and Health Administration. You have learned what rights you have under the OSH Act and how to contact OSHA for assistance if you observe or are exposed to a safety or health hazard in your workplace. You should now be able to:

- ▶ explain how OSHA is important to workers.
- ▶ list significant worker rights under OSHA.
- ▶ describe employer responsibilities under OSHA.
- ▶ explain how to locate and interpret OSHA standards.
- ▶ outline how OSHA inspections are conducted.
- ▶ list some of the important worker safety and health resources available.

## Module 4:

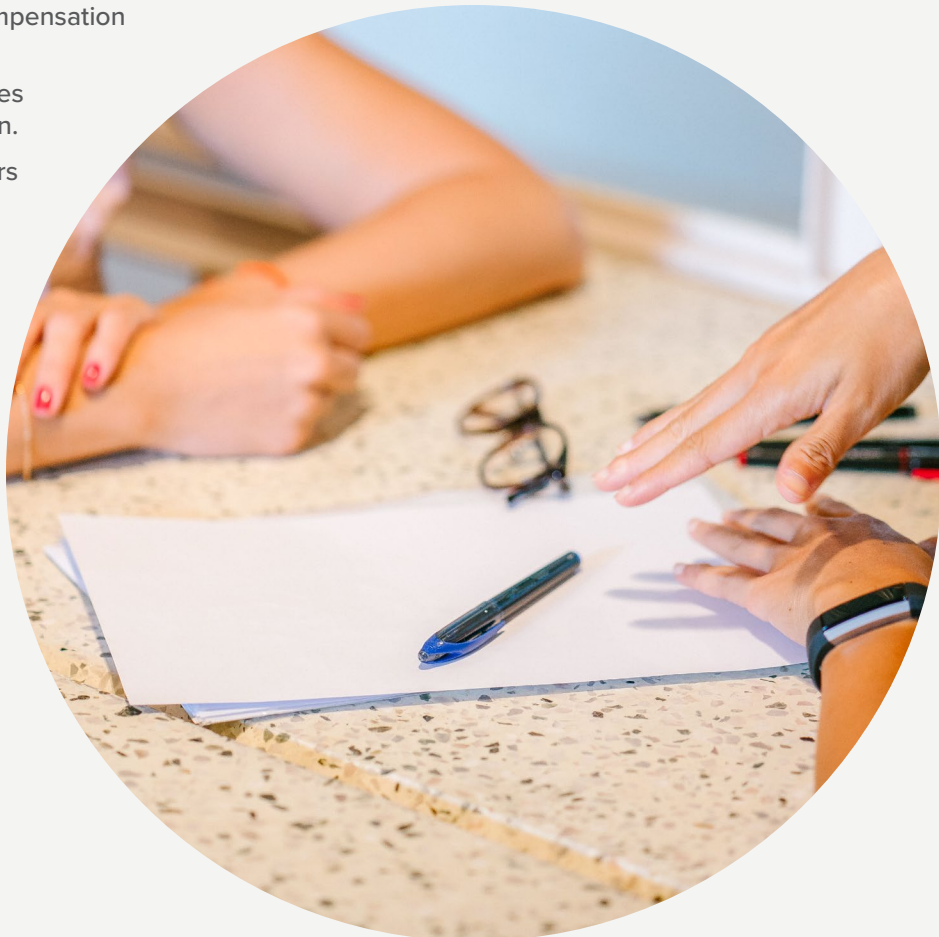
# Workers' Compensation and Florida Law

### Module Objectives

**This module introduces the Federal Employee's Compensation Act and covers aspects of workers' compensation as they pertain to Florida law.**

**Our objectives in this module are to:**

- ▶ Introduce and summarize the Federal Employees' Compensation Act and Florida's Workers' Compensation Law.
- ▶ Explain what constitutes workers' compensation.
- ▶ Define when employers are and are not required to pay for compensation.
- ▶ Describe what compensation looks like in the workplace.
- ▶ Outline what you need to know if you have been injured on the job.



## Workers' Compensation Laws

The Federal Employees' Compensation Act (FECA) provides federal employees injured in the performance of duty with workers' compensation benefits, which include wage-loss benefits for total or partial disability, monetary benefits for permanent loss of use of a body part, medical benefits, and vocational rehabilitation. This Act also provides survivor benefits to eligible dependents if the injury causes the employee's death. The FECA is administered by the Office of Workers' Compensation Programs (OWCP). Workers employed privately or by state or local government agencies are not covered under FECA.

The Florida Division of Workers' Compensation provides compensation for disabilities. The state's Workers' Compensation Law is detailed in Chapter 440 of Title 31 of the Florida Statutes.

### Definition of "Accident"

Workers' compensation will be granted in cases of accidents. Workers' Compensation Law 440.02 defines an accident as an unexpected or unusual event or result that occurs suddenly.

As defined in the statute, accidents do NOT include:

- ▶ disability or death due to the accidental acceleration or aggravation of:
- ▶ venereal disease,
- ▶ disease caused by habitual use of alcohol or controlled substances or narcotic drugs,
- ▶ disease that manifests itself in the fear of or dislike for an individual because of the individual's race, color, religion, sex, national origin, age, or handicap.
- ▶ a preexisting disease or anomaly that is accelerated or aggravated by an accident arising out of and in the course of employment. (Acceleration of death or acceleration or aggravation of the preexisting condition reasonably attributable to the accident may be compensable.)
- ▶ injury or disease caused by exposure to a toxic substance, such as fungus or mold, unless "there is clear and convincing evidence establishing that exposure to the specific substance involved, at the levels to which the employee was exposed, can cause the injury or disease sustained by the employee."

### Employer Responsibilities

The OSH Act covers most private sector employers and their workers throughout the U.S. and its territories and jurisdictions. Employers and workers in many fields—such as manufacturing, construction, longshoring, agriculture, law, medicine, charity, and disaster relief—are also covered by OSHA. Religious groups that employ workers for secular purposes—such as maintenance or gardening—are also covered.

Employers are required to provide workers' compensation coverage when their employees work:

- ▶ in an industry other than construction with four or more full-time or part-time employees. (Note: An exempted corporate officer does not count as an employee.)
- ▶ in the construction industry with one or more employees including him/herself. (Note: An exempted corporate officer or member of a limited liability company does not count as an employee.)
- ▶ in a state or local government.
- ▶ as a farmer when there are more than five regular employees and/or 12 or more other workers for seasonal agricultural labor lasting 30 days or more.

You can verify that your employer has workers' compensation coverage by using the Division of Workers' Compensation's [Proof of Coverage Database](#). For assistance in resolving a workers' compensation dispute, contact the [Bureau of Employee Assistance and Ombudsman Office](#).

Every employer is liable for compensation if they are within the provisions outlined in Section 440.10 of the Workers' Compensation Law. Employers must pay compensation or benefits for employees who suffer accidental injury or death (as defined in 440.02) under the following circumstances:

- ▶ The injury or death must directly arise from work performed on the job site.
- ▶ The injury must be verified by objective medical assessments.
- ▶ The accidental injury must be proven to be the major contributing cause of any other injuries.
- ▶ For cases of exposure to toxins, both causation and significant exposure must also be proven through objective medical assessments (physical exam or diagnostic testing that confirms the employee claim).

### What Is Not Covered

Workers' Compensation does not cover some kinds of complaints. For example:

- ▶ Any pain or subjective complaints without supporting medical findings cannot be considered for compensation.
- ▶ If a work-related injury aggravates a pre-existing condition, only an apportioned percentage of the need that is attributable to the injury—not the pre-existing condition—can be covered by workers compensation benefits.
- ▶ Compensation will not be provided if the employee willfully intended to injure or kill him or herself or anyone else.
- ▶ Employees will not be compensated if their injury was acquired while the employee was under the influence of any substance (alcohol, drugs, etc.) not prescribed by a physician.

If a judge, court, or jury determines any of the above apply, the employee may not be granted compensation. Additionally, should an employee receive compensation for a worker injury and then be found to have acquired the injury by failing to comply with safety rules or use any safety appliances, any compensation they have received will be reduced by 25%.

**Remember:** The only acceptable form of evidence to determine what level of compensation is required is objective medical evidence.

### Mental or Nervous Injuries

According to Section 440.093 of Florida's Workers' Compensation statute, no mental injury will be compensated unless it is accompanied by a physical injury. In other words, any condition such as stress, fright, or excitement only is not considered an accidental injury in the workplace.

However, compensation may be available for a mental or nervous injury that is due to an accidental physical injury ("accident" being defined in the first section of this lesson) if appropriate medical assessments are provided. The assessments:

- ▶ must be provided by a licensed psychiatrist.
- ▶ must meet criteria established in the latest edition of the Diagnostic and Statistical Manual of Mental Disorders published by the American Psychiatric Association.

Again, a mental or nervous condition cannot qualify for compensation unless a physical injury is identified as the major contributing cause. In addition, no medical compensation may be awarded for any conditions deriving from depression due to loss of employment or being out of work.

### **Monetary Compensation**

Compensation to an injured worker is determined by a formula in the Florida statute, which states:

Compensation will not be less than \$20 per week, unless the employee makes less than \$20 per week. An employee who makes less than \$20 per week will receive their full weekly wages.

- ▶ Employees whose wages exceed \$20 per week will receive compensation equal to 100% of the statewide average weekly wage for the year in which the injury occurred, adjusted to the nearest dollar.
- ▶ The statewide average weekly wage is determined by the Agency for Workforce Innovation based on wages paid by all employers subject to the Florida Unemployment Compensation Law.

### **Categories of Disability**

The discussion above outlined the general principles governing monetary compensation for disabilities workers might experience as a result of work-related injuries. Florida's Workers' Compensation law divides these disabilities into the following categories:

- ▶ permanent total disability,
- ▶ temporary total disability,
- ▶ permanent impairment, or
- ▶ temporary partial disability.

**Note:** Some injuries do not fall into any of the categories listed above. (See "Other Subsequent Forms of Injury" below.)



Here is more information about the categories of disability:

### Permanent Total Disability Benefits

A worker is defined as permanently and totally disabled if:

- ▶ they have a spinal cord injury that involves severe paralysis of an arm, a leg, or the trunk.
- ▶ their hand, arm, foot, or leg has been amputated.
- ▶ they have severe brain injury or closed-head injury as determined by severe characteristics such as sensory or motor disturbances, communication disturbances, cerebral function disturbances, neurological disorders, etc.
- ▶ second- or third degree burns cover at least 25 or more percent of the body or third degree burns cover at least 5 percent or more of the face and hands.
- ▶ they have total or industrial blindness.

According to Florida statute 440.15, workers who are determined to be capable of engaging in at least sedentary employment within 50 miles of their homes may not be considered permanently totally disabled.

Workers who are designated as having a permanent total disability receive 66 2/3% of their average weekly wages. Benefits for permanent total disability halt once the worker reaches 75 years of age, unless they are also ineligible for social security benefits.

### Temporary Total Disability Benefits

In general, compensation for a disability that is total but temporary is set at 66 2/3% of the worker's average weekly wage.

However, workers with the following types of temporary total disabilities may receive compensation of 80% of their average weekly wage:

- ▶ they lose an arm, leg, hand, or foot,
- ▶ they have been determined to be paraplegic, paraparetic, quadriplegic, or quadriparetic, or
- ▶ they have lost sight in both of their eyes.

This compensation is not payable if an employee is also collecting benefits for a permanent total disability.

This higher compensation rate is paid for no longer than 6 months from the date of the accident. After that period, if the employee is still experiencing temporary total disability, they are eligible to receive the lower compensation rate (66 2/3% of average weekly wage).

Workers may receive compensation for a temporary total disability for a total of no more than 104 weeks—including any weeks paid at the higher compensation rate—or until they medically improve, whichever comes first. Once the employee reaches the allowed maximum weeks or medically improves, temporary total disability benefits cease and permanent impairment for the injured worker will be examined.

**Permanent Impairment Benefits**

Permanent impairment benefits:

- ▶ are based on when the employee reaches the date of maximum medical improvement, and
- ▶ must be paid by the employer or carrier within 14 days of knowledge of the impairment.

The compensation rate for permanent impairment is 75 percent of the employee's average weekly wages, with benefits will be reduced by 50 percent for each week in which the employee earns income equal to or greater than their average weekly wage.

The duration of permanent impairment benefits is determined by a schedule established by a panel including a representative of the Florida Department of Financial Services. This schedule is based on objective medical and scientific findings, as well as criteria from the American Medical Association's Guides to the Evaluation of Permanent Impairment and other sources.

**Temporary Partial Disability Benefits**

Within five days of when the employee leaves for restricted work, the employer or carrier must send an informational letter detailing possible eligibility for benefits.

Workers who qualify for temporary partial disability benefits receive compensation equal to 80% of the difference between 80% of the employee's average weekly wage and whatever salary, wages, or other compensation the employee can earn post injury.

These weekly temporary partial benefits cannot be greater than 66 2/3% of a worker's average weekly wages at the time of the accident.

Temporary partial disability benefits are paid biweekly, no later than the seventh day following the last day of each biweekly work week.

- ▶ These benefits must also not exceed a period of 104 weeks.
- ▶ At the end of 104 weeks, benefit payments will cease and the employee will be reevaluated to determine permanent impairment.

**Subsequent Injuries**

An employee who has a pre-existing disability, injury, or disease is not necessarily disqualified from receiving benefits if a work-related injury makes the pre-existing condition worse. Instead, the employee qualifies for compensation based only on the amount of new disability or impairment directly associated with the injury. The employee will not receive benefits at all, however, if they falsely represent their pre-existing disability or impairment.

## Other Considerations for Compensation

There are a few other situations that may affect an employee's eligibility for compensation.

- ▶ An employee who refuses employment they are capable of doing is not entitled to any form of compensation.
- ▶ An injured employee who leaves their place of employment while receiving compensation for temporary partial disability and then secures employment elsewhere must give their former employer an affidavit containing the name of the new employer, place of employment, and wages being received at the new place of employment. Partial disability compensation will cease until the employee gives the affidavit to their former employer.
- ▶ No compensation will be awarded to an employee who becomes an inmate of a public institution, unless the employee has a dependent who relies on the employee for financial support.
- ▶ An employee is not eligible for temporary total disability or permanent total disability compensation for any week in which they are receiving unemployment benefits.
- ▶ An employee who is receiving unemployment benefits may also receive temporary partial disability compensation as a supplement; however, the total may not exceed the temporary partial disability amount the employee would normally receive.

### Guide to the Workers' Compensation System

The Department of Financial Services publishes a comprehensive and easy-to-understand guide to the workers' compensation system. This guide outlines benefits that are to be provided, as well as any information that the department deems necessary.

The Workers' Compensation Guide is available on the [department's website](#).

## What to Expect If You Are Injured

Many injured workers have questions:

- ▶ "What do I need to do?"
- ▶ "Will my medical care be covered?"
- ▶ "Will I be paid any monetary benefits when I am off work?"
- ▶ "If so, how much and how often?"
- ▶ "What suggestions can help me with my claim?"

If you are injured on the job, the Division of Workers' Compensation Employee Assistance and Ombudsman Office (EAO) is available to assist you with any questions you may have concerning your workers' compensation claim and advocate on your behalf at no cost. The EAO has offices around the state.

You can contact the Division of Workers' Compensation EAO using any of the following methods:

- ▶ Toll-free telephone: 1-800-342-1741
- ▶ [Website](#)
- ▶ E-mail: [wceao@myfloridacfo.com](mailto:wceao@myfloridacfo.com)

## Employee Responsibilities

An employee injured on the job has the following responsibilities:

- ▶ Report the injury to the employer as soon as possible. An employee who fails to advise their employer of the initial manifestation of an injury within 30 days may be unable to claim benefits.
- ▶ Unless it is an emergency, the employee must ask the employer what doctor to see and must see a doctor authorized by the employer or the insurance company.

**Note:** In an emergency when the employer is not available to consult, the employee should go directly to the closest emergency room, then report the incident to the employer as soon as possible.

- ▶ Carefully review the information packet provided by the EOA; complete, sign, and return any forms as required. Benefits may be withheld until the employee signs and returns the fraud statement that may be included in this packet.
- ▶ Obtain a copy of the accident report/first notice of injury from the employer, as well as their claim number from the insurance company.
- ▶ Discuss with the doctor whether the condition is work related and whether the employee may return to work in any capacity.
- ▶ Provide the employer with any notes from the doctor.
- ▶ If the doctor approves a return to work, the employee must report to work as scheduled.

## Employer Responsibilities

Employers are required to post the Broken Arm Poster and Anti-Fraud Notice—with the name and contact information of the insurance company—in a conspicuous location. When an employee is injured on the job, the employer has the following responsibilities:

**Workers' Comp Works For You**

If you are injured on the job:

1. Notify your employer immediately to get the name of an approved physician. Workers' comp insurance may not pay the medical bills if you don't report your injury promptly to your employer.
2. Notify the doctor and medical staff that you were injured on the job so that bills may be properly filed.
3. If you have any problems with your claim or suffer excessive delays in treatment, contact the State of Florida's Division of Workers' Compensation at 1-800-342-1741.

**\$25,000 Reward**  
ANTI-FRAUD REWARD PROGRAM  
Rewards of up to \$25,000 may be paid to persons providing information to the Department of Financial Services leading to the arrest and conviction of persons committing insurance fraud, including employers who illegally fail to obtain workers' compensation coverage. Persons may report suspected fraud to the department at 1-800-378-0445 or online at [https://www.myfloridaclear.com/Online/DIFS\\_WCR.asp](https://www.myfloridaclear.com/Online/DIFS_WCR.asp). A person is not subject to civil liability for furnishing such information, if such person acts without malice, fraud or bad faith.

68L-6.007, F.A.C. Compensation Notice  
DPS-F4-1548  
Revised March 2010  
(Fraud reporting link updated February 2018)

PLACE INSURER INFORMATION STICKER HERE

Employers are required to conspicuously post certain notices.

When an employee is injured on the job, the employer has the following responsibilities:

- ▶ Contact the insurance company immediately.
- ▶ Maintain contact with the employee and the insurance adjuster until the employee returns to work.
- ▶ Obtain information from the doctor about whether the employee can return to work with restrictions.
- ▶ If possible, work out a plan to bring the employee back to work with appropriate restrictions.
- ▶ Keep the insurance adjuster informed of the employee's restricted work duties and any changes in the worker's earnings.

Employers must also maintain records of all workplace injuries for at least 2.5 years.

### **Insurance Carrier Responsibilities**

If an employee is injured on the job, the insurance carrier must:

- ▶ adjust the employee's claim without harassment, coercion, or intimidation.
- ▶ respond to requests for medical treatment by authorized health care providers within three business days after receipt of the request.
- ▶ pay the first installment of compensation for total disability or death benefits or deny the claim within 14 days after the employer receives notification of the injury or death, when disability is immediate and continuous for eight days or more after the injury.
- ▶ pay, disallow, or deny all medical, dental, pharmacy and hospital bills properly submitted to the carrier within 45 calendar days after the carrier receives the bill.
- ▶ report the claim to the Division of Workers' Compensation within 14 days after the employer reports the injury to the carrier-for injuries that result in more than 7 consecutive days of lost work time.
- ▶ obtain a fraud statement signed by the employee.
- ▶ send the employee a brochure explaining the employee's rights and benefits.

### **Authorized Treating Physician Responsibilities**

Under Chapter 440 Section 440.13, the doctor treating an employee injured on the job has some specific responsibilities. These include:

- ▶ except in an emergency, receiving authorization from the insurance carrier before providing treatment.
- ▶ reporting any emergency care to the insurance carrier within three days.
- ▶ submitting a proposed course of treatment to the insurance carrier to determine whether such treatment would be recognized as reasonably prudent.

# Workers' Compensation and Florida Law

## Florida Workers' Compensation System Medical Benefits

Employees who are injured on the job receive the following medical benefits under Florida Workers' Compensation law:

- ▶ the treatment, care, and attendance determined to be medically necessary for as long as the injury or the process of recovery requires. This includes medications, medical supplies, durable medical equipment, and prosthetics.
- ▶ care provided by appropriate attendants as prescribed in writing by the doctor.
- ▶ the right to change doctors one time during the course of treatment for any one incident.
- ▶ the right to have an independent medical examination—at the employee's expense—and submit the findings in case of a dispute.

## Ensuring Smooth Workers' Compensation Claims

Clear and positive communication with the insurance adjuster is one way employees can make sure their workers' compensation claim process goes smoothly. Employees should obtain the adjuster's contact information and determine the adjuster's preferred method of communication (email, phone, etc.). Employees should share with the adjuster updates and important information such as the date on which the employee returns to work, changes to the employee's contact information, and any changes to scheduled appointments with doctors.

Frequent and clear communication with the employer is also important. Injured workers should make sure their employer knows they value their job and look forward to returning. Employees should also:

- ▶ Notify the employer of their return-to-work status, work restrictions, and medical treatment plan.
- ▶ Discuss any restrictions for returning to work from their doctor (for example, "light duty") and ask the employer if they will accommodate those restrictions.
- ▶ Try to schedule doctor's appointments so that they take minimal time away from the job once the employee does return to work.
- ▶ Notify the employer of any difficulties in obtaining authorization for medical treatment from the adjuster.

**Note:** Employers are not required to pay for an employee's time out of the work day to attend doctor or therapy appointments.

## Successful Health Care Provider Visits

Successful visits to physicians and health care providers are another way employees can ensure their workers' compensation claim process goes smoothly. Some actions the employee can take to manage this process include:

- ▶ Be on time for appointments.
- ▶ When searching for information about a doctor, visit the Florida Department of Health website.
- ▶ Provide the physician or health care provider as much advance notice as possible when canceling an appointment.
- ▶ Have the carrier and adjuster's name, address, telephone, fax number, and email address, as well as the claim number available. Take these to all appointments.
- ▶ Provide a complete description of how the injury occurred and all body parts affected. An incomplete record can affect the claim and benefits later. Inform the doctor about whether symptoms are improving, worsening, or remaining the same.
- ▶ Be thorough. Provide a complete medical history and information about the current status of any medical conditions.
- ▶ Take a list of all current medications—including those taken for non-work-related conditions—to each doctor visit.
- ▶ Be prepared with a list of any questions or concerns to discuss with the doctor.
- ▶ Ask how long it will take to recover from the injury and when it will be possible to return to work, both with and without restrictions.
- ▶ Ask about alternative or less invasive treatment options.
- ▶ Follow the treatment plan.
- ▶ Ask the doctor's office to fax prescriptions for procedures, medications, or referrals to the adjuster. Have the adjuster's fax number with you.
- ▶ Request a copy of the "Florida Workers' Compensation Uniform Medical Treatment/Status Reporting Form" (Form DFS-F5-DWC-25) or the return to work form, completed by the physician, and obtain a copy of the physician notes. The notes may not be available until the next office visit.
- ▶ Keep copies of all medical records including lab and x-ray results, and keep copies of CT scans and MRI's. When seeing a new physician, take medical records to the initial appointments.
- ▶ Under certain circumstances, a health care provider may charge a small fee for copying the records. Florida law sets a limit of \$1 per page for most records.

## Frequently Asked Workers' Compensation Questions

Review some frequently asked questions about workers' compensation.

### General Questions

**Question** How long after an accident do I have to report it to my employer?

- ▶ Report it as soon as possible but no later than thirty (30) days after the incident or your claim may be denied. Reference: Florida Statutes Section 440.185



**Question** If I am unable to return to the type of work I did before I was injured, what can I do?

- ▶ The law provides reemployment services at no cost to you. Services include vocational counseling, transferable skills analysis, job-seeking skills, job placement, on-the-job training, and formal retraining. To find out more about this program, you may visit the Division of Vocational Rehabilitation Florida Department of Education website. Reference: Florida Statutes Section 440.491

**Question** My employer and the insurance company have denied my claim for workers' compensation benefits. Do I need legal representation to get my benefits? What should I do?

- ▶ It is your decision whether to hire an attorney. However, the Bureau of Employee Assistance and Ombudsman (EOA) can assist you and attempt to resolve the dispute. The EAO can also assist you in drafting a Petition for Benefits. This service is provided at no cost to you. Visit the EAO website for contact information. Reference: Florida Statutes Sections 440.191 and 440.192

**Question** What is the time limit for filing a Petition for Benefits?

- ▶ In general, there is a two-year period to file a petition. However, it depends on the type of issue in dispute. Contact the EAO for specific information. Reference: Florida Statutes Section 440.19(1)

**Question** Is there a period of time after which my claim is no longer open?

- ▶ If you were injured on or after January 1, 1994, the claim is closed one (1) year from the date of your last medical treatment or payment of compensation. This period is referred to as the Statute of Limitations. If you were injured before January 1, 1994, the period is two (2) years. Reference: Florida Statutes Section 440.19(2)

**Question** Can I get a settlement from my claim?

- ▶ Settlements may be made under certain circumstances and are voluntary, not automatic or mandatory. Reference: Florida Statutes Section 440.20(11)(a)(b)(c)

**Question** If I settle my claim for medical benefits with the insurance company and my condition gets worse later, who pays for my future medical care, surgeries, etc?

- ▶ You are responsible for your future medical needs after your claim for medical benefits is settled.

**Question** What can I do when it is difficult to get a prescription filled or I am having problems with the pharmacy where I get my workers' compensation medication?

- ▶ In Florida, an injured worker has the right to select a pharmacy or pharmacist. Florida law prohibits interference with your right to choose a pharmacy or pharmacist. However, a pharmacy is not required to participate in the workers' compensation program. If at any time, you become dissatisfied with your pharmacy or pharmacist's services, you can seek another pharmacy to fill your prescriptions. Reference: Florida Statutes Section 440.13(3)(j)

### Employer Responsibilities Questions

**Question** When should my employer report the injury to their insurance company?

- ▶ Your employer should report the injury as soon as possible, but no later than seven (7) days after their knowledge. The insurance company must send you an informational brochure explaining your rights and responsibilities and providing additional information about the workers' compensation law within three (3) days after receiving notice from your employer. Reference: Florida Statutes Section 440.185

**Question** My employer will not report my injury to the insurance company. What can I do?

- ▶ You have the right to report the injury to the employer's insurance company. If you need assistance, contact the EAO. Reference: Florida Statutes Section 440.185

**Question** If I am unable to return to work until my doctor releases me, does my employer have to hold my job for me?

- ▶ No, there is no provision in the law that requires your employer to hold the job open for you.

**Question** Can my employer fire me if I am unable to work because of an injury and am receiving workers' compensation benefits?

- ▶ No, it is against the law to fire you because you have filed or attempted to file a workers' compensation claim. Reference: Florida Statutes Section 440.205

### Benefits Questions

**Question** What kind of medical treatment can I get?

- ▶ The medical provider, authorized by your employer or the insurance company, will provide the necessary medical care, treatment and prescriptions related to your injury. Reference: Florida Statutes Section 440.13(2)

**Question** Do I have to pay any of my medical bills?

- ▶ No, all authorized medical bills should be submitted by the medical provider to your employer's insurance company for payment. Reference: Florida Statutes Section 440.13(3)(g)

**Question** Will I be paid if I lose time from work?

- ▶ Under Florida law, you are not paid for the first seven days of disability. However, if you lose time because your disability extends to over 21 days, you may be paid for the first seven days by the insurance company. Reference: Florida Statutes Section 440.12

**Question** How much will I be paid?

- ▶ In most cases, your benefit check, which is paid bi-weekly, will be 66 2/3% of your average weekly wage. Reference: Florida Statutes Sections 440.02(28) and 440.14

**Question** Do I have to pay income tax on workers' compensation monetary benefits?

- ▶ No. However, if you go back to work on light or limited duty and are still under the care of the authorized doctor, you will pay taxes on any wages earned while working. For additional information visit the Internal Revenue Service website.

**Question** When will I get my first check?

- ▶ You should receive the first check within 21 days after reporting your injury to your employer. Reference: Florida Statutes Section 440.20

**Question** If I'm only temporarily disabled, how long can I get these checks?

- ▶ You can receive temporary total, temporary partial disability payments or a combination of the two benefits during the continuance of your disability for no more than a maximum of 104 weeks. Reference: Florida Statutes Section 440.15(2)

**Question** Can I receive Social Security benefits and workers' compensation benefits at the same time?

- ▶ Yes. However an offset, or reduction in your workers' compensation check may be applied because the law states that the two combined may not exceed 80% of your average weekly wage earned prior to your injury. For further information on Social Security visit their website. Reference: Florida Statutes Section 440.15(9)

**Question** Can I receive unemployment compensation and workers' compensation benefits at the same time?

- ▶ No. You must be medically able and available for work to qualify for unemployment. For additional information on unemployment compensation, visit the Department of Economic Opportunity website. Reference: Florida Statutes Section 440.15(10)

**Question** What can I do if I am not receiving my benefit check?

- ▶ Call the insurance company and ask for the adjuster or claims representative. If you still have questions and don't understand why the checks have stopped, contact the EAO.  
Reference: Florida Statutes Section 440.14

**Module Conclusion**

In this module, we have discussed workers' compensation, including the definition of "accident" according to the law, and have introduced the applicable Florida Statutes and laws. You should now be able to:

- ▶ identify when employers are required to pay for workers' compensation.
- ▶ define the four major types of disability (permanent total disability, temporary total disability, permanent disability, and temporary partial disability).
- ▶ describe subsequent forms of injury as they pertain to workers' compensation.
- ▶ outline the contents of the guide to the workers' compensation system.
- ▶ list the responsibilities of an employee who is injured on the job, the responsibilities of the worker's employer, the responsibilities of the insurance carrier, and the responsibilities of the treating physician.

## Module 5:

# State and Federal Laws as Applied to Cosmetology

### Module Objectives

**Anyone who wishes to practice cosmetology must adhere to the rules and standards set forth by their local, state, and federal governments.**

**Our objectives in this module are to:**

- ▶ Outline laws and regulations designed to protect the client or consumer.
- ▶ Define when and where individuals may (and may not) be allowed to practice cosmetology.
- ▶ Introduce the Board of Cosmetology and describe its functions.
- ▶ List salon requirements, including fees and license requirements, as well as regulations regarding disciplinary actions.
- ▶ Describe safety and health programs as they pertain to the field of cosmetology.

### Federal Food, Drug, and Cosmetic Act

In addition to state laws, there are national laws and organizations that govern the well-being of individuals, cosmetologists included. One important law that cosmetologists and their employees will find useful in



salons and establishments is the Federal Food, Drug, and Cosmetic Act (FD&C Act). This law, enforced by the Food and Drug Administration, has the following goals:

- ▶ Regulate cosmetic products to ensure they are used safely both at home and in salons.
- ▶ Prohibit misbranding, alteration, or misrepresentation of cosmetics.

To protect clients, cosmetologists must never purchase or use any unlabeled products on their clients. They must also never use products in their establishment that are not marked with any of the following:

- ▶ name and place of business of the manufacturer,
- ▶ quantity of the contents (in terms of their weight or volume), and
- ▶ warnings or labels that are clearly displayed and can be easily read and understood.

## Florida Statutes

The first priority in cosmetology is protecting and promoting the health, safety, and well-being of clients and cosmetologists. There are laws at both the national and the state level designed to support this goal and protect clients, cosmetologists, and cosmetology establishments.

This section covers the state laws in Florida that apply to the licensing of cosmetologists and the practice of cosmetology.

### Florida Cosmetology Act

In Florida, the Board of Cosmetology seeks to “protect the public from significant and discernible danger to health.” Title 32, Chapter 477 of the Florida Statutes, known as the Florida Cosmetology Act, assigns the Board a variety of functions, including:

- ▶ establishing procedures to certify that applicants have met the requirements to practice cosmetology [Section 477.019].
- ▶ ensuring that licensing exams adequately measure applicants’ competency and comply with legal guidelines [Section 477.022].
- ▶ regulating and restricting cosmetic products and substances used in cosmetology (as outlined by the United States Food and Drug Administration) that may potentially be perceived as a health or safety risk to any client or cosmetologist [Section 477.0265].
- ▶ setting fees for licensing of cosmetologists, specialists, and salons [Section 477.026].
- ▶ conducting disciplinary proceedings and, when necessary, revoking or suspending a cosmetologist’s license [Section 477.028].
- ▶ It is the duty of the cosmetologist to always follow these state and national laws.

### Training Requirements

The Florida Cosmetology Act prohibits anyone other than a licensed cosmetologist from practicing cosmetology.

Aspiring cosmetologists must complete a minimum of 1,200 hours of training before they are awarded a license. This training may be completed through:

- ▶ a licensed school of cosmetology.
- ▶ a cosmetology program in a public school system.

- ▶ the Cosmetology Division of the Florida School for the Deaf and the Blind (if the individual is eligible for this program).
- ▶ a government-operated cosmetology program in the state of Florida.

### Licensing Requirements

Anyone seeking to practice cosmetology in Florida must hold an appropriate license. To apply for a cosmetology license, the application must:

- ▶ be at least 16 years old (or have received a high school diploma),
- ▶ complete the 1,200 hours of training described above.
- ▶ pay both the non-refundable application fee and a required examination fee.

If a student fails their examination, they will not be awarded a license. However, they may reapply right away for another examination should they choose to do so.

### Examination Requirements

Florida Statutes Section 477.022 assigns certain responsibilities regarding cosmetology licensing exams to the Board of Cosmetology. For example, the Board specifies the general areas of competency to be covered by examinations for the cosmetology licensing, including the relative weight assigned in grading each area, the grading criteria to be used by the examiner, and the score necessary to achieve a passing grade. The Board ensures that examinations adequately measure both an applicant's competency and their knowledge of related statutory requirements. The Board may offer a written clinical examination, a performance examination, or both, in addition to a written theory examination.

The examination is given at least once a year, and the Board must ensure that examinations comply with state and federal equal employment opportunity guidelines.

All licensing examinations must be conducted so that the applicant is identified only by a number until the examination is completed and graded. An accurate record of each examination must be filed with the secretary of the Department and must be kept for reference and inspection for at least two years.

Once an individual passes the examination, they will receive their license to practice cosmetology.

### Renewing a License

- ▶ Individuals who wish to renew their cosmetology license must complete this continuing education course. Courses that are offered at cosmetology school conferences may be allowed to be counted toward the 10-hour requirement for license renewal, provided that these courses are approved by the Board.
- ▶ Should a cosmetologist fail to comply with any of the continuing education requirements or any other requirement for licensure, they may be required to take a refresher course that will be no longer 48 hours, or they may be required to take the refresher course exam.



### Exemptions

The licensure requirements in the Florida Cosmetology Act do not apply to the following persons when they are practicing pursuant to their professional or occupational responsibilities and duties:

- ▶ Persons authorized under the laws of this state to practice medicine, surgery, osteopathic medicine, chiropractic medicine, massage, naturopathy, or podiatric medicine
- ▶ Commissioned medical or surgical officers of the United States Armed Forces hospital services
- ▶ Registered nurses under the laws of this state
- ▶ Persons employed in federal, state, or local institutions, hospitals, or military bases as cosmetologists whose practices are limited to the inmates, patients, or authorized military personnel of such institutions, hospitals, or bases
- ▶ Persons whose practice is limited to the application of cosmetic products to another person in connection with the sale, or attempted sale, of such products at retail without compensation from such other person other than the regular retail price of such merchandise

Other individuals exempt from regular licensing requirements include:

- ▶ any person whose occupation or practice is confined solely to shampooing.
- ▶ any person whose occupation or practice is confined solely to cutting, trimming, polishing, or cleansing the fingernails of any person in a barbershop licensed pursuant to Chapter 476 if such individual has been practicing the activities set forth in this subsection prior to October 1, 1985.
- ▶ any individual providing makeup, special effects, or cosmetology services to an actor, stunt person, musician, extra, or other talent during a production recognized by the Office of Film and Entertainment as a qualified production as defined in Section 288.1254(1). Individuals exempt under this subsection must be certain to not provide any such services to the general public.
- ▶ any individual providing makeup or special effects services in a theme park or entertainment complex to an actor, stunt person, musician, extra, or other talent, or providing makeup or special effects services to the general public.
  - ▶ **Note:** The term “theme park or entertainment complex” has the same meaning as it does in Section 509.013(9).

A photography studio salon may also be exempt from the licensure provisions of this chapter. However, the hair-arranging services of such salon must be performed under the supervision of a licensed cosmetologist employed by the salon. The salon itself must use disposable hair-arranging implements or use a wet or dry sanitizing system approved by the federal Environmental Protection Agency.

### Hair Braiding, Hair Wrapping, and Body Wrapping

Course requirements for people who practice hair braiding, hair wrapping, and body wrapping are different from the training or continuing education requirements for cosmetologists. Click on the tabs below to learn about the requirements for each type of practice:

### Hair Braiding

- ▶ Those whose occupation or practice is confined solely to hair braiding must register with the Department of Business and Professional Regulation, pay a registration fee, and take a 16-hour course. This course approved by the Board consists of five hours of training on HIV/AIDS and other communicable diseases, five hours on sanitation and sterilization, four hours on disorders and diseases of the scalp, and two hours on laws affecting hair braiding.



### Hair Wrapping

- ▶ Those whose occupation or practice is confined solely to hair wrapping must register with the Department of Business and Professional Regulation, pay a registration fee, and take a 6-hour course. The course approved by the Board consists of education in HIV/AIDS and other communicable diseases, sanitation and sterilization, disorders and diseases of the scalp, and laws affecting hair wrapping.



### Body Wrapping

- ▶ Unless otherwise licensed or exempted from licensure, any person whose occupation or practice is body wrapping must register with the Department, pay the applicable registration fee, and take a 12-hour course. The course approved by the Board consist of education in HIV/AIDS and other communicable diseases, sanitation and sterilization, disorders and diseases of the skin, and laws affecting body wrapping.



Only the Board may review, evaluate, and approve a course required for registration in the occupation or practice of hair braiding, hair wrapping, or body wrapping.

Once a person has submitted a registration application that includes proof they have completed the education requirements and has paid the application fee, they may practice hair braiding, hair wrapping, or body wrapping while waiting for the registration to be issued.

Hair braiding, hair wrapping, and body wrapping may be practiced outside a cosmetology salon or specialty salon as long as disposable implements are used or all implements are sanitized in a disinfectant approved for hospital use or approved by the federal Environmental Protection Agency.

## The Board of Cosmetology

The previous sections have referred to the Board of Cosmetology. This section includes more details about the Board and its duties.

### About the Board

The Board functions within the Department of Business and Professional Regulation. There are seven members on this Board, each of whom is appointed by the Governor and must be confirmed by the Senate. Five out of the seven members of the board must be licensed cosmetologists who have experience practicing cosmetology in Florida for at least five years. The other two members of the board are laypersons. All members of the Board of Cosmetology must be Florida residents who have lived in the state for at least the last five consecutive years.

Board members may not serve more than two consecutive terms, whether full or partial. When vacancies on the Board occur, the Governor may appoint a replacement for the remainder of the unexpired term. A Board member is expected to hold over after the expiration of their term until a successor is in place.

Before assuming their duties, Board members take the constitutional oath of office and file it with the Department of State. Each member is then issued a certificate of appointment.

Every January, the Board members elect a chair and a vice chair. The Board holds an annual meeting as well as other meetings as necessary throughout the year. The chair of the Board has the authority to call other meetings at their discretion. A quorum of the Board consists of at least four members.

Board members are accountable to the Governor for the proper performance of all duties and obligations. The Governor investigates any complaints or unfavorable reports received concerning the actions of the Board or its members before taking appropriate action. The Governor may remove from office any Board member for neglect of duty, incompetence, or unprofessional or dishonorable conduct.

### Duties of the Board

According to Florida Statutes Sections 120.536(1) and 120.54, the Board may adopt rules to implement the provisions the duties assigned to it under Florida law.

The Board may adopt any restriction established by the Food and Drug Administration regarding products or substances determined to be hazardous.

The Board is responsible for ensuring that:

- ▶ cosmetologists follow all regulations and rules within the Florida Cosmetology Act.
- ▶ no cosmetologist engages in any prohibited act, such as operating at or owning a practice without an active license.
- ▶ no cosmetologist abuses the privileges of their license or invokes any fraud.
- ▶ cosmetologists do not endanger the health, safety, or well-being of their clients in any way.

A cosmetologist who violates any of these rules may be guilty of committing a second-degree misdemeanor. If the cosmetologist is convicted of the misdemeanor or pleads no contest, they will be required to pay a \$500 fine plus any additional court costs.

## Disciplinary Proceedings

In addition to investigating any complaint that is filed, the Board has the power to revoke or suspend the license of a cosmetologist or the registration of a specialist. The Board may also reprimand, censure, deny subsequent licensure or registration of, or otherwise discipline a cosmetologist or a specialist if any of the following occur:

- ▶ A license or registration was obtained by fraud or misrepresentation.
- ▶ The holder of a license or registration is guilty of fraud, deceit, gross negligence, incompetency, or misconduct in the practice or instruction of cosmetology or a specialty.
- ▶ The holder of a license or registration is guilty of aiding, assisting, procuring, or advising any unlicensed person to practice as a cosmetologist.

The Board may revoke or suspend the license of a cosmetology salon or a specialty salon, or deny subsequent licensure of such salon, as well as reprimand, censure, or otherwise discipline the owner of such salon when either of the following is true:

- ▶ A license was obtained by fraud or misrepresentation.
- ▶ The holder of a license is guilty of fraud, deceit, gross negligence, incompetency, or misconduct in the operation of the salon.

The Department will not issue or renew a license or certificate of registration to any person or salon against whom the Board has assessed a fine, interest, or costs associated with investigation and prosecution until the person or salon has paid the fine or costs and has complied with or satisfied all terms and conditions of the final order.

## Duties of the State Governor

All Board members are accountable to the governor, who serves as the head of the Board of Cosmetology. The governor is responsible for filling vacancies for unexpired terms. In addition, the governor has the right to investigate any complaints concerning the Board and the power to take any appropriate action to resolve issues; the governor may also remove members from the Board.

# State and Federal Laws as Applied to Cosmetology

## Becoming a Licensed Cosmetologist

A person who wants to become licensed as a cosmetologist must apply to the Department for licensure. The graphic below outlines the steps required to become a licensed cosmetologist.

*\* The Board establishes procedures by which schools and programs certify that a person is qualified to take the required examination after completing a minimum of 1,000 actual school hours. If the person passes the exam, they have satisfied this requirement. However, if the person fails the exam, they may not take the exam again until they have completed the full requirements.*

Once the applicant passes the exam and pays the initial licensing fee, the Department issues a license to practice cosmetology.

Graduates of licensed cosmetology schools are eligible to practice cosmetology while waiting for results of the first licensing exam and for a license to be issued as long as they are supervised by a licensed cosmetologist in a licensed cosmetology salon.

## Continuing Education

To protect the public, the Board requires cosmetologists and specialists to complete at least 10 hours of approved continuing education every two years.

Courses given at cosmetology conferences may be counted toward the number of continuing education hours required if approved by the Board.

Any person whose occupation or practice is confined solely to hair braiding, hair wrapping, or body wrapping is exempt from the continuing education requirements of this subsection.

The Board may require licensees in violation of a continuing education requirement to take refresher courses or refresher courses and an exam in addition to any other penalty. The number of hours for the refresher course may not exceed 48 hours.

## Path to Licensure

To earn a license by examination to practice cosmetology in Florida, an applicant must:

Be at least 16 years old or have received a high school diploma.

Complete the minimum 1,200 hours of training at a licensed school of cosmetology, a cosmetology program within a public school, the Cosmetology Division of the Florida School for the Deaf and Blind, or a Florida government-operated program.

Hold and have held for at least one year an active valid license to practice cosmetology in another state or country.

Pass the examination.\*

Pay the initial licensing fee.

## Registering as a Specialist

Florida Statutes Section 477.013(6) defines practices such as manicuring, pedicuring, providing facials or skin care services, and shampooing as specialties. A person who wants to practice one or more of these specialties must apply to the Department for licensure.

The graphic below outlines the steps required to register as a specialist.

Specialists who have completed the education requirements, submitted an application for registration, and paid the required fees are eligible to practice as a specialist while waiting for the registration to be issued as long as they are supervised by a registered specialist in a licensed specialty or cosmetology salon.

Board of Cosmetology rules specify procedures allowing specialty practitioners who are registered or licensed in states whose registration or licensing standards are substantially similar to, equivalent to, or more stringent than Florida's standards to register in this state.

The Board also determines rules regarding how specialists renew their registrations.

## Specialist Registration

To register as a specialist in one or more cosmetology specialty practices, a person must:

Be at least 16 years old or have received a high school diploma.

Earn a certificate of completion in a specialty as described in Section 477.013(6) from a licensed school, a specialty program within the public school system, or a specialty division within the Cosmetology Division of the Florida School for the Deaf and Blind.

Complete and submit the appropriate forms to the department.

Pay the initial licensing fee.

## Fees

The Board of Cosmetology sets fees according to the following schedule:

Type of Practice or Location	Fees
Cosmetologists	<ul style="list-style-type: none"><li>▶ Fees for obtaining an original license, renewing a license, and any delinquent renewal will cost no more than \$50.</li><li>▶ Fees for endorsement applications, exams, and re-examinations will be no more than \$50.</li></ul>
Specialists	<ul style="list-style-type: none"><li>▶ Fees for application and endorsement registration for specialists will not exceed \$30.</li><li>▶ Fees for initial registration, registration renewal, and delinquent renewal will be no more than \$50.</li></ul>
Cosmetology and Specialty Salons	<ul style="list-style-type: none"><li>▶ Fees for license application, original licensing, license renewal, and delinquent renewal will be no more than \$50.</li></ul>

## Licensing a Salon

In addition to the various state and federal laws that apply to individual cosmetologists and specialists, there are laws that apply to the salons in which individuals are permitted to practice. This section covers the licensing requirements for two types of establishments: fixed salons and mobile salons.

### Licensing Fixed Cosmetology Salons

Florida Statutes Section 477.025 requires all cosmetology and specialty salons to have a license issued by the Department in order to operate, except for some establishments operating in nursing homes or assisted living facilities. Florida law also requires the Board of Cosmetology to adopt rules governing the licensing and operation of salons and specialty salons, their facilities and personnel, safety and sanitary requirements, and the license application and granting process.



The graphic below outlines the process.

*\* An applicant denied licensure because of failure to meet requirements may reapply for licensure after correcting any problems.*

### Licensing Mobile Cosmetology Salons

Mobile salons must follow all the same licensure and operating requirements specified in Florida laws, as well as the Board or Department rules that apply to cosmetology salons at fixed locations, with a few exceptions:

- ▶ Mobile salons must maintain a permanent business address, located in the same area as its local Department office, where the salon can receive correspondence.
- ▶ Records of appointments, itineraries, employee license numbers, and vehicle identification numbers of the mobile salon must be kept at that permanent business location and be available for inspection.
- ▶ Before the beginning of each month, the salon's license holder must provide the Board with the itinerary for that month so that the Board can conduct inspections.
- ▶ Mobile salons must comply with all local laws, as well as the Americans with Disabilities Act and all applicable OSHA requirements.

### Renewing a Salon License

The Board of Cosmetology sets the rules for renewing license registration for cosmetology salons or specialty salons in Florida Administrative Code Rule 61G5-20.005.

- ▶ Salon licenses are issued for a biennium (two-year period).
- ▶ Licenses must be renewed on or before November 30 of each even-numbered year.
- ▶ Salons must meet all current licensing requirements specified in Rule 61G5-20 and pay the renewal fee.

The Board also adopts rules governing delinquent renewal of licenses and may impose penalty fees for delinquent renewal.

- ▶ A salon license is delinquent if not renewed by the November 30 renewal date. The license expires at the end of the two-year period in which it becomes delinquent.
- ▶ To renew a license that is delinquent but has not yet expired, the licensee must pay a delinquent fee in addition to the biennial renewal fee.
- ▶ If a salon license is allowed to expire at the end of the biennium, the licensee must submit a new salon license application, along with the delinquent fee (Rule 61G5-24.009) and all regular salon licensing fees (Rule 61G5-24.005).
- ▶ The salon may not operate until a new license is issued and has been received.

## Licensing a Fixed Salon

To license a cosmetology salon or specialty salon in Florida:

The prospective operator completes and submits the appropriate forms to the Department of Business and Professional Regulation. The application is accompanied by the application fee and any relevant information the department requests.

The department may investigate the salon before issuing a license and, if appropriate, may deny the application in writing listing the requirements that have not been met. \*

Once the department determines that the proposed salon may reasonably be expected to meet the requirements, the department grants the license.

The applicant pays the original licensing fee.

## Delinquent, Expired, and Inactive Renewal Fees

In addition to the fees charged for initial licensure and registration, the Florida Administrative Code Rule 61G5-24 details the fees that apply when licenses and registrations become delinquent, expired, or inactive. The fees for each situation are shown in the table below:

Type of Renewal	Fee
Biennial Salon License	<b>\$40.00</b>
Expired Salon License (When renewed within 24 months of the expiration)	<b>\$25.00 + biennial renewal fee</b>
Delinquent Cosmetology License	<b>\$25.00 + regular renewal fee</b>
Delinquent Specialty Registration	<b>\$25.00 + regular renewal fee</b>
Reactivation of Inactive Cosmetology License	<b>\$50.00 + biennial renewal fee</b>
Reactivation of Inactive Specialty Registration	<b>\$50.00 + biennial renewal fee</b>
Inactive Status License or Specialty Registration	<b>\$40.00</b>
Change of Status Processing (Licensee or registrant is applying for a change in licensure or registration at any time other than during the licensure or registration renewal period.)	<b>\$5.00</b>

## Prohibited Acts

Florida Statutes Section 477.0265 lists some actions that are not allowed in the practice of cosmetology. Those prohibited acts include:

- ▶ practicing cosmetology or a specialty without an active license as a cosmetologist or registration as a specialist issued by the Department.
- ▶ owning, operating, maintaining, opening, establishing, conducting, or having charge of, either alone or with another person or persons, a cosmetology salon or specialty salon that is not licensed or in which a person who is not licensed or registered is permitted to practice cosmetology or any specialty.
- ▶ willfully or repeatedly violating Florida's laws regarding cosmetology or any rule adopted by the Board of Cosmetology.
- ▶ permitting an employed person to practice cosmetology or a specialty without a valid, active license as a cosmetologist or registration as a specialist.
- ▶ obtaining or attempting to obtain a license or registration for money, other than the required fee, or any other thing of value or by fraudulent misrepresentations.
- ▶ using or attempting to use a suspended or revoked license to practice cosmetology or a suspended or revoked registration to practice a specialty.
- ▶ advertising or implying that skin care services or body wrapping are related to the practice of massage therapy as defined in Section 480.033(3), except those practices or activities defined in Section 477.013.

A person who violates any of the rules listed above is guilty of a misdemeanor of the second degree

# State and Federal Laws as Applied to Cosmetology

## Disciplinary Guidelines

The Board of Cosmetology disciplinary guidelines are detailed in Florida Administrative Code Rule 61G5-30.001. When it finds a violation, the Board imposes a penalty as described below. The Board may, however, deviate from the guideline penalty if it finds an aggravating or mitigating circumstance.

Below are disciplinary guidelines for different violations.

Violation	Penalty
<b>Unlicensed Cosmetology or Specialty Practice</b>	
Individual Never Licensed	\$500
Licensee or Registrant Failed to Properly Renew	\$50 for every month or partial month during which the individual was unlicensed or unregistered, up to a maximum of \$500
<b>Unlicensed Salon and Delinquent Salon License</b>	
Salon Never Licensed or Salon License Expired	\$500
Delinquent Salon License	\$50 for every month or partial month during which the individual was unlicensed or unregistered, up to a maximum of \$500
<b>Permitting an Unlicensed/Unregistered Person to Perform Cosmetology or Specialty Services in a Salon</b>	
Individual Never Licensed or Registered in Florida	\$250 to \$500
Licensee or Registrant Failed to Properly Renew or Exemption Has Terminated	\$50 for every month or partial month during which the individual was unlicensed or unregistered, up to a maximum of \$500
<b>Employing an Unlicensed/Unregistered Employee to Practice Cosmetology or a Specialty</b>	
Individual Never Licensed or Registered in Florida	\$250 to \$500
Licensee or Registrant Failed to Properly Renew or Exemption Has Terminated	\$50 for every month or partial month during which the individual was unlicensed or unregistered, up to a maximum of \$500

Violation	Penalty
<b>Obtaining or Attempting to Obtain a License or Registration for Money or Any Other Thing of Value or by Misrepresentations</b>	
License or Registration Obtained or Sought with Money (Other Than the Required Fee) or by Fraudulent Misrepresentation	\$500 and denial or revocation of the license or registration
<b>Using or Attempting to Use a Suspended or Revoked License or Registration</b>	
Using or Attempting to Use a Suspended or Revoked Cosmetology License or Specialty Registration to Practice Cosmetology or a Specialty	\$500 and suspension for one year of any license or registration issued pursuant to Florida Statutes Chapter 477 or denial or revocation of license or registration
<b>Advertising or Implying That Skin Care Services or Body Wrapping Are Related to Massage Therapy New Tab</b>	
The following penalties apply when, except as allowed by statute, skin care services or body wrapping are advertised or implied to be related to massage therapy.	
First Offense	\$100 to \$200
Subsequent Offenses	\$500
<b>Using or Possessing a Product Containing Methyl Methacrylate (MMA)</b>	
The following penalties apply to using or possessing a liquid nail monomer containing any trace of methyl methacrylate (MMA).	
First Offense	\$500
Subsequent Offenses	\$500 and suspension (with a reinspection of the premises prior to reinstatement of the license) or revocation
<b>License or Registration Obtained by Fraud or False or Forged Evidence</b>	
License or Registration Obtained by Fraud or False or Forged Evidence	\$500 and revocation of the salon license, cosmetology license, or specialty registration

Violation	Penalty
<b>Fraud, Deceit, Gross Negligence, Incompetency, or Misconduct New Tab</b>	
The following penalty applies when the Board determines there is fraud, deceit, gross negligence, incompetency, or misconduct in the practice or instruction of cosmetology or specialty, or in operation of the salon.	
Fraud, Deceit, Gross Negligence, Incompetency, or Misconduct	\$200 to \$500 and suspension or revocation of the salon license, cosmetology license, or specialty registration
<b>Aiding, Assisting, Procuring, or Advising an Unlicensed Person to Practice Cosmetology</b>	
The following penalties apply when the Board determines that a license or registration holder is guilty of aiding, assisting, procuring, or advising any unlicensed person to practice as a cosmetologist.	
First Offense	\$250
Subsequent Offenses	\$500 and revocation or suspension of salon license, cosmetology license, or specialty registration
<b>Presenting License of Another as Their Own</b>	
First Offense	\$500 and a reprimand
Subsequent Offenses	\$500 and refusal to certify for licensure
<b>Impersonating Another License Holder of Like or Different Name</b>	
Impersonating Another License Holder of Like or Different Name	\$500 and a 6-month suspension of any other license or registration held pursuant to Florida Statutes Chapter 477

This rule also sets disciplinary guidelines, as shown in the table below, for those who violate or refuse to comply with specific rules and laws.

Law or Rule Violated	Penalty
Any Provision of Florida Statutes Chapter 455 or Final Order of the Board or the Department	A fine of \$500 and suspension, revocation, or refusal to certify to the Department for licensure
Any Provision of Florida Statutes Chapter 477 or a Rule of the Board or the Department Except as Otherwise Provided	A fine of \$100 to \$200 for the first violation.
	A fine of \$300 to \$500 for a subsequent violation
	A fine of \$500 and suspension or revocation of license or registration for a refusal to comply
Salon Requirements Florida Administrative Code Subsections 61G5-20.002(3)-(7) Relating to Sanitation and Safety	A fine of \$50 per violation for less than three violations
	A fine of \$250 for three to four violations
	A fine of \$500 for five or more violations, and suspension of the license with a reinspection prior to reinstatement of the license
	A fine of \$250 for a salon operating without proper disinfection practices
Display of Documents Florida Administrative Code Rule 61G5-20.004 Relating to Display of Licenses and Inspection Sheets	A fine of \$100 for each violation for the first offense
	A fine of \$200 to \$300 for each subsequent offense

**Note:** Whenever the Board imposes a monetary fine, it also suspends the license of the person or establishment found guilty of the violation. However, the Board's order will give the violator a certain amount of time to pay the fine. If the fine is paid within that time period, the suspension does not take effect.

### Aggravating or Mitigating Circumstances

The above disciplinary guidelines represent the usual penalties imposed in each situation. However, the Board may impose different penalties based on consideration of the following factors:

- ▶ Danger to the public
- ▶ Length of time since date of violation
- ▶ Number of complaints filed against the licensee
- ▶ Length of time licensee or registrant has practiced
- ▶ Actual damage, physical or otherwise, caused by the violation
- ▶ Deterrent effect of the penalty imposed

- ▶ Effect of the penalty upon the licensee's or registrant's livelihood
- ▶ Any efforts for rehabilitation
- ▶ Actual knowledge of the licensee or registrant pertaining to the violation
- ▶ Attempts by licensee or registrant to correct or stop violations or refusal by licensee or registrant to correct or stop violations
- ▶ Related violations against a licensee or registrant in another state including findings of guilt or innocence, penalties imposed, and penalties served
- ▶ Actual negligence of the licensee or registrant pertaining to any violations
- ▶ Penalties imposed for related offenses under subsection (1) above
- ▶ Any other mitigating or aggravating circumstances

### **Limitations on Penalties**

The Board of Cosmetology may impose any of the penalties included in Florida Administrative Code Rule 61G5-30.001 in combination or individually. However, the total penalties may not exceed the following limits:

- ▶ Issuance of a reprimand or censure.
- ▶ Imposition of an administrative fine not to exceed \$500 for each count or separate offense.
- ▶ Placement on probation for a period of time and subject to such reasonable conditions as the Board may specify.
- ▶ Revocation or suspension of any license or registration issued pursuant to Florida Statutes Chapter 477.
- ▶ Refusal to certify to the Department an applicant for licensure or registration.
- ▶ None of the limitations above prohibit civil action or criminal prosecution as provided for in Florida Statutes Section 477.0265(2) or Section 477.031. They also do not limit the ability of the Board to enter into binding stipulations with accused parties outlined in Florida Statutes Section 120.57(3).

### **Citations**

As used in the Florida Statutes and Florida Administrative Code:

- ▶ Subject means the licensee, applicant, person, partnership, corporation, or other entity alleged to have committed a violation.
- ▶ Citation means a notification served upon a subject for the purpose of assessing a penalty. A citation must meet the requirements set forth in Florida Statutes Section 455.224.

For a first offense, the department may issue a citation in place of the disciplinary procedures contained in Florida Statutes Section 455.225. The citation must be issued within six months after the filing of the complaint which is the basis for the citation. The subject may choose to accept the citation or to dispute the matter and follow the regularly disciplinary procedures details in Section 455.225.

In the Florida Administrative Code Rule 61G5-30.004, the Board of Cosmetology designates the following as citation violations.



Violations	Penalty
▶ Except as otherwise provided in Rule 61G5-30.004, any violation of the safety, sanitary, or other salon requirements specified in Florida Administrative Code Rule 61G5-20.002. However, if it is an initial offense and there are no other violations, then the subject shall be given a Notice of Noncompliance;	\$50
▶ Practicing cosmetology or a specialty with an inactive or expired license for one month or part of a month;	
▶ Operating a salon with a delinquent license for one month or part of a month;	
▶ Employing a person to practice cosmetology or a specialty with an inactive or expired license for one month or part of a month.	
▶ Unless otherwise permitted in Florida Statutes Chapter 477, performing cosmetology services in a salon which does not have a license in violation of Florida Statutes Section 477.0263(1).	
▶ Practicing cosmetology or a specialty with an inactive or expired license for more than one month but not more than two months;	\$100
▶ Operating a salon with a delinquent license for more than one month but not more than two months;	
▶ Employing a person to practice cosmetology or a specialty with an inactive or expired license for more than one month but not more than two months;	
▶ Two violations of the safety, sanitary, or other salon requirements specified in Florida Administrative Code Rule 61G5-20.002.	
▶ Practicing cosmetology or a specialty with an inactive or expired license for more than two months but not more than three months;	\$150
▶ Operating a salon with a delinquent license for more than two months but not more than three months;	
▶ Employing a person to practice cosmetology or a specialty with an inactive or expired license for more than two months but not more than three months.	
▶ Practicing cosmetology or a specialty with an inactive or expired license for more than three months but not more than four months;	\$200
▶ Operating a salon with a delinquent license for more than three months but not more than four months;	
▶ Employing a person to practice cosmetology or a specialty with an inactive or expired license for more than three months but not more than four months.	

Violations	Penalty
▶ Operating a salon without disinfecting solutions as required by Florida Administrative Code 61G5-20.002(3)(d);	\$250
▶ Three violations of the safety, sanitary, or other salon requirements specified in Florida Administrative Code Rule 61G5-20.002;	
▶ Practicing cosmetology or a specialty with an inactive or expired license for more than four months but not more than five months;	
▶ Operating a salon with a delinquent license for more than four months but not more than five months; and	
▶ Employing a person to practice cosmetology or a specialty with an inactive or expired license for more than four months but not more than five months.	
▶ Practicing cosmetology or a specialty with an inactive or expired license for more than five months but not more than six months;	\$300
▶ Operating a salon with a delinquent license for more than five months but not more than six months;	
▶ Employing a person to practice cosmetology or a specialty with an inactive or expired license for more than five months but not more than six months; and	
▶ Four violations of the safety, sanitary, or other salon requirements specified in Florida Administrative Code Rule 61G5-20.002.	
▶ Practicing cosmetology or a specialty with an inactive or expired license for more than six months but not more than seven months;	\$350
▶ Operating a salon with a delinquent license for more than six months but not more than seven months; and	
▶ Employing a person to practice cosmetology or a specialty with an inactive or expired license for more than six months but not more than seven months.	
▶ Practicing cosmetology or a specialty with an inactive or expired license for more than seven months but not more than eight months;	\$400
▶ Operating a salon with a delinquent license for more than seven months but not more than eight months; and	
Employing a person to practice cosmetology or a specialty with an inactive or expired license for more than seven months but not more than eight months.	

Violations	Penalty
▶ Practicing cosmetology or a specialty with an inactive or expired license for more than eight months but not more than nine months;	<b>\$450</b>
▶ Operating a salon with a delinquent license for more than eight months but not more than nine months; and	
▶ Employing a person to practice cosmetology or a specialty with an inactive or expired license for more than eight months but not more than nine months.	
▶ Practicing cosmetology or a specialty without a license;	<b>\$500</b>
▶ Operating a salon without a license;	
▶ Employing a person to practice cosmetology or a specialty without a license;	
▶ Practicing cosmetology or a specialty with an inactive or expired license for more than nine months but not more than 12 months;	
▶ Operating a salon with a delinquent license for more than nine months but not more than 12 months; and	
▶ Employing a person to practice cosmetology or a specialty with an inactive or expired license for more than nine months but not more than 12 months.	

## Mediation

Florida Administrative Code Rule 61G5-30.005 defines mediation as a process in which a mediator appointed by the Department encourages and facilitates resolution of a legally sufficient complaint. Mediation is an informal and non-adversarial way of assisting the parties to reach a mutually acceptable agreement.

The Board of Cosmetology considers mediation an acceptable method of resolving disputes for the following violations that are economic in nature or can be remedied by the licensee:

- ▶ failure of the licensee to timely pay any assessed administrative fines or costs;
- ▶ failure of the licensee to timely respond to a continuing education audit;
- ▶ failure to submit change of address for a salon; and
- ▶ failure to timely notify the Department of the licensee's or registrant's change of mailing address or place of practice.

A mediator is a person certified in mediation by the Florida Bar, the Florida Supreme Court, or the Division of Administrative Hearings.

## Notice of Non-Compliance

In accordance with Florida Statutes Section 455.225(3), when a complaint is received, the Department may provide a licensee with a notice of non-compliance for an initial offense of a minor violation. Failure of a licensee to correct the violation within 15 days after notice may result in the institution of regular disciplinary proceedings.

Florida Administrative Code Rule 61G5-30.006 defines the following as minor violations for which a notice of

non-compliance is issued:

- ▶ Violations of the Display of Documents requirement in Florida Administrative Code Rule 61G5-20.004.
- ▶ Violations of Florida Administrative Code Rule 61G5-18.011(1) in failing to maintain a copy of a certificate of completion for a Human Immunodeficiency Virus and Acquired Immune Deficiency Syndrome course.
- ▶ Violations of Florida Administrative Code Rule 61G5-20.008(2)(a) in failing to retain copies of an employee's high school diploma or G.E.D. equivalency certificate and cosmetology school diploma or certificate of completion.

### **Civil Proceedings**

In addition to any other remedy or criminal prosecution, the Department may file a proceeding in the name of the state seeking issuance of a restraining order, injunction, or other remedy against any person who violates any provision of the laws described above.

# State and Federal Laws as Applied to Cosmetology

## Management Leadership and Employee Involvement

This section of the module covers how management leadership and employee involvement play a role in the health and safety of an organization.

Employees must understand the hazards they may be exposed to and how to prevent any harm that may come to themselves and others from hazard exposure. Many places of employment provide orientation to familiarize new employees with these principles.

Supervisors, on the other hand, must analyze work to identify potential hazards in their areas of responsibility. They must also maintain physical protections in work areas, reinforce employee training through performance feedback and, if needed, enforce safe work practices.

## Hazard Training

One of the ways employers can promote safety and health in the work environment is by providing appropriate hazard training. The extent and type of hazard information needed by each employee varies but should include at least:

- ▶ general information about the hazards and safety rules of the worksite
- ▶ information about specific hazards, safety rules, and practices related to individual work assignments.
- ▶ details about the employee's role in emergency situations

This kind of information and training is especially important when the workplace contains hazards that may not be readily apparent to, or to within the ordinary experience and knowledge of, employees.

In general, hazard training should include the following topics:

- ▶ Hazard recognition
- ▶ Training required by applicable standards
  - ▶ For example, if the workplace deals with hazardous chemicals, training should cover OSHA's hazardous chemical standards.
- ▶ Emergency response
- ▶ Accident investigation
- ▶ Emergency drills

## Safety and Health Programs

In addition to the basic hazard training described above, employers should provide safety and health programs. These programs are recommended for all businesses and have been proven to reduce work-related injuries, improve morale, and reduce compensation costs. This section covers the following aspects of successful safety and health programs:

- ▶ Major organizational elements
- ▶ Common effective characteristics
- ▶ Worksite analysis

### Major Organizational Elements

Should employers fail to correctly manage their employees regarding health and safety programs, they may find their employees encountering more accidents. Workplace accidents are more expensive than most people realize. The hidden costs of these accidents include things like workers' compensation claims, training and compensating a replacement worker, and repairing damaged property.

These accidents cause not only monetary and physical damage but also emotional damage in a workplace. A work environment that is unsafe for employees lowers the organization's morale and subsequently increases absenteeism among the employees. This is another reason it is extremely beneficial to implement safety and health programs in the workplace.

Employers and managers should strive to reduce the likelihood of employee injuries and added costs, including monetary, physical, and emotional tolls. When faced with a workplace accident, the employer or manager's goals should be investigating the accident, implementing corrective action, and maintaining their insurance coverage.

### Common Effective Characteristics

The best safety and health programs involve every level of the organization and encourage a safety culture that reduces accidents for workers and improves the bottom line for managers. Some of the most common characteristics of a good safety and health culture are:

- ▶ Management considers safety and health on the job to be just as important a company goal as other organizational objectives (such as cost control, quality, and productivity).
- ▶ Individuals within the organization believe they have a right to a safe and healthy workplace
- ▶ Each person accepts personal responsibility for ensuring their own safety and health
- ▶ Everyone believes they have a duty to protect the safety and health of others

Both management leadership and employee involvement are essential to the success of a safety and health program; one cannot be effective without the other. The manager of a workplace can be completely committed to their health and safety agendas, but problems will be solved only temporarily unless employees are equally invested. Thus, an effective safety and health plan should:

- ▶ clearly state the safety and health policy,
- ▶ establish and communicate a clear goal and objective,
- ▶ involve top management in implementing the program,
- ▶ encourage employee involvement in the program and in decisions that affect their safety and health, and
- ▶ communicate who is responsible for all program aspects.

## Worksite Analysis

The final component of a successful health and safety plan is the worksite analysis identifying hazardous conditions in the workplace. To facilitate an effective analysis, management must provide the resources and authority for personnel to identify the hazards in the worksite and to eliminate or control those hazards.

A worksite analysis involves the following key factors:

- ▶ Examining the worksite for existing hazards
- ▶ Examining conditions and operations where changes might occur to create hazards
- ▶ Management analyzing the work and worksite to anticipate and prevent harmful occurrences

Additional analysis may be required if accidents or near-accidents have occurred in the workplace. It is important for management to investigate these accidents or near-misses to identify their causes. Once the causes of these incidents are found, the employer or manager can establish means for preventing them from occurring again. In addition, management should analyze injury and illness trends to identify commonalities between them.

The accident investigation and report should answer the who, what, when, where, why, and how of the incident. Thorough interviews with all employees involved in accidents are necessary. The primary purpose of the investigation, however, is to prevent future occurrences of similar accidents. Therefore, the results of the investigation should be used to initiate corrective action.

## Job Hazard Analysis

Unlike an accident investigation, which analyzes an incident that has already happened, a job hazard analysis identifies hazards in the workplace that have the potential to cause accidents. The job hazard analysis also suggests controls or procedures to remove the hazard or minimize the risk of harm.

Below are some questions that should be considered in a job hazard analysis.

Question	Example
What can go wrong?	▶ The worker could slip on a wet floor that did not have a “Caution” sign.
What are the consequences?	▶ The worker could receive an injury to their legs, hands, back, etc.
How could it happen?	▶ The accident could happen because the worker is rushing to take care of a customer that another employer forgot.

Carefully contemplating and answering the questions shown above is the starting point for completing a thorough job hazard analysis. Other important questions include:

- ▶ What are other contributing factors?
- ▶ How likely is it that the hazard will occur?

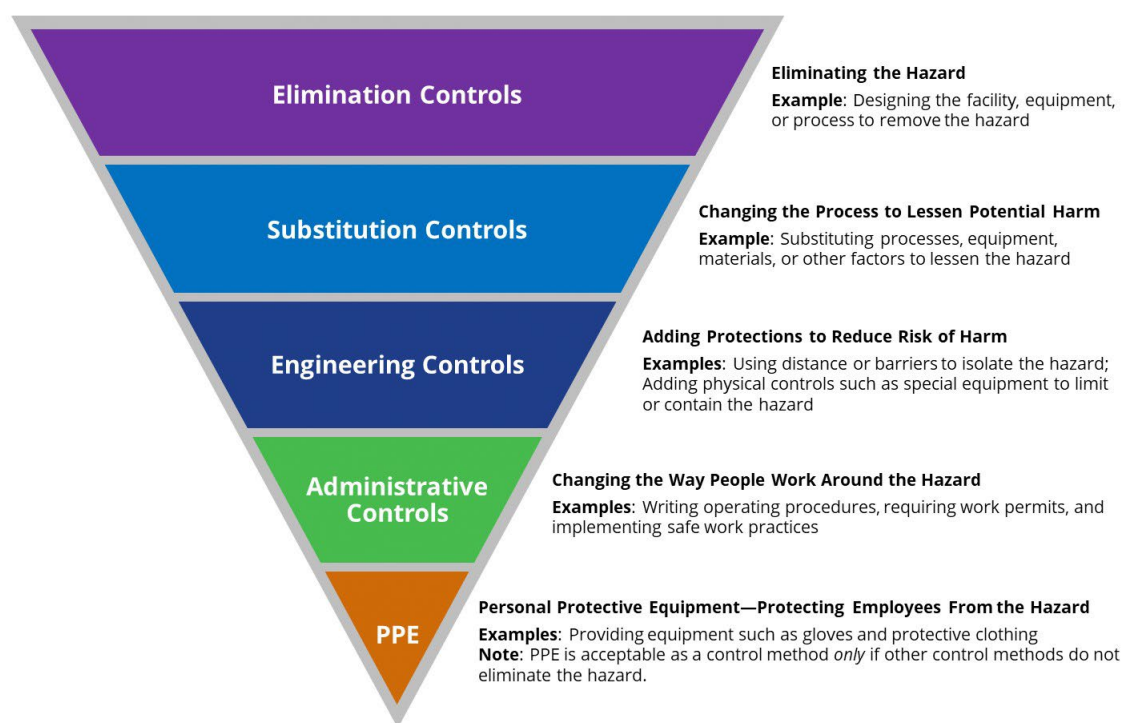
In the job analysis process, hazards are listed and ranked. The next step is to identify controls for the hazards listed in the report. The highest priority should be jobs with hazards that present unacceptable risks either because they are the most likely to occur or would have the most severe consequences—or some combination of both factors.



Follow these guidelines to identify hazards on the job:

- ▶ Include employees familiar with the task in all phases of the analysis—from reviewing the job steps and procedures to discussing uncontrolled hazards and recommended solutions. Clarify that you are evaluating the job itself, not the employees' job performance.
- ▶ Thoroughly outline the steps or tasks.
- ▶ Describe all required steps, but do not include unnecessary or distracting details.
- ▶ Review the job steps with employees to make sure you have not omitted important information.
- ▶ If any hazards exist that pose an immediate danger to an employee's life or health, take immediate action to protect the worker. Any problems that can be corrected easily should be corrected as soon as possible.

When planning for hazard control, use the following hierarchy of effectiveness:



## Hazard Prevention and Planning

Hazard controls can contribute greatly to the reduction of hazards found in the workplace. However, there are hazards that may not be so obvious that the employer or manager is able to eliminate them from occurring in the first place. Sometimes, a prevention method was not followed appropriately, or, despite the best efforts of everyone involved, an unforeseeable event results in an emergency. For these reasons, it is important to always:

- ▶ maintain the facility and equipment,
- ▶ design emergency procedures,
- ▶ implement training and drill as needed, and
- ▶ establish a medical program with first aid on site and physician and emergency care nearby.

Managers and employers may not always be able to prevent or foresee workplace emergencies, but it is important that they are always prepared for the sake of themselves and their employees.

## **Safety and Health Training**

The final component of safety and health programs is training, which is the backbone of any safety and health program. For management to lead, for personnel to analyze the worksite for hazards, and for hazards to be eliminated or controlled, everyone involved must be trained.

Safety and health training should target all the following groups:

- ▶ New hires, contract workers, employees who wear PPE, and workers in high-risk areas.
- ▶ Managers—to emphasize their important role in visibly supporting the safety and health program and set a good example for their employees
- ▶ Supervisors—to cover company policies and procedures, hazard detection and control, accident investigation, handling of emergencies and how to train and reinforce training
- ▶ Long-term workers who have job changes due to new processes or materials

Education and training in safety and health protection is especially critical for employees who are assuming new duties. The high injury rates among workers who are newly assigned to work tasks demonstrate this fact. Although some of these injuries may be attributed to other causes, a substantial number are directly related to inadequate knowledge of job hazards and safe work practices.

In addition to the initial training that occurs when an employee is hired or changes job functions, the entire workforce needs periodic refresher training in responding to emergencies.

## **Safety and Health Inspections**

Site safety and health inspections are designed to catch hazards that might have been missed during other stages. Procedures should also be established for daily inspections of the work area. These inspections provide a system for employees to notify management about hazardous conditions and to receive timely and appropriate responses. They should be conducted regularly and with an appropriate checklist.

Establishments may use a checklist that is already developed or may develop a document that meets the specific needs of that worksite. In either case, the list should be based on the following categories:

- ▶ Past problems
- ▶ Industry standards
- ▶ Input from everyone involved
- ▶ The company's safety practices or rules

Additionally, inspections should thoroughly cover every part of the worksite. They should be conducted at regular intervals, and in-house inspectors need to be trained so that they are able to recognize and control hazards. Any identifiable hazard must be tracked to ensure that it is resolved.

### Safety and Health Checklist

The following is a brief sample checklist that employers and managers may use to assess safety and health programs in their workplace. Note that this checklist is just a general guide; management of a particular establishment may provide a more in-depth and detailed checklist that pertains to the specific workplace.

- |   |  |
|---|--|
| ✓ | Do you have a general safety and health program in place?  |
| ✓ | Do you have a safety and health program addressing hazards specific to your work environment?  |
| ✓ | Is one person clearly responsible for the overall activities of the safety and health program?   |
| ✓ | Do you have a safety committee or group of management and labor representatives that meets regularly and reports—in writing—on its activities? |
| ✓ | Do you have a working procedure for handling in-house employee complaints regarding safety and health?   |

Effective worker safety and health programs reduce work-related injuries and illnesses, improve morale and productivity, and reduce compensation costs. Management commitment and employee involvement, worksite and job analysis, hazard prevention and control, and safety and health training are essential to developing a thorough and effective safety and health program.

### Module Conclusion

In this module, we have discussed state and federal laws and regulations designed to protect the health, safety, and well-being of both clients and cosmetologists. You should now be able to:

- ▶ identify who is eligible to obtain a license to practice cosmetology and what the expectations are to maintain that license.
- ▶ outline the significant state and federal laws that govern cosmetologists, registered specialists, and their work environments.
- ▶ define the purpose and functions of the Board of Cosmetology.
- ▶ list the fees associated with practicing cosmetology.
- ▶ describe safety and health programs as they pertain to cosmetology.

## Module 6:

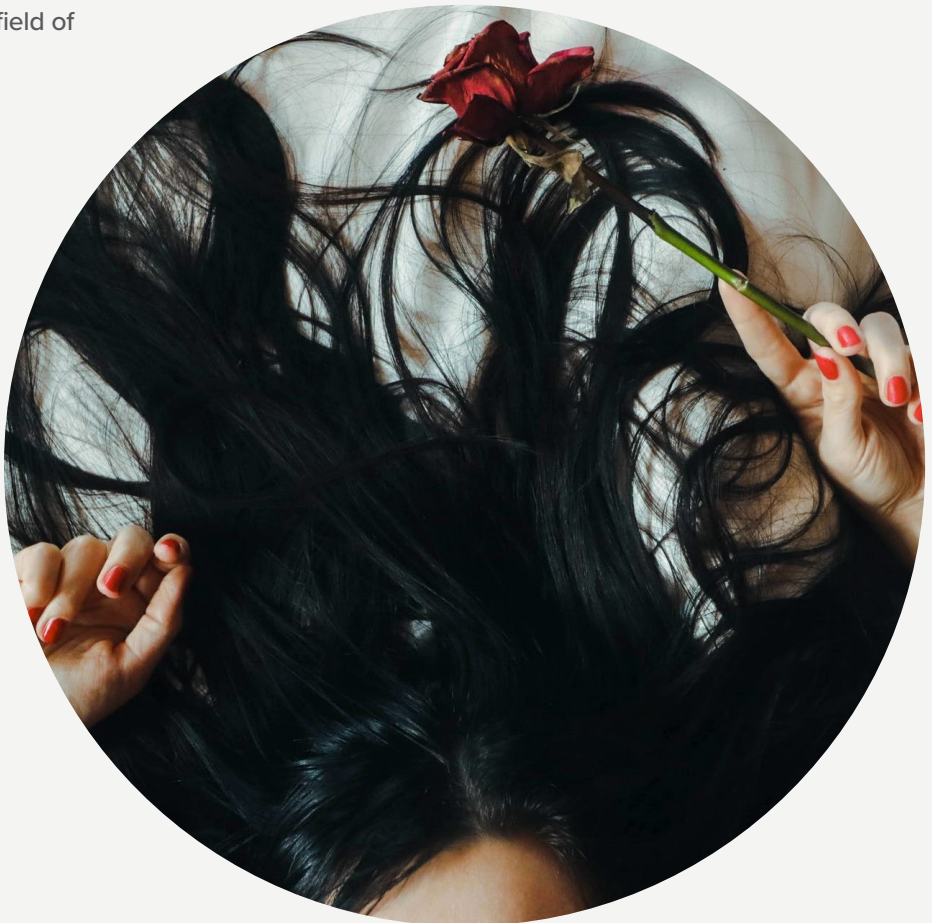
# Chemical Makeup of Skin, Hair, and Nails

### Module Objectives

**This lesson covers the functions and chemical makeups of vital organs such as hair, skin, and nails. It is important for cosmetologists to be aware of the inner workings of these parts of the body, as these are the organs that cosmetologists come into contact with most often.**

**Our objectives in this module are to:**

- ▶ Describe the anatomy of hair, skin, and nails.
- ▶ Explain why knowing the chemical makeup of these organs is important in the field of cosmetology.
- ▶ Name the major diseases and conditions that may cause abnormalities in these organs.
- ▶ Outline the process by which chemicals and other agents enter the skin.
- ▶ Explain how proper hygiene protects cosmetologists and their clients against dangerous chemicals and infection.



## The Skin

The skin, hair, and nails—along with the sweat and oil glands—make up the integumentary system. The skin is the largest organ of the human body, accounting for more than 10% of body mass. Skin serves many functions including:

- ▶ protecting vital organs from damage.
- ▶ preserving water.
- ▶ controlling body temperature.
- ▶ absorbing shock.
- ▶ reserving calories
- ▶ responding to touch.

The skin's two most important functions are:



**To protect the body from potential damage from bacteria, the sun, chemicals, etc.**



**To regulate body temperature**

With its many functions, skin is one of the most important organs in our body.

## Chemical Skin Irritants

Because so much of the work cosmetologists do involves the skin, hair, and nails, a good understanding of and appreciation for these parts of the body is important.

Many skin hazards are directly caused by chemical agents, meaning that cosmetologists are at risk for harmful exposure of the skin due to the nature of the work. These hazards are the main cause of skin disorders and diseases and can be classified into two types:

- ▶ **Primary Irritants:** The effects of primary irritants are usually felt immediately, as they cause chemical reactions on the skin.
- ▶ **Sensitizers:** The effects of sensitizers may not be felt immediately but may manifest after repeated exposure and can cause allergic reactions.

Cosmetologists are vulnerable to these chemical agents when coming in direct contact with contaminated surfaces, through deposition of aerosols, or when being splashed with or immersed in contaminants.

## Skin Disorders

Clients with any of an array of skin disorders may arrive at the salon each day. These conditions include, but are not limited to:

- ▶ Eczema
- ▶ Athlete's foot
- ▶ Cellulitis
- ▶ Impetigo
- ▶ Pigment disorders
- ▶ Psoriasis
- ▶ Rosacea
- ▶ Scabies
- ▶ Shingles
- ▶ Vitiligo

## Physical Agents, Medical Trauma, and Biological Agents

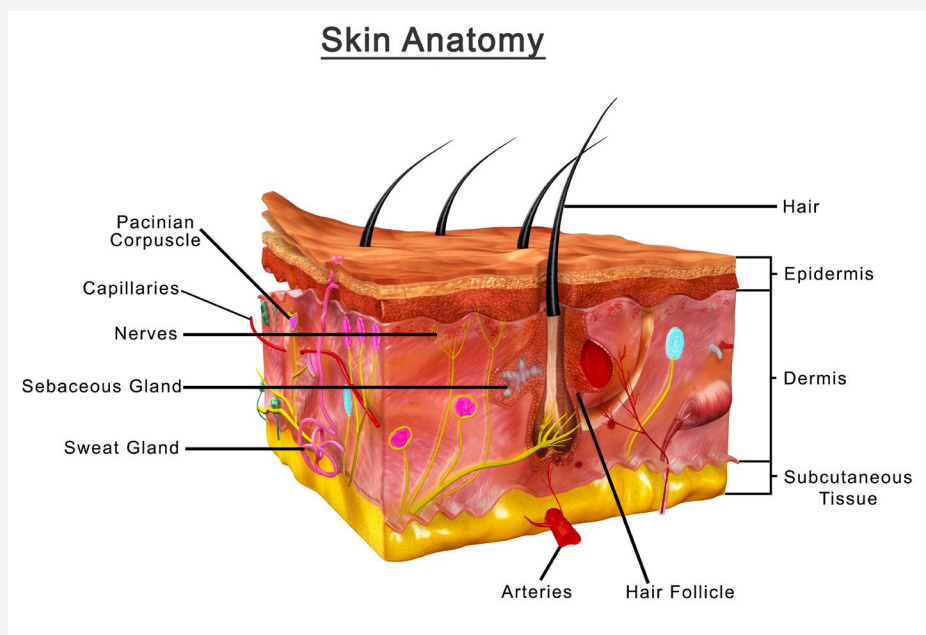
Exposure to irritants such as chemicals found in cosmetology establishments is not the only potential danger to skin. There are three other types of hazards that the skin may encounter:

- ▶ Physical Agents - Extreme temperatures (hot or cold) or radiation (UV/solar radiation).
- ▶ Medical Trauma - Pressure, friction, cuts, bruises, and other similar injuries
- ▶ Biological Agents - Parasites, plants, or microorganisms

The following sections describe how these various hazards relate to the practice of cosmetology.

## Three Layers of the Skin

Understanding the basic anatomy of the skin is necessary to understand how chemicals impact it.



All skin is made of three primary layers. Click on the tabs below to learn about each layer.

<b>1st Layer</b>	<b>The Epidermis</b>
	▶ This outermost layer of the skin varies in thickness from 1.5mm on the palms of and on the soles of the feet to only .05mm thick on the eyelids.
<b>2nd Layer</b>	<b>The Dermis</b>
	▶ This fiber-rich layer below the epidermis is the thickest of the three layers and makes up approximately 90% of the thickness of the skin. Its main functions are to regulate temperature and supply the epidermis with nutrient-saturated blood. The dermis also stores much of the body's water supply.
<b>3rd Layer</b>	<b>The Subcutaneous Layer</b>
	▶ This lowest layer of the skin, consists of a network of fat and collagen cells. It functions both as an insulator, conserving the body's heat, and as a shock absorber, protecting the inner organs. Blood vessels, nerves, lymph vessels, and hair follicles cross through the layer, which also stores fat as an energy reserve for the body.

## How Do Chemicals Enter the Skin?

Chemicals enter the body through dermal absorption. This is a process by which a chemical is transported from the outer surface of the skin into the skin itself, and then distributed throughout the body.

The rate of absorption of a chemical into a person's body is related to the outermost layer of the epidermis, which is called the stratum corneum, or SC. How much a chemical is absorbed is dependent on some of the following factors:

- ▶ Whether the skin is damaged or intact
- ▶ The area of the skin exposed to the hazard
- ▶ The physical and chemical properties of the hazard
- ▶ The concentration of the hazard
- ▶ How long the skin is exposed to the hazard
- ▶ How much of the skin is exposed

A chemical is absorbed by the skin through a process called diffusion. This means that molecules move from high concentration areas to low concentration areas.

## Contact Dermatitis

Contact dermatitis, also called eczema, is an inflammation of the skin resulting from exposure to a hazardous agent. According to the Centers for Disease Control (CDC), it is the most common form of reported occupational



skin disease (OSD) and presents a significant hazard for workers. Contact dermatitis accounts for more than 90% of all cases of OSD in the United States. Common symptoms of dermatitis include:

- ▶ Itching
- ▶ Pain
- ▶ Redness
- ▶ Swelling
- ▶ Small blisters or wheals (itchy, red circles with a white center) on the skin
- ▶ Dry, flaking, scaly skin that may develop cracks

Occupational contact dermatitis falls into two categories as described in the table below:

	Irritant Contact Dermatitis (ICD)	Allergic Contact Dermatitis (ACD)
<b>Characteristics</b>	<ul style="list-style-type: none"> <li>▶ Non-immunologic reaction inflammation of the skin caused by direct damage following exposure to a hazardous agent</li> <li>▶ Makes up approximately 80% of all cases of occupational contact dermatitis</li> <li>▶ Reaction typically localized to the site of contact</li> </ul>	<ul style="list-style-type: none"> <li>▶ Immunologic reaction inflammation of the skin triggered by dermal contact to a skin allergen</li> <li>▶ Workers must be first sensitized to the allergen, after which subsequent exposures of the skin to the allergenic agent may elicit an immunologic reaction resulting in inflammation of the skin</li> <li>▶ Reaction is not confined to the site of contact and may result in systemic responses</li> </ul>
<b>Causes</b>	<ul style="list-style-type: none"> <li>▶ Phototoxic responses (e.g., tar)</li> <li>▶ Acute exposures to highly irritating substances (e.g., acids, bases, oxidizing/reducing agents),</li> <li>▶ Chronic cumulative exposures to mild irritants (e.g., water, detergents, weak cleaning agents)</li> </ul>	<ul style="list-style-type: none"> <li>▶ Industrial compounds (e.g., metals, epoxy and acrylic resins, rubber additives, chemical intermediates)</li> <li>▶ Agrochemicals (e.g., pesticides and fertilizers)</li> <li>▶ Commercial chemicals</li> </ul>

The symptoms and presentation of ICD and ACD are very similar, making it difficult to distinguish between the two forms of contact dermatitis without clinical testing. The severity of contact dermatitis varies and depends on factors including:

- ▶ Characteristics of the hazardous agent (irritant and/or allergen)
- ▶ Concentration of the hazardous agent (irritant and/or allergen)
- ▶ Duration and frequency of exposure to the hazardous agent (irritant and/or allergen)
- ▶ Environmental factors (temperature, humidity)
- ▶ Condition of the skin (healthy vs. damaged skin, dry vs. wet)

# Chemical Makeup of Skin, Hair, and Nails

## The Hair

Hair is another important part of the human body that cosmetologists will frequently encounter in their establishments. This section covers important information about the anatomy of hair.

The visible shaft that is outside the skin is just one of the two major structures that makes up a single hair. The hair shaft is composed of chemically dense keratin that contains more than 85% protein. These keratinized cells have tiny pores across the surface. Large gaps form when the cells begin to split apart, which allows for external agents to become trapped in the hair's outer surface.

That opportunity to introduce substances into the shaft of the hair is what makes this process important to cosmetology.

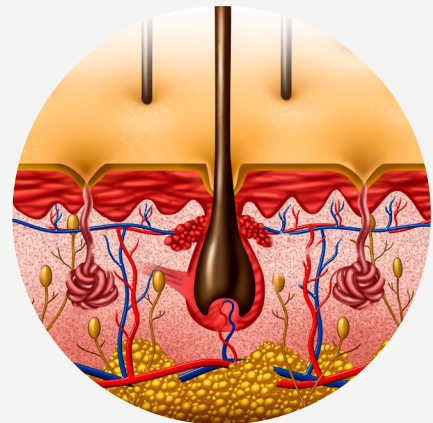
The hair shaft grows out of a follicle that is located below the surface of the skin in the dermis. This follicle has three components:

- ▶ the outer root sheath (ORS), which supplies cells including melanocytes and keratinocytes (the cells that produce keratin);
- ▶ the inner root sheath (IRS), which contains the cuticle layer; and
- ▶ the bulb, which produces hair.

The bulb is underneath the surface of the skin, at the base of the follicle. The arrector pili muscle attaches at the bulge of the bulb and works to elevate the hair; when exposed to cold, these muscles contract, raising the level of the skin in what is sometimes referred to as “goosebumps.” Closer to the surface of the skin, the sebaceous gland lubricates the hair.

Within the hair follicle itself are two additional components as well:

- ▶ The dermal papilla at the base of the bulb contain blood vessels, nerves, and cells that form pigments.
- ▶ The follicle cells that form the hair shaft, which is generally composed of dead cells. These cells form a solid cylinder around the dermis, and mitotic activity at the base of the follicles causes different layers to keratinize.



**Hair follicles located beneath the skin's surface produce hair shafts.**

### Did you know?

Hair has the highest rate of cell division (or mitosis) of any type of cell in the human body. The average hair grows 0.3 millimeters per day, or 1 centimeter per month.

## Curly Hair vs. Straight Hair

It may be surprising to know that curly hair and straight hair are distinctly genetic traits. But why do some people have curly hair, while others have straight hair?

One of the factors in whether a person has curly or straight hair is the shape of their hair follicle. Curly hair grows from curved follicles that do not meet the scalp straight on, while straight hair grows from follicles that are set more or less at a right angle with the scalp.

Another factor in the shape of hair is related to a component mentioned in the section above, keratin, and its relationship with the amino acids present in the hair itself. Keratin and keratin-associated proteins (KAPs) form the fiber of the hair, itself. The arrangement of different types of keratin proteins in the cortex, or middle layer of the hair shaft, affects whether the hair will be curly or straight.

People with curly hair have hook-shaped hair follicles. The more hook-shaped the hair follicle is, the curlier the hair will be.

## Hair Growth

Hair has three phases of growth.

Phase 1	Anagen
	<ul style="list-style-type: none"><li>▶ This is the stage where the hair fiber grows.</li><li>▶ At any time, 80-85% of hair is in this phase.</li><li>▶ Anagen growth lasts from two to seven years.</li></ul>
Phase 2	Catagen
	<ul style="list-style-type: none"><li>▶ This is usually referred to as the "transitional phase."</li><li>▶ Hair growth begins to slow down.</li><li>▶ The catagen phase typically lasts for a few weeks.</li></ul>
Phase 3	Telogen
	<ul style="list-style-type: none"><li>▶ This is when the hair follicle goes dormant and hair growth stops.</li><li>▶ At any time, 10-15% of hair is in this phase.</li><li>▶ The telogen phase may last as long as a year for scalp hair.</li><li>▶ After this phase, hair growth returns to the anagen phase.</li></ul>

## Hair Pigment

Because cutting, coloring, and washing hair is a significant component of a cosmetologist's job, it is important to be familiar with the chemicals of which hair is formed. One of these chemicals is melanin, which is made up of specialized pigments called melanocytes. These melanocytes are found at the opening of the skin's surface, including the places from which hair grows. As hair begins to form, these melanocytes inject melanin - basically pigment - into cells that contain keratin.

There are two types of melanin, eumelanin and pheomelanin, and the amount and type in the keratin cells determines the color of the hair.

As was discussed earlier, keratin is a primary component in skin, hair, and nails. Over the years, this melanin continues to be injected. With age, this process slows, leading to hair growth with less and finally no pigment. This results in grey and, eventually, white hair.

## Hair Loss

The human scalp contains about 100,000 hairs, and it's normal to lose about 100 hairs each day. The general scientific term for hair loss is alopecia. Hair loss usually happens gradually and can occur in patches or all over (this is called diffuse).

Although many people probably associate hair loss with aging—androgenetic alopecia—there can be other reasons for hair to thin or fall out. For example, alopecia areata is an autoimmune disease in which the immune system attacks hair follicles.

Hair loss can also result from telogen effluvium, which is caused by various kinds of stressors, and results in hair loss by the handful. The U.S. National Library of Medicine details some of the contributing factors to this type of hair loss. These can include:

- ▶ Infections and very high fevers
- ▶ Childbirth
- ▶ Any major surgery, illness, or sudden blood loss
- ▶ Severe emotional trauma
- ▶ Crash diets that do not include enough protein
- ▶ Starting or stopping certain medications

What else may cause hair loss?

- ▶ Anemia (lack of iron)
- ▶ Autoimmune disorders
- ▶ Burns
- ▶ Infectious diseases
- ▶ Excessive shampooing or blow-drying
- ▶ Hormonal changes
- ▶ Thyroid conditions
- ▶ Nervous habits
- ▶ Cancer treatments such as chemotherapy
- ▶ Tinea capitis (ringworm of the scalp)



**Some daily hair loss is normal, but hair coming out in clumps or handfuls may indicated a medical condition.**

- ▶ Tumors
- ▶ Hairstyles (such as tight braids) that stress hair follicles

## Hair Conditions

There are additional hair conditions that cosmetologists—especially those who interact primarily with female clients—should be familiar with. These conditions include:

### Dandruff

- ▶ This condition is caused primarily by fungus on the scalp.
- ▶ Symptoms: itching of the scalp, flakes of skin

### Eczema

- ▶ This is a chronic skin condition.
- ▶ Symptoms: dry or itchy skin, rashes

### Head lice

- ▶ Head lice are insects that live on a person's head.
- ▶ Symptoms: itching of the scalp

**Note:** Lice are spread primarily through head-to-head contact, but also through sharing things such as combs and brushes. Cosmetologists must always soak their tools in disinfectants prior to using on another customer.

### Psoriasis

- ▶ This is an autoimmune disease.
- ▶ Symptoms: thick red patches, itching, pain

### Vitiligo

- ▶ This is an autoimmune disease.
- ▶ Symptoms: early graying of hair



Dandruff is a common condition that affects most adults at some point during their lives.



Head lice are tiny insects that spread through head-to-head contact.

## Hair Dyes and Relaxers

In addition to the general tools covered above, many cosmetology establishments (especially if they are salons) have manicure/pedicure equipment such as foot spas and air-jet basins that have their own EPA-specific guidelines for cleaning and sanitation. Improperly cleaned and disinfected foot spas can allow biofilm such as skin, hair, oils, lotions, and other residues to build up. The biofilm, in turn, provides a breeding ground for mycobacteria.

Cleaning foot spas with surfactant or enzymatic soaps or detergents before disinfecting will help prevent the build-up of biofilm. The sections above introduced hair-related conditions with medical and environmental causes. Another source of concern for cosmetologists, however, is exposure to chemicals used in hair-related products.

One product that has caused cosmetologists and clients alike is permanent hair dye. In the mid- to late 1970s, permanent hair dyes contained toxic and hazardous chemicals such as aromatic amines. By the 1980s, the components of hair dye products had been changed in an attempt to eliminate harmful chemicals from being used. However, many potentially harmful chemicals do still exist within hair dye products. These dyes can cause such problems as:

- ▶ Hair loss
- ▶ Burning
- ▶ Redness
- ▶ Itchy or raw skin
- ▶ Facial swelling
- ▶ Trouble breathing

That is why cosmetologists must always follow the warnings and directions on warning labels of products, especially when working with clients who may have unknown allergies to hair dyes.

Another source of potentially harmful chemicals is products used to smooth, straighten, or relax hair. Many of these products contain formaldehyde, which is released into the air when the product is heated. Individuals have varying tolerances to formaldehyde, but common reactions for those who are sensitive to the chemical include:

- ▶ watery or irritated eyes
- ▶ burning sensations in the eyes, nose, and throat
- ▶ coughing or wheezing
- ▶ nausea or vomiting
- ▶ headaches and dizziness
- ▶ irritated skin

According to the Food and Drug Administration (FDA), some of these reactions may intensify after repeated contact. Risks increase with greater exposure. Formaldehyde has also been classified as a carcinogen by the National Cancer Institute.

To protect themselves and their clients, cosmetologists should always take precautions when working with hair dyes and chemical relaxers:

- ▶ Wear appropriate attire and gloves to prevent skin irritation.
- ▶ Follow instructions printed on the label for products that contain potentially harmful ingredients.
- ▶ Do not leave hair relaxer on longer than indicated by the manufacturer's directions.
- ▶ Wash hair relaxer out with neutralizing shampoo.



- ▶ Use conditioner after relaxing hair.
- ▶ Always test products such as hair dye on a small portion of hair before completely covering the hair because skin irritation or allergic reaction may possibly occur.

## The Nails

The anatomy of a fingernail or toenail consists of multiple parts. The sections with which cosmetologists must be most familiar are:

- ▶ the nail plate, which is the visible part of the nail;
- ▶ the nail bed, which is where the nail sits;
- ▶ the nail folds, which rest inside slender skin grooves to the sides and bottom of the nail plate;
- ▶ the cuticle, which is a band of tissue that grows over the nail's base; and
- ▶ the nail matrix, located under the skin, which is where the nail plate is formed.

Healthy nails have pink nail plates, and as the nail grows off the nail bed, it should appear white. However, not all nails are normal. The following sections cover some abnormalities that may be found in nails.

## Injury and Illness

Injuries may cause nails to become abnormal. If a person's nail bed has been crushed or damaged in any way, this may cause abnormalities and even deformities in the nail. Additionally, if a person chronically picks or rubs the skin around the nail, this may cause the nail to become abnormally shaped. Finally, even nail polish can be damaging to nails if exposed long-term to it. Extensive exposure to polishes or even moisture can cause the nails to become brittle and peel.

Illnesses may also play a role. If a person has a fungus or yeast, this can cause the nails to change color, texture, or shape. Bacterial infections may also cause the nail color to change. If the infection is severe enough, a person may even lose the nail. Viral warts and certain infections both can affect the shape of the nail as well as its color.

## Diseases, Poisons, and Medications

Quite a few diseases have the potential to affect a person's nails. These include:

- ▶ Kidney disease
- ▶ Liver disease
- ▶ Thyroid disease
- ▶ Severe illnesses or injuries
- ▶ Lichen planus
- ▶ Skin cancer

There are two major types of poisoning that can cause nail abnormalities. The first, arsenic poisoning, can cause white lines and horizontal ridges to form on the nails. Also, if a person consumes silver in any way, their nails may turn blue.

Though medications are beneficial in combatting diseases and illnesses, they may also cause additional side effects to the shape or color of the nail. Some antibiotics have the potential to cause the nail itself to lift up from the nail bed, while chemotherapy can also affect the growth of a nail.

## Nail Hygiene

Nail hygiene is important not only to the client but also for the cosmetologist. Both fingernails and toenails can harbor germs and dirt, which may contain bacteria and can cause the spread of infections.

According to the Centers for Disease Control and Prevention (CDC), some basics of proper nail hygiene are:

- ▶ Keeping nails short and trimming them often.
- ▶ Scrubbing the underside of the nails with soap and water every time hands are washed.
- ▶ Not biting or chewing nails.
- ▶ Not cutting cuticles, which provide barriers to infection.
- ▶ Not biting or ripping hangnails. (Clip with a clean nail trimmer, instead.)

Cosmetologists should always keep their nails appropriately clean, because their hands come in contact frequently with the hands and other body parts of their clients. Using good nail hygiene will help prevent the spread of any bacteria or disease to clients.

When it comes to clients, cosmetologists should perform services only on healthy skin and nails. Cosmetologists may rightfully refuse to perform any service on skin that appears to have any infection in order to protect their own health, safety, and well-being as well as the health, safety, and well-being of the other customers in the establishment.

Always sterilize tools before using them on a new customer.

As was covered in Module 2: Sanitization and Sterilization, cosmetology establishments that use foot spas for pedicures must ensure that this equipment and the areas around it are properly disinfected (according to the guidelines established by the EPA).

It is important that all disinfectants (bleach, Lysol, etc.) are completely absent from the water of the foot spa before clients' feet are submerged.

Finally, make sure to properly dispose of gloves after each customer and replace them with new, clean gloves.



**Make sure that foot spas are properly cleaned and disinfected before beginning work with each client.**

## Module Conclusion

In this module, we have discussed the anatomy, functions, and chemical makeup of skin, hair, and nails. We have covered some potential abnormalities and diseases of these organs and emphasized the importance of keeping the cosmetologist, client, and establishment clean and sanitized. You should now be able to:

- ▶ describe the structures that make up skin, hair, and nails.
- ▶ name the major diseases and conditions that may cause abnormalities in these organs.
- ▶ outline the process by which chemicals and other agents enter the skin.
- ▶ explain how proper hygiene protects cosmetologists and their clients against dangerous chemicals and infection.

**Module 7:**

# Environmental Issues

**Module Objectives**

**Federal and state governments require an array of stringent precautions meant to maintain the health, safety, and well-being of both cosmetologists and clients by addressing environment issues associated with cosmetology workplaces. This lesson covers a variety of those environmental issues.**

**Our objectives in this module are to:**

- ▶ Outline how to prevent hazards, including fire, slipping, electrical, and chemical hazards.
- ▶ Name the hazardous substances that are commonly found in cosmetology salons and list the risks associated with each one.
- ▶ Explain the precautions that should be taken to protect against those risks.
- ▶ Review the Hierarchy of Controls and how it applies to hazardous substances in cosmetology salons.
- ▶ Describe safety and maintenance procedures for tanning beds.
- ▶ Highlight the importance of the Florida Clean Indoor Air Act as it applies to pollution in salons.
- ▶ Review requirements for the contents of Safety Data Sheets (or SDS) and explain why these documents are important in the workplace.



## Physical Hazards

Cosmetologists run the risk of many occupational hazards in salons. They not only work with chemicals on their clients, but also usually work in environments where fire and other hazards are prevalent.

### Fire Hazards

Some basics of fire safety in salons include the following practices:

The priority for fire hazards is always keeping exit routes in the salon unobstructed. Salon workers should regularly check to ensure that this is the case. All workers should know where the fire exits in the salons or workplaces are located. Each employee must also be aware of the salon's fire evacuation plan and be prepared in case of an emergency to direct clients and other employees safely out of the building.

Aerosols such as hairspray and spray-on hair color, as well as any other product that is flammable, should always be stored away from any open flames or heat. They should be kept in a cool, dry atmosphere and should never come in contact with too much direct sunlight.

Employees should always unplug electrical appliances before they leave in order to prevent fires from sparking overnight.

### Electrical Hazards

Cosmetologists use many electrical appliances daily, from small, portable items such as hair dryers and flat irons to larger items such as foot spas and tanning beds. Because these and other electrical appliances commonly found in salons present some hazards, every employee should recognize the potential for these electrical hazards and how they may be prevented.

For example, equipment should be checked regularly to prevent faulty tools from becoming hazards. Salon equipment often undergoes a great deal of wear and tear, since most equipment is used daily. Employees should be certain to log any issues with equipment, including noting when the equipment has been fixed. Each work station should have well-maintained electrical sockets that are never overloaded. This will prevent the sockets from sparking fires.

### Slipping, Tripping, and Fall Hazards

With many people in a salon at one time, as well as various equipment, slips, trips, and falls can be quite common. The following precautions will help prevent fall hazards in salon environments:

- ▶ Make certain that floor surfaces are even and that cords, cables, and equipment are removed from pathways.
- ▶ Clean up any spills immediately.
- ▶ Keep all areas of the salon well lighted.
- ▶ Provide appropriate step ladders to discourage employees from standing on chairs or other items.





## Properly Handling Equipment

All employees must learn to properly lift and handle the equipment they use in the salon. They should not lift equipment that is too heavy for them and should use other devices to do so when necessary. Establishments should be designed to maximize movement for the cosmetologist, providing employees with plenty of space to move around and use equipment while they are working.

## Hazardous Substances

This section briefly covers some chemicals that cosmetologists may encounter in their practice. It also describes processes cosmetologists can use to avoid contaminating themselves and their clients with these chemicals.

Cosmetologists encounter chemicals daily that have the potential to harm them. Perhaps the most potent of these chemicals include disinfectants such as bleach or Lysol that are used to clean surfaces in the workplace. Since the skin is such a sensitive organ, any chemical can potentially induce adverse side effects.

Solvents, such as those used to disinfect, can be beneficial in cleaning the work environment, but also remove natural oils from the skin. This can cause irritation or dryness of the skin, which makes it easier for other potentially harmful ingredients to enter the body. It is important for cosmetologists to understand the chemicals they are working with and how those chemicals interact with the body's vital organs in order to protect themselves and their clients from such hazards.

Here are some other chemicals a cosmetologist may encounter:

### Acid/Alkaline Perms

- ▶ Acid/alkaline perms often involve the use of glyceryl thioglycolate ester, which can lead to serious skin disorders (sensitization). The process involves mixing and applying liquids/pastes using a perming rod and plastic wrapping of the hair. After perming, the substance is rinsed and neutralized using hydrogen peroxide. There are hazards throughout the process, including cleaning and disposing of wrapping, cotton wool, paper towels, gloves, and empty tubes.
- ▶ Always wear gloves when mixing/decanting chemicals.

### Shampoos and Conditioners

- ▶ Even shampoos and conditioners that are identified as non-hazardous on the SDS may lead to skin irritation and dermatitis after prolonged exposure. Shampooing is generally considered less hazardous than other activities unless continuous or prolonged washing is performed.
- ▶ Gloves are not normally required, but wear gloves if experiencing any skin condition.

### Hair Dye and Colors

- ▶ Dyeing and coloring involves applying dye from a tube using a brush. Foils or other devices are often used. Cosmetologists then work the dye through the hair using their hands. The primary risks are repeated or prolonged skin exposure and possible eye and respiratory irritation.
- ▶ Hair bleaches and dyes may contain any of the following chemicals: ammonia, which can cause harm to skin ranging from mild irritation to serious tissue damage; hydrogen peroxide, which can irritate skin and eyes and cause more serious damage such as blistering on the skin in higher concentrations; and paraphenylenediamine (PPDA), which is a common allergen that can cause serious reactions with repeated or prolonged exposure.
- ▶ Temporary colors are easier to wash from the hands but often contain azo dyes or phenyl amine compounds, which are suspected carcinogens (cancer causing substances). Alcohol as an ingredient makes skin contact with colors and dyes more hazardous.
- ▶ Always wear gloves when mixing/decanting chemicals.

### Peroxide Solutions

- ▶ Peroxide solutions usually contain 7-12% hydrogen peroxide. Hydrogen peroxide can irritate skin, eyes, noses, and throats and cause severe eye damage. It comes in liquid form with more concentrated solutions being more hazardous. Hydrogen peroxide is also used as a neutralizer in perming solutions.
- ▶ Applying peroxide usually involves mixing the peroxide with colors or bleaches. The mixture is then applied to the hair using a spatula or brush. Like coloring, foils or other devices are often used.
- ▶ Hydrogen peroxide will irritate skin and cause itching. Skin exposed to hydrogen peroxide mixed with dyes or ammonium persulphate bleaches is more susceptible to allergic dermatitis.
- ▶ Always wear gloves when mixing/decanting chemicals.

### Powder Bleach

- ▶ Powdered bleaches incorporate a range of persulphate salts including ammonia, sodium, and potassium. All of these products may irritate eyes and noses. Prolonged or repeated exposures may result in eczema, dermatitis, and skin sensitization.
- ▶ The process usually involves mixing fine powders, which come in a bag, with liquid hydrogen peroxide. The preparation is mixed with a brush and then applied to hair. Using foils, frosting caps, hair clips, and other instruments during bleaching is common.
- ▶ Hazardous exposure can result from breathing in the dust, getting corrosive dust in the eyes, or leaving the peroxide mix in contact with the skin for extended periods of time.
- ▶ Always wear gloves when mixing/decanting chemicals.



**Hair Sprays and Spray-On Hair Color**

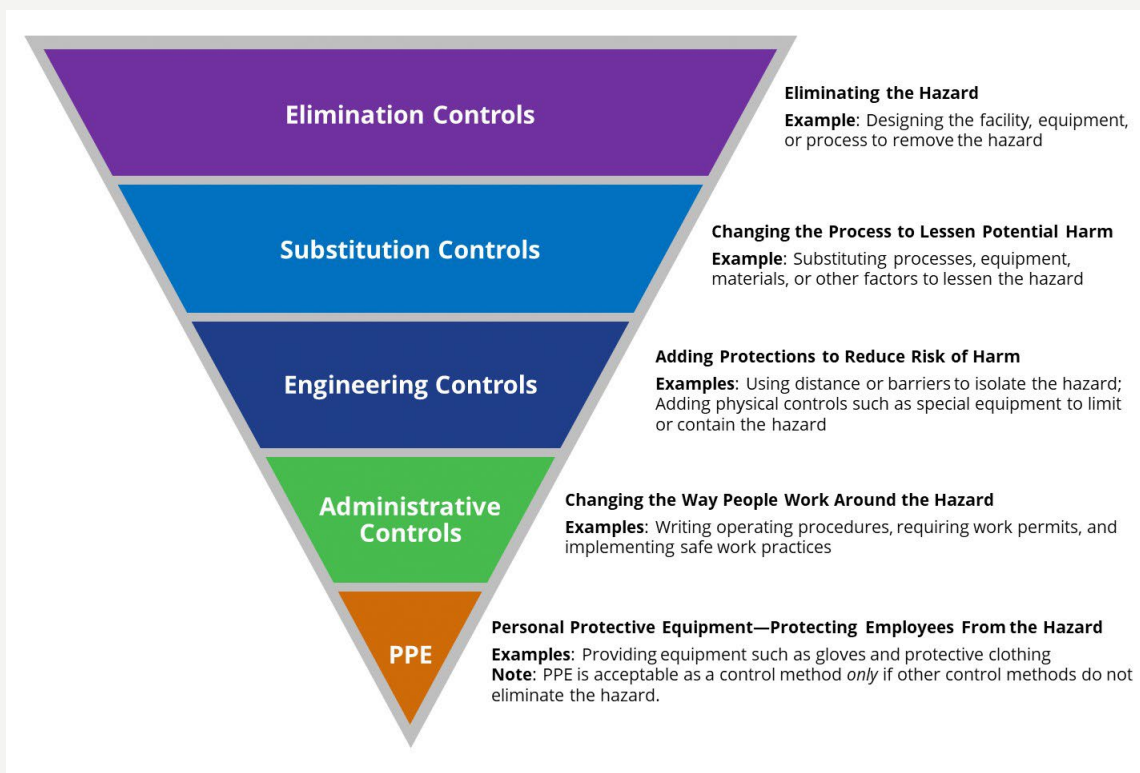
- ▶ Hair sprays including lacquers and styling mousses may contain alcohols and hydrocarbon propellants such as propane and butane.
- ▶ Spray-on hair color may contain ingredients such as ammonia, diamine sulphate, and PPDA. Never use these products to dye eyelashes or eyebrows. Always follow the manufacturer's instructions.
- ▶ Hairsprays and lacquers may irritate eyes and skin, and intentionally misusing these products by deliberately inhaling them may be fatal. They are also highly flammable and should be stored apart from other chemicals.
- ▶ Always wear glasses when using hair sprays.

**Nail Products**

- ▶ These products include a range of liquid solvents, lacquers, and applications containing hydrocarbons such as ethyl methacrylate, methyl methacrylate, acetone, and amyl acetate.
- ▶ Quantities used during nail procedures are usually small, and the risk of generating mists or sprays that may be inhaled or irritate eyes is lower than when using hairsprays. Nonetheless prolonged use of these products may be hazardous. The odors generated from acrylate-based products may be a serious nuisance issue.
- ▶ These products are usually manually applied using cotton wool, brushes, or other means from small bottles. Poor ventilation or enclosed work places may result in abnormally high exposures. Poor work practices such as positioning the face very close to the substance during intricate work may increase the risk of exposure.
- ▶ Always wear gloves when washing and removing nail polish or when exposure to these substances may be prolonged.

## Safety Control Measures for Hazardous Substances

It is important that cosmetologists do what they can to always protect themselves and their clients from potentially harmful chemicals. In general, the same hierarchy of controls discussed in Module 5: State and Federal Laws as Applied to Cosmetology, is used when working with hazardous substances.



As shown above, controls for potential hazards are applied in the following order, starting with the most effective at the top of the graphic:

### Elimination Controls

First consider whether it is possible to eliminate the use of the substance entirely.

**Example:** Use a physical process that does not require a chemical.

### Substitution Controls

If eliminating the hazard entirely is not possible, considering using a less hazardous substance or a less hazardous form of the substance.

#### Examples:

- ▶ Use a water-based spray instead of solvent-based spray.
- ▶ Purchase the substance in a less hazardous form (pellets instead of powder, lower concentration, ready-to-use product that requires less handling).

### Engineering Controls

If substitution will not adequately protect workers, consider adding physical controls (such as different equipment) that eliminate or reduce the generation of substances, suppress or contain substances, or limit the area of contamination in the event of spills and leaks. Also consider separating people from the substance by distance or barriers.

#### Examples:

- ▶ Use partially enclosed, ventilated mixing booths.
- ▶ Use down draft ventilation for nail product application.
- ▶ Use closed systems.
- ▶ Isolate the process to one room with restricted access.
- ▶ Distance workers from hazardous substances.

### Administrative Controls

If substitution and/or isolation methods are not practical or sufficient, consider instituting and documenting safe work practices.

#### Examples:

- ▶ Limit the number of employees authorized to do certain tasks to reduce opportunities for exposure to hazardous chemicals.
- ▶ Streamline processes to reduce the duration and/or frequency of exposure to substances.
- ▶ Clean up spills immediately.
- ▶ Prohibit eating, drinking, and smoking in areas where substances are used.
- ▶ Provide suitable washing facilities.

### Personal Protective Equipment (PPE)

Consider only if none of the above controls are possible or if they do not provide adequate protection. Require protective clothing and equipment for employees, supervisors, and clients.

**Example:** Require aprons/gowns, gloves, chemical-resistant (safety) glasses, and head protection as appropriate.

**Note:** Nitrile gloves provide the best protection against many of the chemicals described above, especially those found in nail salons. The exception to this recommendation is when you are handling acetone. The CDC recommends wearing butyl gloves when handling this chemical.

Generally, a combination of measures is needed if it is not possible to eliminate the use of the hazardous substance.

## Tanning Beds

Another source of risk that cosmetologists may encounter in a salon is tanning beds. This section addresses the steps cosmetologists should take to protect themselves and their clients from potential hazards associated with this equipment.

- ▶ Like all other salon equipment, tanning beds should be properly maintained.
- ▶ Tanning beds should always be electrically isolated from the other products in the salon and must have a cut-out switch available to the client.
- ▶ Cosmetologists should be trained in the hazards of UV light exposure in order to protect clients.
- ▶ They should be able to clearly relay all safety information regarding tanning beds—including features, maximum allowed duration, etc. —to their clients.

## Air Pollution in the Workplace

Salons are prone to air pollution because of the amount of chemicals circulating throughout the establishments at any given time. This means the risk of inhaling chemicals is prevalent in all salons. According to the Occupational Safety and Health Administration (OSHA), proper ventilation is the most effective way to decrease the amount of chemicals in a salon. For example, one way to protect workers from chemical hazards is to install exhaust ventilation systems that trap vapors, dust, and chemical particles and expel them from the workplace. This precaution alone may reduce potential chemical exposure by at least 50%.

In addition to installing and using an exhaust ventilation system, OSHA makes the following recommendations specifically for nail salons:

- ▶ Open doors and windows when possible to allow fresh air to circulate.
- ▶ Make sure ceiling vents are turned on and working.
- ▶ Install exhaust fans near open doors and windows to pull in air at one end of the salon and push it out the other.
- ▶ Provide and properly maintain ventilated tables. Clean catch basins weekly, and change charcoal filters at least monthly.
- ▶ Keep bottles closed tightly to prevent products from spilling or evaporating into the air.
- ▶ Dispose of used cotton balls and any other soaked materials in metal trash cans with tightly fitting lids or place the materials in a sealed bag before placing them in a trash can.

Salons that do not have exhaust systems should keep the heating/air conditioning system running during work hours. Setting the fan switch to “on” will help air circulate. Salon owners should make sure the system is properly maintained and that filters are changed regularly.

When none of the above are adequate, employers must provide respirators that meet OSHA requirements.

## Florida Clean Indoor Air Act (FCIAA)

Chemicals are not the only potential hazards within the work environment. In 1985, the Florida Clean Indoor Air Act (FCIAA) was enacted to protect people from the hazards of secondhand smoke. In 2003, as a result of an amendment to Florida’s constitution, smoking was prohibited in all indoor workplaces, including cosmetology salons. The current statute also prohibits vaping.

Under the law, the owner or person in charge of an enclosed indoor workplace must put in place a policy prohibiting smoking and vaping. The policy may also specify what will happen if the person in charge learns of a violation. The person in charge may also choose to post signs to increase awareness of the policy.

A proprietor or person in charge who does not comply with the law may be fined between \$250 and \$2,000.

### Reporting a Violation

Violations of the FCIAA should be reported to the Florida Department of Health (DOH) and the Department of Business and Professional Regulation (DBPR).

Florida Department of Health  
(800) 337-3742  
FCIAA@flhealth.gov  
4052 Bald Cypress Way, Bin C-23  
Tallahassee, FL 32399-1743

Department of Business & Professional Regulation  
(850) 487-1395  
www.myfloridalicense.com/contactus  
1940 N. Monroe Street  
Tallahassee, FL 32399-1027

Complaints must include the following information:

- ▶ Name of the workplace where the violation occurred
- ▶ The mailing of the workplace
- ▶ The nature of the violation
- ▶ The telephone number and name of the person in charge of the workplace.

## Safety Data Sheets (SDS)

As discussed in Module 3, the Safety Data Sheet (SDS) is an important component of protecting the work environment from accidents and chemical hazards. An SDS contains the important and relevant information regarding the properties of a particular substance.

The following sections must be included on a SDS:

- ▶ Product identifier
- ▶ Name and contact information of the manufacturer
- ▶ Recommended use of the product
- ▶ Hazards and precautionary statements
- ▶ Names of the chemicals, including concentration levels for mixtures
- ▶ Appropriate first aid measures for different types of exposure
- ▶ Fire-fighting measures

- ▶ Precautions for handling and storage
- ▶ Physical and chemical properties
- ▶ Recommended control measures
- ▶ Information about the substance's reactivity and stability
- ▶ Descriptions of the possible health effects related to short-term and long-term exposure to the product

Safety Data Sheets may also include helpful but non-mandatory information about the product's ecological impact, proper methods of disposal and transportation, as well as citations to any safety, health, or environmental regulations that apply to the product.

Each SDS should be updated at least once a year. The latest SDS for every product that potentially contains hazardous materials must be kept in the salon, readily available for use. It may be helpful to keep the Safety Data Sheets in a binder and store the binder in the same place where products are stored.

Employees should read and understand the content on the Safety Data Sheets to ensure that their establishment is complying with local and federal regulations. Also, before disposing of any chemical, an employee should always check the corresponding SDS for procedures.

## Module Conclusion

In this module, we have examined procedures and laws intended to encourage safe practices in the cosmetology environment. We have covered methods for preventing hazards such as tripping, fire hazards, electrical hazards, and chemical hazards and discussed procedures for using and maintaining tanning beds. We covered the topic of air pollution in the workplace, including the history and importance of the Florida Clean Indoor Air Act. Lastly, we discussed what an SDS is and why it is an integral part of maintaining an establishment's environmental safety. You should now be able to:

- ▶ identify physical hazards, including fire, slipping, electrical, and chemical hazards and explain how to prevent them.
- ▶ name hazardous substances found in cosmetology salons and list the risks and precautions associated with each one.
- ▶ explain how the Hierarchy of Controls applies to hazardous substances in cosmetology salons.
- ▶ describe safety and maintenance procedures for tanning beds.
- ▶ highlight the importance of the Florida Clean Indoor Air Act as it applies to pollution in salons.
- ▶ list the contents of Safety Data Sheets (or SDS) and explain why they are important in the workplace.

## Module 8:

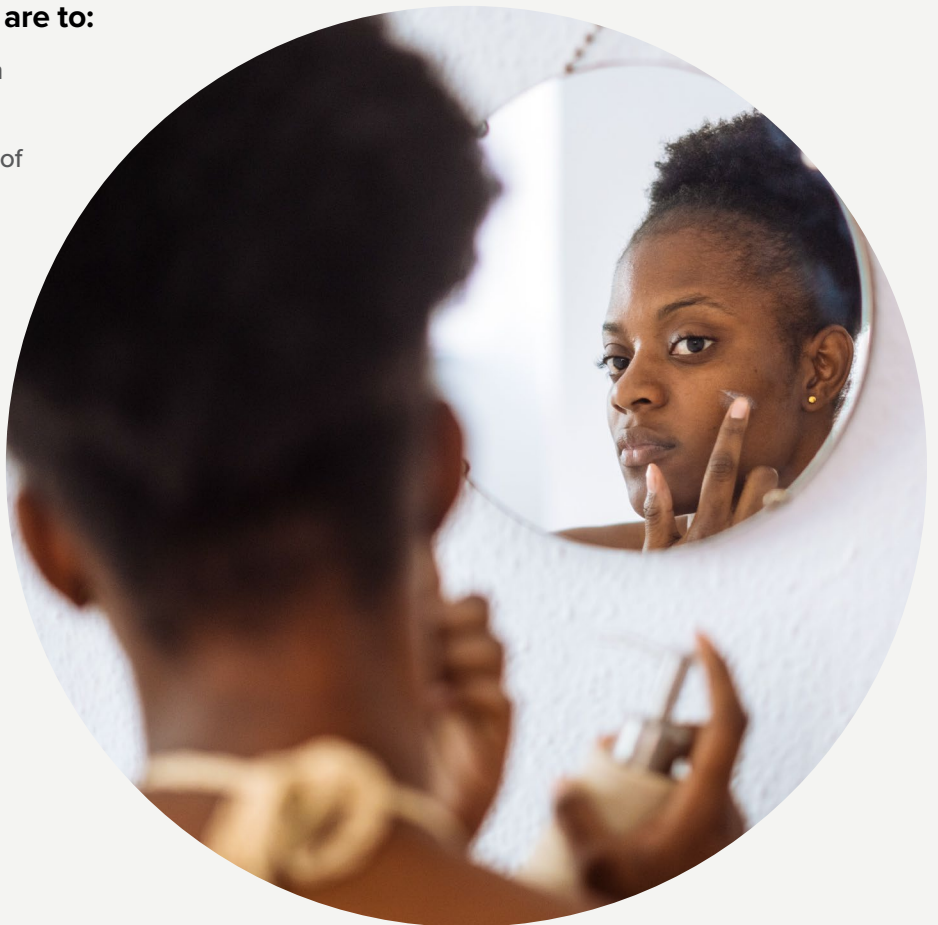
# The Impact of Cosmetics on Health

### Module Objectives

**This lesson covers the effects of chemicals in cosmetics, diseases and disorders caused by cosmetics, and regulations around ingredients in cosmetics.**

**Our objectives in this module are to:**

- ▶ List the different chemicals used in cosmetics.
- ▶ State the potential harmful effects of long-term cosmetic use.
- ▶ Relate federal regulations to how they protect consumer health.
- ▶ Select protective measures that you can take to reduce the impact of chemicals on your health.





## Chemicals and Cosmetics

Cosmetics are used to enhance a person's concept of beauty and hygiene. Marketers advertise their cosmetic products with phrases such as "UV ray protection," "natural ingredients," and "recommended by dermatologists." However, some cosmetics can have harmful effects when applied to the human body. These products often contain fragrances, preservatives, and other chemicals that must be regulated by the U.S. Food and Drug Administration (FDA) due to their potential toxicity.

### Did you know?

Cosmetics are regulated by the FDA, but they do not have to be approved by the FDA before they enter the market.

The next few sections examine the different chemicals found in cosmetics as well as their functions as product ingredients.

## Parabens

Parabens are often used in cosmetics as a preservative to extend a product's shelf life. These chemicals inhibit bacterial or mold growth that could harm both cosmetologists and their customers. When scanning a cosmetic product's ingredient list, you may see this type of chemical appear under any of the following names:

- ▶ Methylparaben
- ▶ Ethylparaben
- ▶ Butylparaben
- ▶ Propylparaben

Parabens can be found in the following cosmetic products:

- ▶ Shampoo
- ▶ Conditioner
- ▶ Moisturizers
- ▶ Makeup

There are no known serious health concerns related to parabens; however, the International *Journal of Molecular Sciences* cites this chemical as a potential hormone disruptor in high concentrations. Although cosmetics typically use multiple parabens together to protect consumers against harmful bacteria, the concentration of parabens in cosmetics is low.

## Formaldehyde

Chemicals that release formaldehyde are often used as preservatives in cosmetics under the names of formalin and methylene glycol. Formaldehyde can be found in many skincare and hair-smoothing products, although it may not always be labeled as an ingredient. It can also be used in nail polishes to increase the durability of the polish.

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As formaldehyde is released into the air—typically through heat—consumers may have adverse, sensitive reactions. When using cosmetic products with formaldehyde, it is important to keep your workstation well-ventilated to prevent negative health effects.

## Fragrances

Fragrances are used in cosmetics to enhance the scent of both the product and the consumer. These different scents can be caused by naturally occurring or man-made chemicals, such as limonene (a chemical that is commonly found in citrus peel), citronellol (a chemical found in rose oil), and linalool (a chemical that gives a floral odor).

Another chemical commonly used in cosmetics is diethyl phthalate, which has little or no odor of its own but is used as a fixative and solvent. Phthalates are a family of chemicals used to strengthen plastic. Diethyl phthalate acts as a solvent for the following personal care products:

- ▶ Shampoo
- ▶ Nail polish
- ▶ Hairspray
- ▶ Soap
- ▶ Body wash

The Centers for Disease Control and Prevention (CDC) reports that women have higher concentrations of metabolized phthalates than those of men due to exposure from cosmetics. Studies indicate that high levels of phthalate exposure could have harmful effects on reproductive systems, as shown by their effects on laboratory animals. However, phthalates currently have no verified effects on human health, according to the CDC.

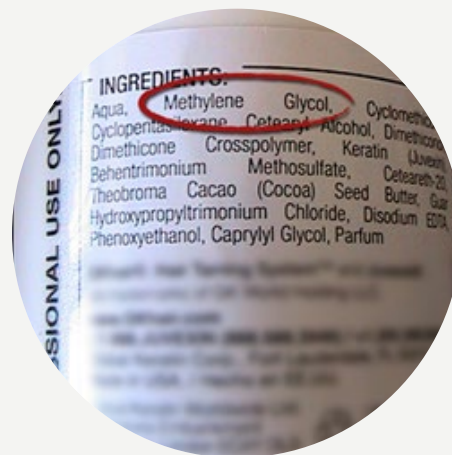
## Color Additives

Cosmetics sometimes use chemicals to add or change or add color to clients' hair, skin, or nails. These color additives found in hair dyes, henna products, and makeup can either be man-made or occur naturally in plants, animals, and other organic sources.

Color additives in cosmetics are strictly regulated by the FDA for consumer safety. As a result, only FDA-approved color additives can be used, and certain additives require additional certification. When working with multiple pigments, be sure that the color additives are FDA-approved ingredients and match your intended use.

## Other Chemicals

While not all cosmetics contain chemicals such as surfactants, ultraviolet (UV) filters, toluene, acetone, and polyethylene glycols (PEGs), these ingredients should be noted when considering the effect of cosmetics on human health. Toluene, for example, can be used with formaldehyde in nail polish to make the product stronger, easier to use, and shinier. UV filters are likewise found primarily in skincare products and makeup. Though the effects of prolonged exposure to these chemicals need to be studied in greater detail, it is recommended that you maintain airflow at your workstation and take breaks when using cosmetics.



**Methylene glycol is a chemical ingredient found in cosmetics that is known to release formaldehyde.**



**The color additives in these lipsticks received FDA approval before the products reached the market.**

## The Effects of Cosmetics on Health

Cosmetologists are expected to take measures to safeguard their clients' health when using potentially toxic products. Some factors to must consider when helping a client include:

- ▶ The concentration of chemicals in the product
- ▶ Different methods of chemical exposure (e.g. direct contact, inhalation, etc.)
- ▶ The duration of chemical exposure
- ▶ Any potential allergic reactions or sensitivities to chemicals
- ▶ Any chemical reactions that may occur with different products or multiple uses of the same product

**Note:** While you cannot entirely prevent negative side effects from cosmetics, you can protect your clients by identifying these factors and adapting accordingly.

For example, bleaching a client's hair often involves using chemicals in the developer and toner that may cause scalp sensitivity and irritation. Instead of bleaching a client's hair multiple times to achieve a desired result, you could instead suggest that the client schedule several appointments to decrease the duration of chemical exposure.

Cosmetologists are exposed to high levels of chemicals because of the nature of their work. The effects of these chemicals can vary depending on the length of exposure, as well as each person's skin sensitivity, existing conditions, age, and other environmental and health factors. This vulnerability is compounded by two phenomena: the "cocktail effect" and the additive effect.

### The "Cocktail Effect"

The "cocktail effect," otherwise known as the synergistic effect, occurs when different chemicals interact to produce a reaction greater than that of either chemical alone. Cosmetologists are vulnerable to this effect because they use multiple fragrances, preservatives, color additives, or other chemical ingredients; there is a higher probability that the cocktail effect will occur if different products are used together. For example, nail products often contain a combination of dibutyl phthalate, formaldehyde, and toluene. When used together, these chemicals can cause any of the following acute effects:

- ▶ Irritated and/or burning eyes
- ▶ Headaches
- ▶ Dizziness or fainting
- ▶ Confusion
- ▶ Rashes
- ▶ Coughing
- ▶ Birth defects

Long-term exposure to this "cocktail" of chemicals can also result in chronic health conditions, such as asthma and cancer.

## The Additive Effect

An additive effect occurs when a person is exposed to a large quantity of a single ingredient. This ingredient may be safe at lower concentrations but become toxic when the person has used several products containing that ingredient. Sometimes, there may be one main toxic chemical present in a line of cosmetic products that you intend to use on a client. If you use only one of these products, the concentration of the chemical may not be strong enough to affect the client. However, you must still take caution when using the same product repeatedly or when using multiple products with the same chemical ingredient. If you or a client is exposed to the same chemical ingredient repeatedly, there may be a negative, additive effect.

For example, hair-smoothing products and hair dye products both often contain ammonium hydroxide; this chemical can cause dermatitis, respiratory irritation, and burns. This may not be a concern if only one such product is used but could become a problem when these products are used concurrently during a client's salon appointment.

## Related Health Conditions

Chemicals in cosmetic products may have long-term effects on health when they are inhaled, make contact with skin or eyes, or are swallowed accidentally. Cosmetologists are more susceptible to chronic health conditions due to a high level of exposure to chemicals in their line of work.

Explore the different health issues listed below that chemicals in cosmetic products may cause over time:

### Allergic Reactions

Some cosmetic products can cause allergic reactions for you or your clients. Allergic reactions occur when your immune system sends antibodies to protect your body against what it perceives to be harmful chemicals. When this happens, you may experience any of the following symptoms:

- ▶ sneezing,
- ▶ coughing,
- ▶ irritated eyes or skin,
- ▶ difficulty breathing,
- ▶ anaphylaxis, and
- ▶ sinus congestion.

If you are allergic to a chemical in a cosmetic product, you will experience a reaction, regardless of the concentration or duration of exposure. However, you may not initially be allergic to that chemical ingredient; some cosmetologists develop reactions to common chemical allergens at their workplace with repeated exposure. Common allergens in cosmetic products include ammonium persulfate, formaldehyde, and glycerol monothioglycolate; these allergens can be found in bleaches, hair relaxers, hair-smoothing products, and nail care products.

Some cosmetologists or clients may be allergic to the tools used to apply cosmetic products, such as latex gloves.

### Asthma

Asthma is a lung disease that causes inflammation as a reaction to an allergen or other environmental condition. Chemical ingredients in cosmetics can cause respiratory irritation, especially if used for a long period of time. This respiratory irritation may lead to asthma. Asthma may cause the following symptoms:

- ▶ difficulty breathing,
- ▶ excessive coughing, and
- ▶ wheezing.

Asthma can stem from repeated allergic reactions to irritants. One of the most common cosmetic chemicals that causes asthma is formaldehyde, which is commonly found in nail care products, shampoos, hair-smoothing products, and blow-out products. Acrylates, used in artificial nails, may also lead to the development of asthma. Other chemicals that may cause asthma over time are considered allergens, such as ammonium persulfate and glycerol monothioglycolate.

### Cancer

Unfortunately, some ingredients in cosmetics can have lasting effects, leading to different types of cancer. Coal tar in hair dyes, for example, is correlated with bladder cancer. While the FDA does require coal tar products to have a warning for those with sensitive skin, the FDA does not require them to contain a warning for cancer. Parabens, which are found in shampoos, moisturizers, and makeup, are linked to breast, ovary, and testicular cancer. Likewise, in addition to causing irritation, formaldehyde may cause nose cancer, as reported by National Cancer Institute.

Other chemicals that can lead to cancer include:

- ▶ Butylated hydroxyanisole (found in hair relaxers and hair-smoothing products)
- ▶ Hydroquinone (found in hair dyes)
- ▶ Selenium sulfide (found in shampoos)
- ▶ Benzophenone (used as a UV filter in skincare products)
- ▶ Cocamide diethanolamine (found in shampoos and conditioners)

However, it must be noted that cancer cases linked to cosmetic product use are not common.

### Dermatitis

Dermatitis is skin inflammation caused by contact with an irritant. Common symptoms of dermatitis include blistering, redness, swelling, itchiness, dryness, burning, flakiness, and sensitivity to UV ray exposure. Dermatitis can come in two forms: allergic and irritant. As a cosmetologist, you may face these symptoms as you handle products for your clients. Some of the irritants or allergens in these products that can cause dermatitis are:

- ▶ ethyl and isopropyl alcohol (found in bleach products, hair relaxers, hair dyes, hairsprays, and hair-smoothing products);
- ▶ ammonium persulfate (found in bleach products, hair relaxers, and hair-smoothing products);

- ▶ sodium peroxide (found in bleach products);
- ▶ glycerol monothioglycolate (found in hair relaxers and hair-smoothing products);
- ▶ bromates (found in hair relaxers and hair-smoothing products);
- ▶ formaldehyde (found in hair relaxers, hair-smoothing products, and nail care products);
- ▶ coal tar (found in hair dyes)
- ▶ toluene (found in nail care products); and
- ▶ acetone (found in nail care products).
- ▶ Over time, dermatitis can cause leathered skin, eczema, sensitivity to the sun, and other skin conditions.

### Hormone Disruption

One of the chemical ingredients in cosmetics that can cause hormone disruption is parabens. According to research published in the Journal of Preventive Medicine and Hygiene, propylparaben and butylparaben are especially likely to affect estrogen levels. These endocrine disruptors may lead to a more serious impact on the reproductive system. Likewise, butylated hydroxyanisole, a chemical found in hair relaxers and hair-smoothing products, is also known to disrupt the body's natural balance of hormones.

Hormone disruption can lead to the following related conditions:

- ▶ Cancer
- ▶ Miscarriages
- ▶ Birth defects
- ▶ Developmental delays

### Organ Damage

Although not as common, chemicals such as monoethanolamine (MEA) in hair dyes can cause damage to internal organs. Exposure to MEA leads to decreased organ functionality over time, particularly affecting kidneys, lungs, and the liver. High levels of exposure to MEA force the body to work overtime to filter out toxins. Formaldehyde also reduces lung functionality with long-term use, as the lungs of those exposed become frequently inflamed. Over time, this organ damage can lead to chronic health conditions, such as hepatitis and asthma.

### Pregnancy Issues

Reproductive issues can result from exposure to endocrine disruptors and other chemicals that are toxic in higher concentrations. These pregnancy issues may include:

- ▶ miscarriages,
- ▶ birth defects,
- ▶ infertility,

- ▶ still births, and
- ▶ altered child development.

While these harmful effects of cosmetic chemicals are not common, it is still important to be aware of them, especially if you are pregnant or intend to get pregnant. Some chemicals to avoid in order to decrease risk of reproductive problems are:

- ▶ parabens (found in shampoos and conditioners);
- ▶ toluene (found in nail care products);
- ▶ glycol ethers (found in nail care products);
- ▶ hydroquinone (found in hair dyes); and
- ▶ phthalates (found in nail care products).

### Case Study: The Effects of Long-Term Cosmetic Use

A 2018 study from the National Institutes of Health (NIH) found that moderate to frequent use of personal care products may be linked to breast cancer. In this study, the women reported their use of nine makeup, nine skincare, and six hair products. Some of these products included:

- ▶ mascara,
- ▶ nail polish,
- ▶ hair straightener,
- ▶ hairspray,
- ▶ lotion, and
- ▶ talcum powder.

One recent study found a correlation between frequent cosmetic use and a higher incidence of breast cancer.



Of the 46,897 women who participated, 2,326 women were reported to have breast cancer after a long period of cosmetic use. Those who were more likely to be frequent users of skincare products had a 13% higher risk of developing breast cancer than those who identified as infrequent users. Likewise, those who were postmenopausal were more likely to be susceptible to the chemicals in cosmetic products. Researchers pointed to parabens and phthalates in cosmetic products as possible causes of the breast cancer development seen in the study's participants; these two chemicals alter the balance of estrogen in the body, which can be dangerous for postmenopausal women.



## **Sensitive Skin and Cosmetics**

Sensitive skin is an uncomfortable experience that cosmetologists and clients alike often try to avoid when selecting their cosmetic products. According to a study cited by the NIH, around 60-70% of women and 50-60% of men worldwide identify as having sensitive skin. These physical reactions to a product can include:

- ▶ dryness,
- ▶ a feeling of taut skin,
- ▶ a burning sensation,
- ▶ itchiness, and
- ▶ sharp pain.

Sensitive skin does not need to be accompanied by an existing skin condition for a person to experience a physical reaction to irritants in cosmetics. Individuals exhibiting skin sensitivities to cosmetics have weakened cell barriers that decrease the skin's ability to protect against damage. Additionally, the brain responds to the introduction of the irritant by sending signals along the skin's nerves, causing sensations of burning, itching, and/or pain. Of all areas in the body, the face—the application site of many cosmetics—is the most likely to be sensitive to chemical ingredients. Overuse of cosmetics over time can break down the skin's tolerance to potential irritants.

Common cosmetic ingredients that can irritate sensitive skin include lactic acid, capsaicin, and sodium lauryl sulfate. Other chemicals used as fragrances in cosmetics can further irritate sensitive skin. Some cosmetic products may also contain chemicals that cause a person's skin to become sensitive to the sun. This sensitivity to UV rays can lead to dryness, scaling, rashes, and/or a “bad sunburn”—even with limited exposure.

# The Impact of Cosmetics on Health

## Cosmetic Regulations

Cosmetic regulations are often less stringent than regulations around products classified as drugs by the FDA. While federal agencies still have standards around cosmetics for consumer and cosmetologist safety, related regulations pertain only to the labeling and amount of chemical ingredients in products. Therefore, you must also understand OSHA's standards for hazardous chemicals in the workplace to protect your own safety and the safety of your clients.

### The Role of the FDA

#### Regulations

The FDA establishes standards for cosmetics through the Federal Food, Drug, and Cosmetic Act and the Fair Packaging and Labeling Act. The Federal Food, Drug, and Cosmetic Act requires all color additives to be approved before a cosmetic product reaches the market. While other ingredients do not have to be approved, they must be present in safe quantities and properly labeled. The Fair Packaging and Labeling Act prohibits the incorrect or misleading labeling of cosmetic ingredients, especially as some may cause allergic reactions or may not be safe for vulnerable populations.

The FDA also does not regulate the use of the phrases "organic," "natural," and "hypoallergenic." It is your responsibility as a cosmetologist to check all product ingredients if your customer has negative reactions to an ingredient or prefers to avoid chemicals.

#### Enforcement

As you have learned, if a cosmetic is about to enter the market and be used by consumers, it does not require FDA approval. However, if the product is labeled misleadingly, has false information, does not disclose its ingredients, or presents a safety hazard to consumers, the FDA may enforce regulations. In these cases, the product manufacturers may issue a recall, or the FDA will request that the company pulls the product. Should the company refuse, the FDA may call upon the Department of Justice to ensure consumer safety. Enforcement actions that may be taken include an inspection, a restraining order, or product seizure.



## The Role of OSHA

OSHA also regulates cosmetics as they relate to chemical exposure and the workplace. For example, in standard 1910 Subpart Z, Toxic and Hazardous Substances, OSHA requires employers to ensure that employee exposure to formaldehyde-releasing products and products containing formaldehyde does not surpass:

- ▶ 0.75 parts of formaldehyde per million parts of air during the average workday or
- ▶ two parts of formaldehyde per million parts of air over a period of fifteen minutes (also known as the short-term exposure limit).

If the level reaches 0.5 parts per million, the employer should monitor the levels of formaldehyde and release this information to employees. If levels are above the maximum allowed exposure limit, the employer must also post a warning sign about formaldehyde and its related health risks. Additionally, the employer must provide respiratory protection, eye protection, and hazard training as necessary. Should an employee show signs of formaldehyde overexposure, the employer must reassign the worker to perform other salon services until the worker's health improves.

An employer can violate this standard by failing to protect workers from possible exposure and overexposure to formaldehyde, as well as failure to adequately communicate the hazard to workers. If an employer has taken any of these illegal actions, they may be cited and fined by OSHA. In a recent year, OSHA fined salons and cosmetic manufacturers up to \$17,500 for violations of this standard.

### Resources

If you or a customer experience negative side effects or health conditions after using a cosmetic product, you have the right to report. You can file a complaint through any of the following means:

- ▶ Find the FDA Consumer Complaint Coordinator for your state and report over the phone.
- ▶ Submit an electronic Voluntary MedWatch form.
- ▶ Mail a printed Voluntary MedWatch form to the FDA office.

For more information about reporting health conditions due to cosmetic use, visit the FDA's guide on cosmetic complaints. If you wish to report violations in the workplace, you can request a Health Hazard Evaluation from the National Institute for Occupational Safety and Health.

## Preventative Practices

Working in cosmetology requires you to be diligent about protecting your health as well as the health of your clients. As you have learned, many often-used cosmetology products contain chemicals that may have an additive or "cocktail" effect if you do not take preventative measures. Additionally, the safety of your workplace may be compromised with hazards such as chemical spills, fires, and improper chemical disposal. However, following the best practices described below will help you avoid these hazards and minimize health risks associated with long-term cosmetology work.

## Limiting Exposure to Chemicals

Overexposure to chemicals is common for cosmetologists, who often experience health complications as a result. While preventing all chemical exposure is not possible during work, there are some measures that you can take to decrease your exposure. Click on the tabs below to learn about these protective measures.

### Personal Protective Equipment (PPE)

Whenever you are interacting with a chemical in a product, you will need to wear PPE to prevent skin irritation, eye injuries, respiratory damage, and other health conditions. Salon safety equipment may include:

- ▶ nitrile gloves,
- ▶ safety goggles,
- ▶ a long-sleeved shirt,
- ▶ closed-toed shoes,
- ▶ an apron,
- ▶ a dust mask, and/or
- ▶ a chemical cartridge respirator.

**Chemical cartridge respirators require training before use.**



**Note:** Chemical cartridge respirators require specialist fitting and training before use. Consult your employer if you must use one of these respirators to protect your health and safety.

Before working with chemicals, always make sure that PPE is in good condition and is not compromised in any way. For example, while nitrile gloves are stronger than other types of gloves, they still have a breakthrough time, the point at which the gloves are no longer an effective barrier against chemicals. Always dispose of gloves after the first use, especially as compromised PPE is not always visible.

The type of apron material is also crucial to your health and safety. For example, plastic aprons are chemical resistant and safe for use during manicuring services, and they can be used to prevent dust or particle transfer to your clothes. However, this material is not safe under heat.

### Ventilation

Adequate ventilation can reduce exposure to toxic fumes and vapors from chemical ingredients. While ventilation will not completely eliminate hazardous chemicals from the environment, it can reduce the risk of respiratory side effects. There are two types of ventilation that may be used in the workplace, depending on the site-specific hazards: a local exhaust ventilation system and a general dilution ventilation system.

Local exhaust ventilation works by drawing chemicals away from the atmosphere into the system before you can inhale them. This method uses the following devices to eliminate chemicals in the environment:

- ▶ Fume hoods
- ▶ Air ducts

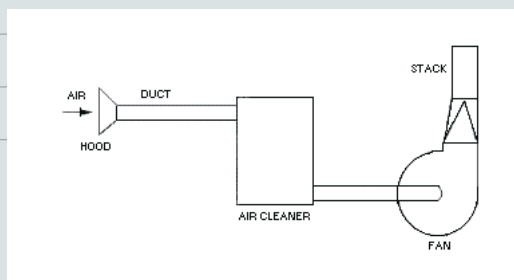
- ▶ Vented exhaust tables
- ▶ Fans
- ▶ Charcoal and dust filters

To properly use a local exhaust ventilation system, place the system away from other fans or doors. Another best practice is to place the system near the chemical workstation.

A general dilution ventilation system does not remove chemicals from the environment. Instead, general dilution decreases chemical concentrations by increasing clean air. Some methods used include:

- ▶ open windows,
- ▶ mechanical fans, and
- ▶ mechanical vents.

**A local exhaust ventilation system uses ducts, hoods, air cleaners, and fans to pull chemicals away from the environment.**



### Scheduling Appointments

When scheduling appointments, keep in mind what chemicals are needed for each service. If several clients want the same service on a certain day, consider scheduling them so that you have breaks between clients. Spacing out the appointments can reduce the duration of exposure to those chemical ingredients. Likewise, this protects clients' health by lowering the concentration of the chemicals in your workstation.

### Careful Selection of Products

While contact with potentially harmful chemical ingredients may be unavoidable due to the nature of the service provided, you do have the power to choose from among various products. For example, when painting a client's nails, select a product that does not contain formalin (another name for formaldehyde). Similarly, verify that formaldehyde-free nail polishes do not contain toluene, a chemical that can cause dermatitis and birth defects. Sometimes, clients may request that certain chemicals not be used during their appointment due to a health condition or sensitive skin; be careful not to substitute the product containing the known irritant with a product containing toxic ingredients.

### Separation of Work Spaces

Mixing cosmetic products next to a client is not ideal for the client's health or yours; doing so exposes you both to the same chemical ingredients for a longer duration of time. A similar situation occurs when you perform the same service as a nearby coworker. The increased concentration of chemicals in the area may negatively impact the client.

One way to decrease exposure to a hazardous chemical is to isolate your tasks. For example, when doing a perm on a client's hair, work in your own workstation with adequate ventilation. When mixing products, go into a separate room with PPE to avoid overexposure to chemicals. This practice also reduces the risk of unintentionally splashing product on your client. Working in a separate space instead of working quickly to reduce chemical exposure allows you to focus on safe practices.

## Preventing Chemical Fires or Explosions

Chemical fires and explosions can result from cosmetics with flammable ingredients, such as nail polish removers, hairsprays, and hair gels. To prevent this hazard, follow these steps:

- ▶ Store flammable cosmetics in a fireproof cabinet.
- ▶ Store flammable products away from sources of heat (e.g. blow dryer, flat iron, etc.).
- ▶ Substitute a known flammable product with safer cosmetics.
- ▶ Verify that all heat sources are turned off when not in use or when you leave your station.
- ▶ Verify that there is a fire extinguisher nearby in working condition.

Read the Safety Data Sheet for your product to ensure that it does not need a specific method of disposal to prevent a fire hazard.

## Proper Chemical Storage

It may be tempting to refill old product containers with new products to save on storage space. However, this can be a dangerous practice. When storing cosmetics that have chemical ingredients, keep them in their original bottles and ensure that they are clearly labeled. Also be sure to close all products before storing them to prevent accidental spills or leaks. When working around flammable products, use the fireproof cabinet at your salon to store these cosmetics.

Cosmetic products are less likely to react to environmental factors when kept away from heat and light. The storage space should be ventilated and preferably located in an enclosed cabinet or room. Before placing these products in their ventilated area, be sure to check the containers for any form of damage. Store these products in easily accessible places so that they are not spilled when retrieved.

By adhering to these storage practices for cosmetics, you can avoid the following hazards:

- ▶ accidental product switching,
- ▶ expired product use,
- ▶ chemical fires,
- ▶ contamination of food with chemicals,
- ▶ chemical reactions, and
- ▶ chemical exposure to the environment.

## Proper Chemical Disposal

When disposing of cosmetics with chemical ingredients, never throw the products in the garbage or empty them down the sink without first assessing the risk of an injury or health hazard. If a product contains potentially toxic or flammable ingredients, first check the associated Safety Data Sheets to see if there is a specific way to dispose of the chemical for your safety and the safety of your coworkers.

## Avoiding Dangerous Chemical Interactions

Achieving the desired result for a client occasionally requires mixing different cosmetic products—and, therefore, different chemicals. Before combining two different products, keep in mind the following questions:

- ▶ Have I checked all ingredients to make sure that the chemicals in the products will not produce a toxic or flammable reaction when combined?
- ▶ Will adding these two products together cause an additive effect?

- ▶ Do I have enough ventilation in my workspace to ensure that I am not inhaling a potentially toxic amount of a chemical?
- ▶ Am I mixing these products far enough away from other products and/or eating areas?

To protect your health when mixing cosmetics, always wear appropriate PPE. Depending on the types and concentration of chemicals in the products, this gear may include goggles, gloves, masks, respirators, aprons, and other protective clothing. You should also be able to locate an eye washing station prior to mixing products just in case a chemical ingredient comes into contact with your eyes. After mixing the products together, wash your hands thoroughly to prevent any cross-contamination with other cosmetics or prolonged chemical exposure on your skin.

## **Injury and Illness**

Injuries may cause nails to become abnormal. If a person's nail bed has been crushed or damaged in any way, this may cause abnormalities and even deformities in the nail. Additionally, if a person chronically picks or rubs the skin around the nail, this may cause the nail to become abnormally shaped. Finally, even nail polish can be damaging to nails if exposed long-term to it. Extensive exposure to polishes or even moisture can cause the nails to become brittle and peel.

Illnesses may also play a role. If a person has a fungus or yeast, this can cause the nails to change color, texture, or shape. Bacterial infections may also cause the nail color to change. If the infection is severe enough, a person may even lose the nail. Viral warts and certain infections both can affect the shape of the nail as well as its color.

## **Diseases, Poisons, and Medications**

Quite a few diseases have the potential to affect a person's nails. These include:

- ▶ Kidney disease
- ▶ Liver disease
- ▶ Thyroid disease
- ▶ Severe illnesses or injuries
- ▶ Lichen planus
- ▶ Skin cancer

There are two major types of poisoning that can cause nail abnormalities. The first, arsenic poisoning, can cause white lines and horizontal ridges to form on the nails. Also, if a person consumes silver in any way, their nails may turn blue.

Though medications are beneficial in combatting diseases and illnesses, they may also cause additional side effects to the shape or color of the nail. Some antibiotics have the potential to cause the nail itself to lift up from the nail bed, while chemotherapy can also affect the growth of a nail.



## Module Conclusion

In this module, we have discussed several common categories of chemicals present in cosmetics. We covered health conditions and sensitive skin to long-term chemical exposure, as well as the FDA and OSHA regulations that protect cosmetologist and client health. Finally, we described protective equipment and measures you can take to reduce your exposure to harmful cosmetic ingredients. After concluding this module, you should be able to:

- ▶ List the different chemicals used in cosmetics.
- ▶ State the potential harmful effects of long-term cosmetic use.
- ▶ Relate federal regulations to how they protect consumer health.
- ▶ Select protective measures that you can take to reduce the impact of chemicals on your health.