

Continuing Education for Ohio Manicurists

Manicurist / Advanced Manicurist Licenses

CE DEADLINE - JANUARY 15, 2023

**Don't Let Your
License Expire!**

*What you will
find inside:*

- 7 hours of Approved Continuing Education for only \$48.00
- Course Materials
- Final Exam Included

BOOK A



P.O. Box 449 | Pewaukee, WI 53072
www.beautyce.com | 888-290-9739
support@pdhacademy.com



Frequently Asked Questions



Q: Why are you sending me this Ohio approved course?

A: You are required to complete continuing education every two years so that you can renew your license. We have sent you this 7 hour state-approved course to make the process of completing your continuing education easy. It contains the required 3 hours of safety and infection control, 1 hour of personal wellness, and 3 hours of nail-related subject matter. It has been approved for Manicurist, Advanced Manicurist, Cosmetologist, and Advanced Cosmetologist licenses. (PLEASE NOTE: Licensees age 65 or older before January 31, 2023 are not required to complete continuing education.)

To learn more about us you can visit our website at www.beautyce.com.

Q: When does my Continuing Education need to be completed by?

A: YOUR CE DEADLINE IS JANUARY 15, 2023. This course will expire on January 15, 2023.

Q: I need 8 hours to renew my license. Why did you only send me 7 hours?

A: You are required to take 1 hour concerning Board laws and rules. This 1 hour course can only be given by the Ohio State Cosmetology and Barber Board.

Q: How do I complete this course?

A: After reviewing the material, you must complete the exam questions for each section. There are only 6 questions for each of the 7 sections, for a total of just 42 questions. As long as you answer at least 75% of the questions correctly you will receive credit for a full 7 hours of continuing education. If you fail, you can retake the course for free!

Q: How do I obtain credit for this course and receive my certificate of completion?

A: You can choose one of the following three ways to complete the course and receive credit:

ONLINE: You can submit your exam answers and pay for the course online at www.beautyce.com. The online exam answer sheet is identical to the exam answer sheet in this book. After you pay with your credit card, you will receive an order receipt via email with a link to take the exam. Select the book version that matches the version on the front cover of this book. Then you simply enter your answers and the exam will be automatically graded. You can then print your certificate immediately.

MAIL: You can fill in the answer sheet on page 1, and mail that answer sheet to us with a check or money order for \$48 payable to Beauty Academy. Our mailing address is PO Box 449, Pewaukee, WI 53072. We will then email your certificate to you (or mail if no email is provided).

FAX/SCAN: You can call us at (888) 290-9739 with a credit card number and then send your answer sheet to us by fax at (888) 290-9739 or scan/email at support@pdhacademy.com. We will then email, fax, or mail your certificate to you, whichever you prefer.

We will also report your hours directly to the Ohio State Cosmetology and Barber Board.

Q: Is this course approved by my state?

A: Yes. Our course is fully approved by the Ohio State Cosmetology and Barber Board for Manicurist, Advanced Manicurist, Cosmetologist, and Advanced Cosmetologist licenses. You can view our approval on their website at www.cos.ohio.gov.

PRICE

Course Title	Hours	Cost
□ Ohio Manicurist 7 CE Hour Class	7	\$48

ANSWER SHEET - BOOK A

First Name: _____ Last Name: _____ Date: _____

Address: _____ City: _____ State: _____ ZIP: _____

Phone: _____ Email: _____

Ohio License #: _____

** See instructions on the inside cover page to submit your exams and pay for your course.

Safety & Sanitation in the Salon, Part 1 - Final Exam

Questions on page 13

- | | |
|--------------------|--------------------|
| 1. (A) (B) (C) (D) | 4. (A) (B) (C) (D) |
| 2. (A) (B) (C) (D) | 5. (A) (B) (C) (D) |
| 3. (A) (B) (C) (D) | 6. (A) (B) (C) (D) |

Golden Nail Care: The Essentials, Part 1 - Final Exam

Questions on page 54

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|---------------------|---------------------|
| 25. (A) (B) (C) (D) | 28. (A) (B) (C) (D) |
| 26. (A) (B) (C) (D) | 29. (A) (B) (C) (D) |
| 27. (A) (B) (C) (D) | 30. (A) (B) (C) (D) |

Safety & Sanitation in the Salon, Part 2 - Final Exam

Questions on page 22

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|--------------------|---------------------|
| 7. (A) (B) (C) (D) | 10. (A) (B) (C) (D) |
| 8. (A) (B) (C) (D) | 11. (A) (B) (C) (D) |
| 9. (A) (B) (C) (D) | 12. (A) (B) (C) (D) |

Golden Nail Care: The Essentials, Part 2 - Final Exam

Questions on page 64

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|---------------------|---------------------|
| 31. (A) (B) (C) (D) | 34. (A) (B) (C) (D) |
| 32. (A) (B) (C) (D) | 35. (A) (B) (C) (D) |
| 33. (A) (B) (C) (D) | 36. (A) (B) (C) (D) |

Safety & Sanitation in the Salon, Part 3 - Final Exam

Questions on page 33

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| 13. (A) (B) (C) (D) | 16. (A) (B) (C) (D) |
| 14. (A) (B) (C) (D) | 17. (A) (B) (C) (D) |
| 15. (A) (B) (C) (D) | 18. (A) (B) (C) (D) |

Domestic Violence: Effecting Change for Your Clients - Final Exam

Questions on page 75

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| 37. (A) (B) (C) (D) | 40. (A) (B) (C) (D) |
| 38. (A) (B) (C) (D) | 41. (A) (B) (C) (D) |
| 39. (A) (B) (C) (D) | 42. (A) (B) (C) (D) |

Modern Manicures - Final Exam

Questions on page 44

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|---------------------|---------------------|
| 19. (A) (B) (C) (D) | 22. (A) (B) (C) (D) |
| 20. (A) (B) (C) (D) | 23. (A) (B) (C) (D) |
| 21. (A) (B) (C) (D) | 24. (A) (B) (C) (D) |

Continuing Education for Ohio Manicurists

Chapter 1:

Safety & Sanitation in the Salon, Part 1

Chapter 2:

Safety & Sanitation in the Salon, Part 2

Chapter 3:

Safety & Sanitation in the Salon, Part 3

Chapter 4:

Modern Manicures

Chapter 5:

Golden Nail Care: The Essentials, Part 1

Chapter 6:

Golden Nail Care: The Essentials, Part 2

Chapter 7:

Domestic Violence: Effecting Change for Your Clients

Chapter 1: Safety and Sanitation in the Salon, Part 1

Timothy E. Johnson

LEARNING OBJECTIVES

At the end of this module, the licensee will be able to:

- Recognize the characteristics of bacteria and viruses, and identify communicable diseases that pertain to each
- Differentiate between common external parasites
- Recall possible sources of contamination in the salon
- Identify regulating agencies that have an influence on infection control in the salon
- Recognize appropriate salon protocol for sanitation, disinfection, and sterilization
- Recall common sanitation violations occurring in salons
- Identify health issues that affect licensees, and ways to address each

MODULE OUTLINE

- I. Bacteria & Viruses
MRSA, Tuberculosis, Mycobacterium Fortuitum, COVID-19, HIV/AIDS, Human Hepatitis A, B, & C
- II. External Parasites
Head Lice, Scabies, Ringworm
- III. Possible Sources of Contamination in the Salon
- IV. Regulating Agencies
Board of Cosmetology, EPA, OSHA
- V. Infection Control Procedures
Sanitation, Disinfection, Sterilization
- VI. Common Infection Control Violations
- VII. Additional Health Issues in the Salon
Musculoskeletal Concerns, Chemical Concerns, Stress and Burnout

BACTERIA & VIRUSES

MICROBIOLOGY PIONEERS

Microbiology is the study of microscopic, one-celled plant **microorganisms**. These microorganisms, which can be seen only with the aid of a microscope, are commonly referred to as germs or microbes. They thrive in damp, dark, dirty places that have an adequate food source to sustain their lives and reproductive capacity. Ideal places include water, the skin and hair, decaying matter, and the various waste materials provided by man and other animals (19).

Antonie van Leeuwenhoek (1632-1723), a Dutch businessman and amateur scientist, was the first person to accurately describe bacteria. He built a microscope and was able to view little objects moving in water. He called them “little animals,” but they were actually microbes (4).

For centuries, the cause of disease, infection, and even death were unknown – until 1822, when a French chemist named Louis Pasteur (1822-1895) discovered the connection between microorganisms and disease and infection. Pasteur showed that airborne microbes were the cause of disease. He built upon the work of Edward Jenner (the pioneer of the smallpox vaccine) to develop vaccines that helped fight disease during his time. Pasteur also realized, through his investigative studies of bacteria, that heating liquids could kill the microbes (bacteria) therein. This process, named for Pasteur and still used today in the processing of milk and other foods we consume, is commonly known as pasteurization (34).

Finally, Joseph Lister (1827-1912), an English doctor, accepted Pasteur's theory on bacteria. Lister completed many surgical operations in the hospitals where he was employed, and noticed that often patients contracted infections around surgical incisions. Lister began to apply antibacterial phenol over skin wounds and surgical incisions; this act led to a drastic reduction in the surgical infections that were once so common. Therefore, Joseph Lister became known as the father of antiseptic surgery (31).

As you can see from the information above, these three pioneers led the way for microbiology to advance to the science that it is today, and alerted us to the fact that bacteria are everywhere around us, all the time. That fact is a great motivator for us to be ever-vigilant in our daily sanitation and disinfection practices in the salon.

BACTERIA

As a licensee of the Ohio State Cosmetology and Barber Board, it is important for you to have a basic understanding of bacteria. Bacteria are everywhere: it is up to you to protect your clients and yourself as you work in the salon. As such, you need to understand the differences between **non-pathogenic bacteria** and **pathogenic bacteria**.

Non-pathogenic bacteria do not produce disease. They are harmless, sometimes beneficial, and many live on the surface of the skin. Non-pathogenic bacteria make up 70% of all bacteria. **Pathogenic bacteria** cause infection and disease. They have distinct shapes, some produce toxins, they are spread easily, and just as with non-pathogenic bacteria, they live everywhere (9).

As mentioned above, pathogenic bacteria have distinct shapes and characteristics that are unique to each classification. There are three basic classifications of pathogenic bacteria: **cocci**, **bacilli**, and **spirilla**.

Cocci, which are round or spherical in shape and can appear in groups or singularly, are subdivided into three subclasses. The first subclass is **staphylococci**. Staphylococci grow in bunches and resemble grapes; they are found in boils and are pus-forming. The second subclass of cocci is **streptococci**. Streptococci grow in long chains, and cause strep throat and blood poisoning (septicemia); they are also pus-forming bacteria. The last subclass of cocci is **diplococci**. Diplococci grow in pairs and are responsible for causing pneumonia (9).

REMINDER: A disease caused by cocci that is prevalent today is the staph infection **methicillin-resistant Staphylococcus aureus (MRSA)**. MRSA is a bacterium that is resistant to many antibiotics. According to the Centers for Disease Control and Prevention (CDC), over 80,000 invasive MRSA infections and 11,285 related deaths occur every year.

In the community, MRSA infections are commonly skin infections. In medical facilities, MRSA causes life-threatening bloodstream infections, pneumonia, and surgical site infections.

Anyone can get MRSA through direct contact with an infected wound, or by sharing personal items that have come into contact with the wound. Places that lead to overcrowding are ideal environments for increasing the risk of being infected with MRSA. Studies show that one in three people carry staph in their nose, usually without illness. Two in 100 people carry MRSA.

To prevent MRSA, the steps below must be observed:

- Maintain good hand and body hygiene; wash hands often and clean body regularly
- Keep cuts, scrapes, and wounds clean and covered until they heal
- Avoid sharing personal items
- Get medical attention early if you think you have a MRSA infection

Most staph skin infections, including MRSA, appear as a bump or infected area on the skin that might be red, swollen, and painful, warm to the touch, full of pus or drainage, and/or accompanied by fever. You cannot tell by looking if you have MRSA, so if you suspect you have MRSA, seek medical attention promptly.

To prevent MRSA from spreading, take the following steps:

- Cover your wounds until healed; pus from infected wounds can contain MRSA
- Clean your hands often, especially after changing bandages; use hand sanitizer often
- Do not share personal items
- Wash used sheets, towels, and clothes with laundry detergent and dry completely with a clothes dryer

MRSA can only be diagnosed and treated by a medical professional. Treatment will usually consist of draining the infection, but in some cases antibiotics may be prescribed.

In the salon, you might see the skin infections associated with MRSA. As such, it is important for licensees to protect their clients and themselves through proper sanitation and disinfection practices (35).

IN THE SALON

The chances for the transmission of MRSA in the salon are low, but possible.

There has only been one reported case to date of a community outbreak of MRSA in the salon. It occurred in the Netherlands, not in the United States. A medical microbiologist from the regional microbiology lab reported it to the municipal health department.

A beautician had a recurring MRSA infection from December 2004 onwards. The recurrent infections were found on her legs, buttocks, and groin, and resulted in the incision and drainage of lesions. The beautician was declared MRSA-free after antimicrobial treatment in December of 2005.

In March 2006, the beautician was again tested for MRSA; the test showed she was re-infected or

therapy failed. In April of 2006, a salon customer was hospitalized with an abscess of the breast caused by MRSA. And in February 2006, another salon customer was hospitalized with boils that also tested positive for MRSA. It was discovered after an exhaustive investigation that the beautician had an infected hair follicle in her armpit, which was the source of transmission for the MRSA infection to her clients. When investigators observed the beautician working, they noted that she was not following all infection control procedures: specifically, she removed her gloves after waxing treatments, and used her unwashed hands to check to see if all the hair had been removed.

This case has caused concern to arise for many regulating agencies, as it increases the plausibility of potentially infecting customers via salon instruments and practices. For example, the wax for a hair removal service might harbor bacteria or viruses. If a licensee is rushing and double-dips a wax applicator, there might be a risk of infection transmission. Also, if a licensee is not cleaning surfaces or their hands before and after each client, there might be a risk of transmission of infection (30).

The second classification of pathogenic bacteria is **bacilli**, which are rod- or bar-shaped pathogenic bacteria. Bacilli are the most common form of bacterial cells. Bacilli cause tetanus, typhoid, tuberculosis, and diphtheria (9).

REMINDER: Mycobacteria can potentially impact cosmetology licensees. Mycobacteria are found in soil and water, including water that has been treated by chlorine in municipal water systems.

Tuberculosis (TB) disease is caused by a type of bacilli called **Mycobacterium tuberculosis**. While TB was once the leading cause of death in the United States, it has long been on the decline. Still, provisional numbers supplied by the CDC suggest that there were 8,920 cases of TB in the United States in 2019 (by-state breakdowns are pending). In 2018, the CDC reported 9,025 TB cases in the United States; of these cases, the majority were reported from 4 states: California (23.2%), Texas (12.5%), New York (8.3%), and Florida (6.5%) (55).

A vaccine for TB disease, Bacille Calmette-Guérin (BCG), exists, but is not widely used in the United States, and does not always protect people from getting TB (57).

TB bacteria most often attack the lungs, but all body parts are vulnerable, including the kidneys, spine, and brain. TB bacteria are spread from person to person through the air, when a person with TB disease of the lungs or throat coughs, sneezes, speaks, or sings. People nearby may breathe in these bacteria and become infected.

Most people who become infected have latent TB

infection (LTBI): the body stops the bacteria from growing, and they become inactive. People with LTBI have no symptoms, don't feel sick, and can't spread TB bacteria, but usually test positive for TB, and may develop TB disease later if the bacteria become active.

If the immune system can't stop TB bacteria from growing, the bacteria begin to multiply in the body and cause TB disease (people with weakened immune systems, then, are particularly susceptible after exposure). The bacteria attack the body and destroy tissue.

Symptoms of TB disease depend on where in the body the TB bacteria are growing. TB disease in the lungs may cause symptoms such as:

- A bad cough that lasts three weeks or longer
- Pain in the chest
- Coughing up blood or sputum (phlegm from deep inside the lungs)

Other symptoms of TB disease are:

- Weakness or fatigue
- Weight loss
- No appetite
- Chills
- Fever
- Sweating at night (46)

TB disease can be treated by taking several drugs for six to nine months – it is vital to completely finish out the course of treatment. There are ten drugs currently approved by the U.S. Food and Drug Administration (FDA) for treating TB (54).

IN THE SALON

It is unlikely that you will encounter TB disease in a salon setting, but the possibility exists.

In fact, you are probably more likely to see it in your co-workers than your clients. For example, in 2007, the Health and Human Services Agency (HHS) in San Diego, CA reached out to clients of a Chula Vista nail salon to notify them that an employee had been diagnosed with TB disease (63). Likewise, in 2013, Montgomery County health officials warned anyone who had visited a nail salon in Miami Township, OH more than once since March to be tested for TB disease after an employee was diagnosed (38).

Mycobacterium fortuitum is another type of bacilli. *Mycobacterium fortuitum* rarely poses a threat to healthy immune systems, but under the right circumstances, the bacteria can be harmful (37).

IN THE SALON

On September 26, 2000, a physician in northern California treated four women that developed lower extremity furuncles. The furuncles were of unknown origin, and had developed in the previous six months. The four patients presented first with small red papules that were red and inflamed; over a period of several weeks or months, the papules would increasingly get larger. As they grew in size, they became tender, movable, violet-colored boils. Some progressed to an ulcerated stage, while some resolved on their own but left substantial scarring.

Antibiotic treatment therapy was given to all four patients but failed. The four women were further treated with oral antibiotics, and the boils healed.

The physician noted that the boils occurred below the knee in all four women. In addition, the physician realized that all four women frequented the same salon for pedicure services. Suspecting that rapidly-growing mycobacteria might be responsible for this outbreak of furuncles, health officials began an investigation of the salon. As the investigation progressed, it was noted that the pedicure service started with a ten-15 minute soak of the lower extremities in a whirlpool footbath, with water levels that were most often below the knee. After the soak ended, the technician would then massage the leg below the knee with lotions and oils. Further investigation of all cultures of the oils, lotions, whirlpool disinfectant, and whirlpool bubble soap were negative, meaning there was no mycobacteria found in them. However, the salon tap water yielded rapidly-growing mycobacteria. An inspection of the whirlpool footbath revealed organic debris behind the inlet screens on the whirlpool footbaths. The warm, nutritive tap water found in the whirlpool bath created the perfect environment for *Mycobacterium fortuitum* and other mycobacterial species to grow.

While it was deemed unlikely that salon clients contaminated the footbaths, another surprising find was that 2/3 of the clients affected by *Mycobacterium fortuitum* had shaved 24 hours prior to their pedicure or on the day of their pedicure. Razor-induced micro-trauma was suspected as the cause of the increased percentage of infected individuals.

(*Pseudomonas* and *staphylococcus* bacteria have also been found in whirlpool footbaths. These two bacteria are responsible for follicular infections, but these infections are not as severe as those caused by *Mycobacterium fortuitum*.) (59)

Based on this investigation, it has been determined that similar outbreaks can occur in the future. As

such, most states have created disinfection guidelines for whirlpool footbaths. These disinfection practices also require documentation each time the footbath is disinfected. The documentation must be made available to salon inspectors when they visit your salon.

The last classification of pathogenic bacteria is **spirilla**. Spirilla are spiral or corkscrew-shaped bacteria. They cause diseases such as syphilis, Lyme disease, and cholera (9).

Cocci rarely show mobility or self-movement. They are transmitted in air, dust, or in the substances in which they settle. Bacilli and spirilla use flagella or cilia, which are tiny hair-like projections, to propel themselves (9).

The growth of bacteria occurs in two stages: the **active growing stage** and the **inactive growing stage**. During the first stage, the **active growing stage**, bacteria grow and reproduce rapidly. To do so, they require damp, dark, dirty places with an adequate food source. As each bacterial cell grows and reproduces, it divides into two new cells through a process called mitosis. During the **inactive growing stage**, no growth occurs because conditions are unfavorable; however, the bacteria often produce spores (an outer shell) for protection. These spores are not harmed by disinfectants, heat, or cold. The inactive stage occurs when environments are cleaned through proper sanitation and disinfection practices. If the environments get dirty, conditions are favorable for the active stage again (10).

As you can see from this review of bacteria, you have a responsibility to be aware of the bacteria around you, and to take prescribed precautions to protect you and your clients from infection.

VIRUSES

Viruses are pathogenic particles much smaller than bacteria. They are so small that many cannot be seen with a light microscope. Viruses are surrounded by protein and can multiply in a living cell. They are responsible for diseases such as measles, chicken pox, and the common cold, which is caused by a filterable virus. AIDS, hepatitis, and polio are also caused by viruses.

As mentioned previously, viruses can only reproduce through the aid of a living cell. As viruses enter the body and then the cells, the body does not recognize them as a threat. Instead, the cell uses the virus's energy to help it reproduce. As the virus reproduces, the cell is destroyed. It is this virus reproduction and cell destruction that makes a virus so dangerous for humans, leading to viral diseases and infections that are hard to control (3).

REMINDER: Infections caused by viruses that licensees should be aware of are COVID-19, AIDS, human hepatitis B (HBV), and, increasingly, human hepatitis A (HAV) and C (HCV).

Coronavirus Disease 2019 (COVID19) is a new

disease, not previously seen in humans, caused by a coronavirus called SARS-CoV-2. It was first identified in Wuhan China in late 2019, and the World Health Organization (WHO) announced the name “coronavirus disease 2019,” abbreviated as COVID-19, on February 11, 2020.

Coronaviruses are common in people, where they often cause mild upper-respiratory tract illnesses. They also occur in many different species of animals, including camels, cattle, cats, and bats. While it does not occur often, sometimes animal coronaviruses can infect people and then spread between people. The exact source of the virus that causes COVID-19 is still unknown (1).

We are still learning about COVID-19, so it's critical for licensees to continue to seek out information. The CDC provides up-to-the minute information at <https://www.cdc.gov/coronavirus/2019-ncov/index.html>. Likewise, the Cosmetology and Barber Board regularly posts and updates Ohio-specific information at <https://cos.ohio.gov/COVID-19-Info-Resources>.

The numbers are changing so rapidly that that statistics quickly become out-of-date. That said, as of June 1, 2021, over 171,500,000 cases have been reported worldwide, with over 3,500,000 deaths. In the United States, over 34,000,000 cases have been reported, with over 609,000 deaths (12).

Ohio's numbers are the eighth highest in the country, with over 1,100,000 reported cases and over 19,000 deaths (12).

Modes of Transmission

Thus far, it appears that the virus that causes COVID-19 spreads primarily person-to-person, most often via respiratory droplets: an infected person coughs or sneezes, and droplets land in bystanders' mouths or noses, or are inhaled into their lungs. Close contact increases the likelihood of spread, which is why “social distancing” recommendations cite six feet as the minimum distance (15).

Symptoms & Testing

People who have contracted COVID-19 report a wide range of symptoms, ranging from no symptoms at all (asymptomatic), to mild symptoms, to serious illness. If symptoms do appear, they tend to do so two-14 days after exposure to the virus, and may include:

- Fever or chills
- Cough
- Shortness of breath or difficulty breathing
- Fatigue
- Muscle or body aches
- Headache
- New loss of taste or smell
- Sore throat

- Congestion or runny nose
- Nausea or vomiting
- Diarrhea

Symptoms which indicate a need for immediate medical attention include:

- Trouble breathing
- Persistent pain or pressure in the chest
- New confusion
- Inability to wake or stay awake
- Bluish lips or face
- Other symptoms that are severe or concerning

A complete list of symptoms is still emerging.

While so far it seems that anyone can develop any level of symptoms, higher-risk groups appear to include older adults, as well as people with previous severe conditions like diabetes, heart disease, or lung disease (50).

There are two types of tests for COVID-19: a viral test, which identifies current infections, and an antibody test, which identifies previous infections. It is important to be aware that, as yet, there is no confirmation that having antibodies to the virus provides protection against re-infection (52).

Clinical Management

At the moment there is no specific antiviral treatment for COVID-19; instead, supportive care to help relieve symptoms is recommended.

Mild cases can usually recuperate at home, ideally separated from other people and pets. Rest, hydration, and over-the-counter medications to help manage symptoms can aid in recovery.

For severe cases, treatment should include medical care to support vital organ functions (60).

Recovery from COVID-19 has been hard to pinpoint, in part due to asymptomatic cases. However, the following rules of thumb are thought to apply.

Symptomatic COVID-19: most people do not require testing to decide when they can be around others; however, if your healthcare provider recommends testing, they will let you know when you can resume being around others based on your test results. In the absence of testing, generally you can be around others after:

- 10 days since symptoms first appeared **and**
- 24 hours with no fever without the use of fever-reducing medications **and**
- Other symptoms of COVID-19 are improving*

*Loss of taste and smell may persist for weeks or months after recovery and need not delay the end of isolation

NOTE: People who are severely ill with COVID-19 might need to stay home longer than 10 days – potentially up to 20 days after symptoms first appeared. Likewise, people who are severely immunocompromised may require testing to determine when they can be around others. In these cases, it's best to talk to a healthcare provider to get more information.

Asymptomatic COVID-19: this condition was presumably identified via a test. If you continue to have no symptoms, you can be with others after 10 days have passed since you had a positive viral test for COVID-19. If you develop symptoms after testing positive, follow the guidance for symptomatic COVID-19 (61).

Anyone who has had close contact with someone with COVID-19 should stay home for 14 days after their last exposure to that person. Limited exceptions exist for people who:

- Had COVID-19 illness within the previous 3 months **and**
- Has recovered **and**
- Remains without COVID-19 symptoms (for example, cough, shortness of breath)

Reinfection with COVID-19 may be a possibility ("reinfection" means that a person was infected once, recovered, and then later became infected again). Confirmed cases are rare.

Prevention

The best way to prevent COVID-19 is to avoid exposure. Per the CDC, everyone should:

"Wash your hands often

- Wash your hands often with soap and water for at least 20 seconds especially after you have been in a public place, or after blowing your nose, coughing, or sneezing.
- It's especially important to wash:
 - Before eating or preparing food
 - Before touching your face
 - After using the restroom
 - After leaving a public place
 - After blowing your nose, coughing, or sneezing
 - After handling your cloth face covering
 - After changing a diaper
 - After caring for someone sick
 - After touching animals or pets

- If soap and water are not readily available, use a **hand sanitizer that contains at least 60% alcohol**. Cover all surfaces of your hands and rub them together until they feel dry.
- **Avoid touching your eyes, nose, and mouth with unwashed hands.**

"Avoid close contact

- **Inside your home:** Avoid close contact with people who are sick.
 - If possible, maintain 6 feet between the person who is sick and other household members.
- **Outside your home:** Put 6 feet of distance between yourself and people who don't live in your household.
 - Remember that some people without symptoms may be able to spread the virus.
 - Stay at least 6 feet (about 2 arms' length) from other people.
 - Keeping distance from others is especially important for people who are at higher risk of getting very sick.

"Cover your mouth and nose with a mask when around others

- You could spread COVID-19 to others even if you do not feel sick.
- The mask is meant to protect other people in case you are infected.
- Everyone should wear a mask in public settings and when around people who don't live in your household, especially when other social distancing measures are difficult to maintain.
 - Masks should not be placed on young children under age 2, anyone who has trouble breathing, or is unconscious, incapacitated or otherwise unable to remove the mask without assistance.
- Do NOT use a facemask meant for a healthcare worker. Currently, surgical masks and N95 respirators are critical supplies that should be reserved for healthcare workers and other first responders.
- Continue to keep about 6 feet between yourself and others. The mask is not a substitute for social distancing.

"Cover coughs and sneezes

- **Always cover your mouth and nose** with a tissue when you cough or sneeze or use the inside of your elbow and do not spit.

- **Throw used tissues** in the trash.
- Immediately **wash your hands** with soap and water for at least 20 seconds. If soap and water are not readily available, clean your hands with a hand sanitizer that contains at least 60% alcohol.

“Clean and disinfect

- **Clean AND disinfect frequently touched surfaces daily.** This includes tables, doorknobs, light switches, countertops, handles, desks, phones, keyboards, toilets, faucets, and sinks.
- **If surfaces are dirty, clean them.** Use detergent or soap and water prior to disinfection.
- **Then, use a household disinfectant.** Most common EPA-registered household disinfectants will work.

“Monitor your health daily

- **Be alert for symptoms.** Watch for fever, cough, shortness of breath, or other symptoms of COVID-19.
 - Especially important if you are running essential errands, going into the office or workplace, and in settings where it may be difficult to keep a physical distance of 6 feet.
- **Take your temperature** if symptoms develop.
 - Don’t take your temperature within 30 minutes of exercising or after taking medications that could lower your temperature, like acetaminophen.
- Follow CDC guidance if symptoms develop (29).”

IN THE SALON

The virus that causes COVID-19 spreads person-to-person, especially between those in close contact with each other. It is easy to see how the salon environment presents opportunities for the transmission of this virus – in fact, many experts view salons as “high risk” environments.

Thus far, the risk seems to be mitigated if containment measures are used consistently and effectively. For example, at a Great Clips salon in Springfield, MO, two staff members inadvertently exposed up to 140 customers to COVID-19, but no new cases were reported as a result. The safety measures put in place – such as staggered appointment times to reduce contact between customers, widely-spaced salon chairs, maintaining a six-foot distance from clients at all times except when rendering services, and requiring masks on both customers and staff members – were credited with helping to avoid an outbreak (33).

Both the CDC and the Ohio State Cosmetology and

Barber Board provide salon-specific information regarding reducing the possibility of spread and ways it can be lessened. This information is constantly changing in response to the latest information, so consulting the Board’s website in particular is critical: <https://cos.ohio.gov/>.

Acquired immunodeficiency syndrome (AIDS) is caused by the **human immunodeficiency virus (HIV).**

HIV is a virus that is spread through certain body fluids. As the virus enters the body, it attacks the CD4 cells (T-cells), and over time destroys them. This attack interferes with the normal functions of the body’s immune system. The cell destruction damages the immune system and makes it increasingly difficult for the body to fight off infections. This degradation in the immune system often leads to opportunistic infections or cancers that begin to appear in individuals with HIV infection, usually signaling that the person has developed AIDS (24).

HIV affects people worldwide: in 2018, there were about 1.7 million new cases of HIV. Nearly 37.9 million people are living with HIV around the world in 2018; of those, 23.3 million people are receiving antiretroviral therapy (ART). An estimated 770,000 people died from AIDS-related illnesses in 2018, and 35 million people worldwide have died from AIDS-related illnesses since the epidemic began.

Each year in the United States, roughly 50,000 people are infected with HIV. In 2018, the number of new HIV diagnoses in the United States and 6 dependent areas was 37,968 (26).

The CDC estimates the number of people unknowingly infected with HIV by a scientific model called prevalence. HIV prevalence is the number of people living with HIV infections at a given time such as the end of a given year. At the end of 2018 (the most recent year for which this information is available), an estimated 1.2 million people aged 13 and older had HIV infection in the United States, including an estimated 161,800 (14%) people whose infections had not been diagnosed (26).

In 2018, an estimated 977 people were diagnosed with HIV in Ohio (8).

Modes of Transmission (28)

In the United States, HIV is commonly transmitted from person to person through sexual intercourse and sharing needles or syringes.

There are less common modes of HIV transmission. For instance, HIV can be transmitted from mother to child during childbirth or through breastfeeding (the number of occurrences for this mode have significantly

decreased because most healthcare providers now test for HIV and begin treatment if necessary). Another less common mode of HIV transmission is being stuck with an HIV-contaminated needle (this is mainly a risk for health care workers).

HIV is not spread by mosquitoes, ticks, or other insects. HIV is not transmitted through saliva, tears, or sweat unless it comes into contact with the blood or body fluids of a person infected with HIV. Hugging, shaking hands, sharing toilets, sharing dishes, and closed-mouth kissing (social kissing) with someone who is HIV positive does not lead to the transmission of HIV. Finally, there are no known cases in the United States of anyone getting HIV from tattoos or body piercings; however, if these establishments do not sterilize their implements, and the implements came into contact with the blood or body fluids of a person infected with HIV, transmission might be possible.

HIV must have a living host in order to reproduce: the virus does not survive long outside the human body.

Once a person is infected with HIV, they have it for life: the body cannot get rid of it as it does some viruses. As such, no effective cure exists.

Symptoms & Testing (27)

A person may be infected ten or more years and have no symptoms or illness. When HIV infection begins to impact a person's immune system, the following signs appear:

- An unexplained deep tiredness
- A dry cough
- A fever that comes and goes
- Blotches that can be red, brown, pink, or purplish under the skin or inside the mouth, nose, or eyelids
- Diarrhea that lasts more than a week
- Heavy night sweats
- Memory loss, depression, or other neurological disorders
- Rapid weight loss
- Swollen lymph glands in the arm pits, groin, or neck
- White spots or odd blemishes on the tongue, mouth, or throat

While these are symptoms associated with HIV infection, they can also be associated with other illnesses. Only an HIV test can tell for sure if it is HIV infection. If someone suspects they may be infected with HIV, it is wise for them to be tested periodically, as it can take three to five months from exposure for an HIV infection to show up in a blood test. They can ask their healthcare provider to administer an HIV test, or they may take a home HIV test. If testing reveals they are HIV-positive, they should seek treatment immediately through a healthcare provider.

The CDC recommends everyone between the ages of 13-64 get tested for HIV at least once as part of their healthcare routine.

There are three broad types of tests available to screen for HIV/AIDS: antibody tests, combination or fourth generation tests, and nucleic acid tests (NAT). HIV tests are often performed on blood, oral fluid, or urine.

Most HIV tests are antibody tests. Antibodies are produced by the body's immune system when exposed to viruses like HIV or bacteria. HIV antibody tests look for the presence of these antibodies in blood or oral fluids. It can take three to 12 weeks (21-84 days) for a person who is HIV-positive's body to make enough antibodies for this type of test to detect the presence of an HIV infection – this is called the window period. Approximately 97% of people will develop detectable antibodies during the window period.

The OraQuick HIV test is an oral swab test. You swab the inside of your mouth for an oral fluid sample and use the test kit provided to test the fluid sample. Usually the results from this test can be obtained in as little as 20 minutes. The manufacturer provides confidential counseling and referrals to follow up testing.

The Home Access HIV-1 Test System is a home collection kit. You prick your finger to get a sample of blood, then send the sample of blood to a licensed lab via mail for testing. You can call the next business day for test results. This test is anonymous and the manufacturer provides confidential counseling and has a referral treatment program as well.

A combination or fourth generation test looks for HIV antibodies and antigens. Antigens are foreign substances that can cause your immune system to activate. These combination tests are becoming more popular in the United States. It can take two to six weeks (13-42 days) for a person's body to make enough antibodies and antigens for this test.

Lastly, a nucleic acid test (NAT) looks for HIV in the blood. It looks for the virus and not the antibodies to the virus. This test is very expensive and is not routinely used to screen individuals. It can take seven to 28 days for a NAT to detect HIV.

REMEMBER: testing is the only way for a person to find out if he/she is infected with HIV.

Clinical Management (24)

HIV is managed through the use of antiretroviral therapy or ART. If individuals infected with HIV take medicine as prescribed, it can dramatically prolong their lives, keep them healthy, and lower their chance of infecting others. In ART, there are five different types of HIV medications. Each medication helps stop

HIV at different points in its lifecycle. When taken consistently and correctly, ART helps do the following:

- Reduce an infected person's viral load, which in turn reduces HIV's ability to affect new T-cells
- Keep the immune system healthy by increasing T-cell count
- Prevent opportunistic infections and other illnesses
- Reduce (but not eliminate) the chances an infected person will transmit HIV to others
- Reduce (but not eliminate) the transmission of HIV to the baby if an infected person is pregnant or becomes pregnant

ART is usually three or more drugs that are taken in combination to create the greatest chance of lowering the amount of HIV in the body. ART can cause side effects just as any other drug that may be prescribed: the most common side effects are nausea and vomiting, diarrhea, difficulty sleeping, dry mouth, headache, rash, dizziness, fatigue, and pain. Side effects can differ from one person to the next, and can also differ depending on the type of ART prescribed. Remember that in order for ART to be an effective treatment for HIV, the medications must be taken daily and correctly as prescribed by a healthcare provider.

People who get infected with HIV and do not receive treatment usually progress through three stages of the disease.

Stage 1 Acute HIV Infection: This occurs within two to four weeks after the infection with HIV. The infected individual will develop flu-like symptoms because their blood is bombarded with large amounts of the virus. Most people are unaware that they are infected at this point, but they are very contagious.

Stage 2 Clinical Latency (HIV inactivity or dormancy): This period is called asymptomatic HIV infection. HIV is still active, but reproduces at very low levels. The infected individual may not have symptoms or get sick during this time. If the person is not being treated with ART for the virus, the period can last a decade or longer, but it is possible for the individual to progress through this phase faster. People who are treated with ART right away and every day as prescribed may be in this stage for several decades. During this stage it is still possible for them to infect others. At the end of this stage, the viral load increases and T-cells are destroyed. This leads to a reappearance of the symptoms associated with the infection.

Stage 3 Acquired Immunodeficiency Syndrome (AIDS): AIDS is the most severe phase of HIV infection. At this point, the immune system is in such a weakened state that **opportunistic infections**

– infections that occur more frequently and are more severe in individuals with weakened immune systems – ravage the body. Without treatment, people with AIDS typically survive about three years. Common symptoms of AIDS include chills, fever, sweat, swollen lymph glands, weakness, and weight loss.

While not as prevalent today as in the earlier days of HIV, opportunistic infections still occur in individuals with HIV. Opportunistic infections occur more frequently and have a devastating effect on individuals with weakened immune systems, and were responsible for many of the earlier deaths associated with HIV/AIDS. Prevention is the best defense: if individuals infected with HIV get opportunistic infections, in addition to their antiretroviral therapy, they must now begin antibiotic and antifungal treatments as well (2). A list of the most common opportunistic infections for individuals living in the United States is available at <http://www.cdc.gov/hiv/basics/livingwithhiv/opportunisticinfections.html>.

Prevention (25)

Advances in technology and drug therapy have led to the creation of more tools than ever to prevent HIV infections from occurring. At one time, abstinence, limiting the number of sexual partners, never sharing needles, and using condoms the right way during every sexual encounter were the only options for preventing HIV infection. With advances in drug therapy come two newer options: pre-exposure prophylaxis (PrEP) and post-exposure prophylaxis (PEP). Let's look at all of these infection control procedures in depth.

Abstinence is the only 100% effective method of preventing HIV infection. Abstinence means that a person does not have sex at all, or decides to discontinue having sex for an extended period of time. Abstinence is also an effective way of preventing the spread of other sexually transmitted diseases (STDs).

Using condoms properly during every sexual encounter will drastically reduce the chances of getting HIV. Limiting the number of partners a person has sex with can also reduce the chances of getting HIV because the chances of encountering a partner who is HIV-positive will decrease.

It can be wise to talk to a health care provider about pre-exposure prophylaxis (PrEP). Taking HIV medicines daily to prevent infection is a must if a partner is HIV-positive; individuals who are not in a mutually monogamous relationship should also consider PrEP.

Pre-exposure prophylaxis (PrEP): This is when people who are still HIV-negative lessen their odds of infection by taking antiretroviral medication every day. If this regimen is strictly followed, PrEP can lower the chances of HIV infection in high-risk

populations. Study continues, in the hopes that PrEP can one day be an efficient, cost-effective, widespread prevention method (45).

Lastly, individuals who are HIV-negative but feel they may have recently been exposed to HIV during sex should talk to a health care provider or visit an emergency room to ask about post-exposure prophylaxis (PEP).

Post-exposure prophylaxis (PEP): If an individual is exposed to HIV, beginning a course of antiretroviral medications immediately can lessen the chances of contracting it. In part due to PEP, occupational HIV transmission has been contained in the healthcare field in the United States, with no confirmed cases since 1999 (45).

PEP will have to be taken once or twice daily for 28 days in order to reduce the chances of getting HIV. (Encouraging partners to remain on ART (antiretroviral therapy) daily as prescribed can also further reduce the chances of getting HIV.)

REMEMBER: the only 100% effective way to prevent HIV infection is abstinence.

Attitudes & Behavior (23)

People who are HIV-positive or are perceived as HIV-positive may be unjustly devalued as human beings. Stigma, discrimination, and gender inequality have all been identified as obstacles to effective responses to HIV, and can be as life-changing as the disease itself. Individuals infected with HIV experience spousal abandonment, exclusion from their family, social ostracism, job and property loss, school expulsion, denial of medical services, lack of care and support, and violence. The treatment individuals receive due to their HIV status means they are less likely to be tested for HIV, disclose their HIV status, adopt HIV-preventative behavior, or access treatment, care, and support.

As individuals infected with HIV begin leading longer lives due to advanced antiretroviral therapies, they are re-entering the work force. That's because people between the ages of 20-44 are most affected by HIV/AIDS – and they also make up over 50% of our nation's 143 million workers. Therefore, HIV/AIDS has generated more individual lawsuits across a broad range of health issues than any other disease in history. As such, it is important to know which laws affect you when making decisions in the workplace.

The Americans with Disabilities Act of 1990 (ADA) prohibits employment discrimination on the basis of disability. The ADA covers organizations that employ 15 or more people. Court decisions have found that an individual with asymptomatic HIV is protected under this law.

The Occupational Safety and Health Administration (OSHA) is tasked with the mission of saving lives,

preventing injuries, and protecting the health of American workers through the OSH Act of 1970. They have procedures in place for dealing with bloodborne pathogens in the workplace. These efforts were put in place to protect individuals such as people infected with HIV.

The Family and Medical Leave Act of 1993 (FMLA) provides leave for serious medical conditions or to provide care for immediate family members with serious medical conditions, including HIV/AIDS.

The Health Insurance Portability and Accountability Act of 1996 (HIPAA) addresses some barriers that people with HIV face. HIPAA gives persons with group coverage new protections from discrimination, and makes it easier to get and keep insurance coverage.

Finally, the Consolidated Omnibus Budget Reconciliation Act of 1986 (COBRA) allows ex-employees to continue their health insurance coverage at their own expense for health reasons as in the case of HIV/AIDS. The period that coverage is extended is usually 18-36 months.

IN THE SALON

Salons in many states within the U.S. are increasingly being placed under the microscope of scrutiny because of various outbreaks of infectious disease that were traced to improperly cleaned implements. To date, most of these infectious diseases have been bacterial or fungal in nature, most of these infections have been attributed to nail services, and most of the suspected implements have been manicuring implements used in manicures, pedicures, and nail extension services. According to Robert Spalding, the author of *Death by Pedicure*, manicures and pedicures cause unseen micro-injuries that can lead to bacterial and potentially viral infections including hepatitis B and C, MRSA, and theoretically HIV.

To date, there have been no documented cases of HIV transmission in the salon. The risk of the transmission of HIV in the salon is much lower than staph and other harmful (sometimes deadly) bacteria. However, the risk is still there. For example, if a client who is HIV-positive visits your salon and you accidentally cut their ear, they could bleed. Couple that with an open wound on your finger or hand, and the opportunity for HIV to spread from the client's blood to your bloodstream exists.

That is why all states now require all salon employees to follow blood spill procedures. These blood spill procedures, practicing universal precautions, and following proper sanitation and disinfection guidelines are your defense against the spread of bacterial and viral infections and fungi in the salon (39). (We will discuss blood spill procedures, universal precautions, and sanitation and disinfection guidelines in more detail as we move through this module.)

Safety and Sanitation in the Salon — Part 1

1. _____ began to apply antibacterial phenol over skin wounds and surgical incisions; this act led to a drastic reduction in surgical infections.
 - a. Anton Van Leeuwenhoek
 - b. Edward Jenner
 - c. Joseph Lister
 - d. Louis Pasteur
2. **Streptococci, a subclass of cocci, _____.**
 - a. Are responsible for causing pneumonia
 - b. Cause strep throat and blood poisoning (septicemia)
 - c. Grow in bunches and resemble grapes
 - d. Grow in pairs
3. **Spirilla, one of three basic classifications of pathogenic bacteria, _____.**
 - a. Are spiral or corkscrew shaped
 - b. Are the most common form of bacterial cells
 - c. Caused a community outbreak of MRSA in the salon
 - d. Grow in bunches and resemble grapes
4. **Symptoms of COVID-19 which indicate a need for immediate medical attention include _____.**
 - a. Congestion or runny nose
 - b. Headache
 - c. Persistent pain or pressure in the chest
 - d. Sore throat
5. **The CDC recommends everyone between the ages of _____ get tested for HIV at least once as part of their healthcare routine.**
 - a. 13-64
 - b. 21-36
 - c. 25-48
 - d. 30-71
6. _____ is the only 100% effective method of preventing HIV infection.
 - a. Abstinence
 - b. Pre-exposure prophylaxis (PrEP)
 - c. Post-exposure prophylaxis (PEP)
 - d. Using condoms properly during every sexual encounter

Chapter 2:

Safety and Sanitation in the Salon, Part 2

Timothy E. Johnson

Hepatitis means inflammation of the liver. Hepatitis is also the name of a family of viral infections that affect the liver; the most common types are hepatitis A, hepatitis B, and hepatitis C. Hepatitis A, B, and C are diseases caused by three different viruses. Although they can produce similar symptoms, they have different modes of transmission and can affect the liver differently.

Hepatitis A is a liver infection caused by the hepatitis A virus (HAV). It is very contagious, and can vary in severity from a few weeks of mild illness to several months of severe illness.

In 2018, 12,474 new hepatitis A cases were reported in the United States, many of which were transmitted via person-to-person outbreaks in 24 states (58). The estimated number of active cases in 2018 totals 24,900. Since the CDC began tracking person-to-person outbreaks in 2016, 35 states have publicly reported 36,240 cases, which include 22,125 (61%) hospitalizations and 342 deaths (62).

In Ohio, from January 1, 2018 through November 9, 2020, 3,703 hepatitis A cases were reported. Only Florida and Kentucky have higher case totals (62).

Modes of Transmission

Typically, hepatitis A spreads via the fecal-oral route: in other words, when the virus is ingested after contact with objects, food, or drinks contaminated by stool from an infected person. Less frequently, hepatitis spreads via close personal contact with an infected person – examples of this type of contact include caring for the infected person or sex.

The hepatitis A virus can live outside the body for months.

Symptoms & Testing

Younger children often show no symptoms, while older children and adults usually do. If they appear at all, symptoms tend to emerge about four weeks post-exposure (although it can be as early as two weeks to as late as seven weeks), and develop over several days.

They include fever, fatigue, loss of appetite, nausea, vomiting, abdominal pain, dark urine, diarrhea, clay-colored stools, joint pain, and jaundice – jaundice in particular tends to only appear in older children and adults.

A health care provider can diagnose hepatitis A by discussing the symptoms and taking a blood sample.

Clinical Management

If a recently-exposed (two weeks or less) person is unvaccinated, they can reduce or prevent severe illness by getting the hepatitis A vaccine or a shot of immune globulin. Otherwise, treatment focuses on the symptoms, and includes rest, adequate nutrition, and fluids; recovery is usually complete, but can take a few months.

Prevention

Hepatitis A is vaccine-preventable. More than one shot is needed for full immunization (the number and timing vary). The vaccine can be safely administered after 1 year of age (20).

Hepatitis B is a liver infection caused by the hepatitis B virus (HBV). It can run the spectrum of a mild disease lasting a few weeks to a serious lifelong illness.

Hepatitis B can be acute or chronic. If hepatitis B is acute, it is a short-term illness that occurs within the first six months after someone is exposed to the hepatitis B virus. If hepatitis B is chronic, it is a long-term illness that occurs when the hepatitis B virus remains in a person's body. Chronic hepatitis B can lead to serious health issues like cirrhosis of the liver or liver cancer (21).

In 2018, there were 3,322 new cases of acute hepatitis B reported in the United States, but the estimated number of new infections is significantly higher: 21,600 (50). In the United States, chronic hepatitis B affects an estimated 862,000 people. Globally 257 million people are affected by chronic hepatitis B (21).

Ohio ranked #6 in rate of reported cases in 2018, with 2.7 cases per 100,000 people, for a total of 310 cases (58).

Modes of Transmission

Hepatitis B is transmitted when blood or another body fluid from a person infected with hepatitis B enters the body of someone not infected. Sharing needles, syringes, or other drug injection equipment can also be a source of infection, as can infection from mother to baby during birth.

The hepatitis B virus can live outside the body for seven days. All blood spills, even dried blood, can therefore pose an infection risk for others.

Symptoms & Testing

On an average, hepatitis B symptoms appear 90 days after exposure to the hepatitis B virus. However, symptoms may appear anytime between six weeks and six months after exposure. The symptoms of hepatitis B are fever, fatigue, and loss of appetite, nausea, vomiting, abdominal pain, dark urine, clay-colored bowel movements, joint pain, and jaundice.

A health care provider can diagnose hepatitis B with one or more blood tests. These tests look for antibodies and antigens, and can determine four things: if you have acute or chronic hepatitis B infection, have recovered from an infection, are immune to hepatitis B, or if you could benefit from a hepatitis B vaccination.

Clinical Management

Acute and chronic hepatitis B are managed similarly: the key component to each is monitoring. Even if a person is asymptomatic, damage to the liver can still be occurring. Doctors may recommend hospitalization for some cases of acute hepatitis B; in general, though, careful monitoring by a physician will suffice, along with plenty of rest, hydration, and healthy food. In cases of chronic hepatitis B, regular monitoring and evaluations for any liver damage are recommended. Newer treatments do exist that may be able to slow, or even reverse, the impact of liver disease.

Prevention

Hepatitis B is vaccine-preventable and has now become part of childhood immunizations in most health care institutions. As such, acute hepatitis B in the United States has declined by approximately 82% since 1991, which is when the hepatitis B vaccination of children began (21).

Hepatitis C is a liver infection caused by the hepatitis C virus (HCV).

Acute hepatitis C is a short-term illness that occurs within the first six months after someone is exposed

to the hepatitis C virus. In 2018, there were 3,621 new cases of acute hepatitis C reported in the United States; the estimated number of new cases was 50,300 (58).

Ohio ranked #6 in rate of reported cases in 2018, with 2.4 cases per 100,000 people, for a total of 282 cases (58).

In more than 50% of people, acute infection becomes chronic infection. Chronic hepatitis C means the virus remains in the person's body. If untreated, it can last a lifetime, causing liver damage, cirrhosis or scarring of the liver, liver cancer, and death. There were 2.4 million people in the United States estimated to have chronic hepatitis C in 2016.

Modes of Transmission

Hepatitis C is spread when blood from a person infected with the hepatitis C virus enters the body of someone who is not infected. Today, most people are infected with hepatitis C by sharing needles, syringes, or other drug injection equipment. People may also be infected with hepatitis C by needle stick injuries in a healthcare setting, or by being born to a mother that is infected with the hepatitis C virus. Less common modes of transmission of the hepatitis C virus include sharing personal care items that have come into contact with blood of an infected individual such as razors or toothbrushes, and having sex with a person infected with the hepatitis C virus. The hepatitis C virus is not spread by sharing eating utensils, breastfeeding, hugging, kissing, holding hands, coughing, or sneezing. It is also not spread through food or water.

The hepatitis C virus can live outside the body at room temperature for up to three weeks.

Symptoms & Testing

Approximately 70-80% of the people with acute hepatitis C do not have symptoms. However, some people have mild to severe symptoms soon after being infected. Those symptoms include fever, fatigue, loss of appetite, nausea, vomiting, abdominal pain, dark urine, clay-colored bowel movements, joint pain, and jaundice. If symptoms occur due to hepatitis C infection, the average time is six to seven weeks after exposure, although symptoms may also range from two weeks to six months after exposure to the hepatitis C virus.

Just like other forms of hepatitis, hepatitis C is detected through one or a combination of blood tests to screen for antibodies. If the test shows a positive result for antibodies, the person has been infected with the hepatitis C virus. A second test might be ordered to see if the virus is still present in the body. If the virus is still present, the chances of the individual having chronic hepatitis C are elevated.

Clinical Management

There are medications to aid in the treatment of hepatitis C, including newer treatments that may cure it completely in most people. However, there are many variables that must be assessed prior to beginning these treatments – it is best to seek out a physician who regularly treats this condition.

Prevention

Hepatitis C does not have a vaccine to prevent it as in hepatitis B (22).

IN THE SALON

Millions of people in the U. S. live with viral hepatitis, and more than half don't know it (58). Outbreaks of hepatitis A occur yearly, and the virus remains infectious on surfaces such as headrests, chairs, tools, implements, and counters for months. Likewise, hepatitis B can be infectious for up to a week on surfaces; additionally, hepatitis C can be infectious for as long as three weeks on surfaces, and there is increasing evidence that it can be transmitted by shears, nail files, cuticle scissors, and other similar tools and implements (20, 21, 22, 58).

Practicing good hand hygiene – including thoroughly washing hands after using the bathroom, changing diapers, and before preparing or eating food – plays an important role in preventing the spread of hepatitis A, and it's easy to see how this focus on hand hygiene applies to keeping staff and clients healthy in the salon as well (20).

Bloodborne pathogens are generally difficult to transmit in salon-type situations, but hepatitis B and hepatitis C are two that might pose a threat in the salon. While salon services can ultimately lead to a blood spill, most often they do not; thus, like with HIV, the risk of transmission is low but possible under the right circumstances. For example, if a licensee were to accidentally cut a client who was infected with hepatitis B or C, and then the client's blood entered the licensee's bloodstream through an open wound, the chance of the licensee being infected with hepatitis B or C could exist (7). Again, universal precautions, proper sanitation and disinfection procedures, and following OSHA-prescribed blood spill procedures will be your best defense from being infected. (We will discuss blood spill procedures, universal precautions, and sanitation and disinfection guidelines in more detail as we move through this module.)

To date, there are no documented cases of hepatitis infections associated with salon services.

UNIVERSAL PRECAUTIONS

Since we encounter many bacteria and viruses in our daily lives, it is important to understand the concept of **universal precautions**. The term “universal

precautions” refers to an approach to infection control that treats all human blood, and certain body fluids, as if they are known to be infectious for HIV, HBV, and other bloodborne pathogens. As such, every client you service in the salon should be treated as if they are infected.

In the salon, universal precautions include, but are not limited to, always working on work surfaces that are cleansed with a hospital grade disinfectant. All implements should be disinfected using a hospital grade disinfectant, or discarded if they are unable to be disinfected. Hands should be washed appropriately with an antibacterial soap, before and after servicing each client. Gloves should be worn if there is broken skin involved or if you are using chemicals.

We will continue to discuss salon-related universal precautions as we progress through the module.

EXTERNAL PARASITES

External parasites are organisms that live on or obtain nutrients from another organism. **Parasitic fungi** are molds and yeasts that produce contagious diseases such as ringworm (tinea), honeycomb ringworm (favus), and nail fungus. **Parasitic mites** are insects that cause contagious diseases: for example, the itch mite that causes scabies, and also the louse.

Let's take a more thorough look at three of the most common parasites you may encounter while working in the salon: head lice, scabies, and ringworm.

HEAD LICE

Adult **head lice** (pediculosis capitis) are two to three mm in length. They move around by crawling – contrary to popular belief, they cannot fly or jump. Head lice are most commonly found in the nape and over the ears, where it is usually warmer and darker; they can also be found in the eyelashes and eyebrows. Head lice are not known to cause or spread disease, but they do feed on the blood of an infected person several times a day.

No reliable data exists, but it is estimated that children ages three-11 account for six-12 million infestations a year. While head lice can infect anyone and any race, infestation in African Americans is much less common in the United States: it is thought that the claws of the lice are not of sufficient shape and size to grasp their hair type.

Head lice have three forms: the egg (or **nit**), the **nymph**, and the **adult**. **Nits** are lice eggs that the female lays very close the scalp (usually 1/4” from the scalp). They appear yellow or white in color, and they are barely visible with the naked eye: about the size of a knot in thread. They usually take eight to nine days to hatch. A **nymph** is an immature louse that looks much like its adult counterpart, but smaller. Nymphs feed on the blood of their host in order to survive. A nymph usually matures to an adult nine -12 days after hatching. An **adult** louse is about the size of a sesame seed. It has six legs and is tan to grayish

in color. It too relies on the blood of its host to survive. It can live up to 30 days on its host's head, but will only live one or two days if it falls off. If someone is infested with head lice, they may experience a tickling feeling (as of something moving around), itching caused by an allergic reaction to the bite, irritability or difficulty sleeping, and/or sores on the head caused by scratching (18).

Manicurists are unlikely to encounter head lice. However, if a client comes into your salon to be serviced, and you notice signs that they are infected, you must postpone the service(s) that you have scheduled for your client. It would be wise to move them to a private area of the salon that will provide you an opportunity to tell them that they may be infected with head lice and that you are unable to service them because of it. While you cannot diagnose their condition, you may refer them to a physician for treatment.

If you have begun your service, your work area and implements, towels etc. have already been exposed to the infestation. As such, complete the service as quickly as you can, advise your client of the infestation and have them seek a physician for treatment. Once the client has exited the salon, you must close the salon long enough to disinfect all work surfaces, disinfect your implements, and launder all fabric goods with very hot water and dry them with a very hot dryer.

SCABIES

Human scabies is caused by an infestation of the skin by the human itch mite. The itch mite is so small it is hard to distinguish with the human eye. The scabies mite burrows in the upper layer of the skin where it lives and lays its eggs. Scabies is transmitted by prolonged skin-to-skin contact. The most common symptoms are intense itching and a pimple-like rash.

Scabies undergo four stages in their life cycle: **egg**, **larvae**, **nymph**, and **adult** scabies.

The **eggs** are 0.10 to 0.15 mm in length. They hatch three to four days after they are laid. After they hatch, the **larvae** work their way to the skin's surface and burrow into the stratum corneum, creating molting pouches. As the larval stage begins, the larvae only have three legs. This stage lasts three to four days. The larvae will molt, resulting in **nymphs** with four legs. The nymph will then go on to become **adult** scabies. If the female is not found, she can live one to two months. Under favorable conditions, 10% of her eggs will usually survive to become adults.

If a person is infected with scabies, they should be referred to a physician: a scabicide will have to be prescribed, as there are no over-the-counter medications for scabies.

You should avoid direct skin-to-skin contact with an infected client; as such, services should be postponed until the infestation has been controlled. While it is unlikely that scabies is transmitted on items such as capes, towels etc., it is advisable to launder exposed items in hot

water just to make sure (48).

RINGWORM

Ringworm is a common skin infection caused by a fungus. It was given its name because it can cause a circular rash that is red and itchy. It can also cause red, scaly, cracked skin and hair loss (47).

The technical term for ringworm is **tinea**. Tinea can be located anywhere on the body. The most common places where tinea is found are the scalp, hands, and feet.

If ringworm is found on the scalp, it is called **tinea capitis**. Tinea capitis may present as round scaly areas of skin that are red, swollen, and inflamed. The infected individual may experience an itchy scalp. If the infection goes undetected or untreated it could worsen, leading to bald spots with black dots indicating breakage; there may even be pus-filled sores called kerions.

If ringworm infects the hand, it is called **tinea manus** or tinea manuum. It can affect both hands, but it is generally found on one. Tinea manus can present as a rash with a raised border with a clear middle, similar to a ring. It can also appear as patches of peeling, dry itchy skin.

If ringworm is found on the foot, it is called **tinea pedis**, more commonly referred to as athlete's foot. Athlete's foot is the most common type of tinea infection. It thrives in warm, moist areas, making the foot an ideal breeding ground because of closed-toe shoes, socks, or stockings. Tinea pedis appears as flaking, peeling skin between the toes or on the side of the foot. Red and itchy skin, burning or stinging pain, and blisters that ooze or get crusty can also be present.

Manicurists are unlikely to encounter tinea capitis. However, if a client comes into your salon to be serviced, and you notice signs of tinea capitis, advise them of the condition and refer them to a physician. Postpone any scheduled service(s) until the infection clears, as it is a very contagious condition. The physician may prescribe a topical antifungal agent but the treatment with this preparation is lengthy and requires the client to be faithful in the application of the preparation. In some cases, the physician may prescribe an oral antifungal treatment, as the course of treatment is usually shorter in duration. Likewise, if a client comes into the salon for a manicure and has tinea manus present, you again must postpone the service, as tinea manus is very contagious as well. Not only can it be transmitted from person to person, but also it can be transmitted from the infected hand to the non-infected hand of the client. Lastly, if a client comes into the salon for a pedicure, they could present with tinea pedis or athlete's foot. Athlete's foot is very contagious as well. Services should be postponed, as athlete's foot could be transmitted from person to person. The treatment for tinea manus and tinea pedis is the same as tinea capitis: usually a topical antifungal agent or an oral antifungal agent is prescribed to end the fungal infection (5).

POSSIBLE SOURCES OF CONTAMINATION IN THE SALON

There are myriad things that can lead to contamination in the salon. As such, it is important that we discuss these possible sources of contamination and cite ways to prevent them as we work in the salon.

The **first source of contamination** can come from unsanitary salon conditions. This can include improperly cleaned surfaces, not sweeping up after services, and dropping implements on the floor and using them prior to disinfection. Another source of contamination comes from implements or supplies being placed in one's mouth, in a pocket, or anywhere on your person. By following proper sanitation and disinfection procedures, many of these sources of contamination will be eliminated (9). (We will review sanitation, disinfection, and sterilization in future sections of the module.)

The **second source of contamination** that might occur in the salon is from the common use of drinking cups and towels. To prevent contamination from these sources, offer co-workers and clients disposable drinking cups and paper towels. After use, these items can be disposed of and will not lead to contamination due to sharing or improper cleaning of these items.

The **third source of contamination** can be from coughing and sneezing. If a client or licensee does not cover his/her mouth and nose with a tissue while coughing or sneezing, infectious bacteria and viruses can be spread. To prevent this, tissues should be provided for clients and licensees. After a client or licensee sneezes into the tissue it should be discarded promptly in a trashcan with a lid. If a client or licensee is unable to get to a tissue, they should cough or sneeze into the fold of their arm to prevent the transmission of water droplets from the mouth or nose that could result in infection.

The **fourth source of contamination** can be unclean hands and implements. To avoid contamination from this source, proper handwashing procedures should be followed before and after servicing each client and as often as needed during the service. Proper disinfection of implements will also alleviate this source of contamination. (We will discuss proper handwashing procedures and important disinfection practices in future sections of this module.)

The **fifth source of contamination** can be open wounds either on the client's body or the licensee's body. To avoid contamination due to open wounds, keep wounds covered with a bandage, finger cot, gauze pads, or gloves. If unable to cover open wounds due to the location or size of the wound, the licensee should remain at home until the wound has healed. If a client has a wound that is unable to be covered, the service should be postponed and re-scheduled once the client's wound has healed. *Remember, unbroken skin is our best defense from contamination in the salon.*

Finally, the **sixth source of contamination** can be inadequate ventilation in the salon. Air conditioning filters should be changed regularly, and the unit must be adequate to remove stale air from the building while allowing fresh air to be circulated through the building as well. The ideal temperature for a salon is 70° Fahrenheit. If the salon offers nail extension services, these services should be offered in an area that is separate from the salon's main service areas, and should have a separate ventilation system that allows the odors from the nail monomer and dust filings to be removed from the building (3,10).

As you can see from the aforementioned information, there are many sources of contamination found in the salon. Many if not all of them can be prevented by personal hygiene, public awareness, and practicing proper sanitation and disinfection procedures. (As previously mentioned, we will discuss sanitation, disinfection and sterilization procedures as they relate the salon in future sections of the module.)

REGULATING AGENCIES

As we move on in our discussion from "sources of contamination" to "infection control," there are three main regulating agencies that licensees should be aware of: their state **board of cosmetology**, the **Environmental Protection Agency (EPA)**, and the **Occupational Safety and Health Administration (OSHA)**.

Am. Sub. H.B. 49 was signed into law by Governor John R. Kasich on July 1, 2017, which created the **Ohio State Cosmetology and Barber Board**, effective January 21, 2018. This newly formed agency will continue the work of the former Ohio State Cosmetology Board and the Ohio State Barber Board through effective licensing and regulation of cosmetology, branches of cosmetology, barbering, and tanning services (40).

The Board is a multi-dimensional agency authorized under Chapters 4709 and 4713 of the Ohio Revised Code. It is composed of 13 members who are appointed by the Governor, with the advice and consent of the Ohio State Senate: a diverse group of persons who are representatives of the barber and cosmetology industry, businesses (barbershops, salons, and schools), medical practice, and the public. Under the authority established by law, the Board regulates individuals and businesses engaged in providing barbering, cosmetology, branches of cosmetology (e.g. esthetics, hair design, manicuring, and natural hair styling), boutique, and tanning services. Businesses regulated include barbershops and salons engaged in retail barbering and cosmetology services, tanning facilities, and barber and cosmetology schools.

As far as cosmetology is concerned, the Board licenses salons engaged in retail cosmetology services, branch of cosmetology services, barber shops, and tanning services.

The Board is responsible for the licensure of education programs designed to prepare persons for careers in barbering, cosmetology, or branches of cosmetology. Additionally, the Board issues permits to persons engaged in limited services called “boutique services” and salon licenses to businesses engaged in the provision of boutique services.

Professional Licensing: The Ohio State Cosmetology and Barber Board is responsible for the issuance and regulation of many professional licenses. In the practice of cosmetology or branch of cosmetology, the Board issues two types of practicing licenses: a basic practicing license and an advanced practicing license. Additionally, the Board issues an instructor license for persons seeking authorization to teach cosmetology or a branch of cosmetology, and an Independent Contractor license to persons that rent booth space in salons. Last, the Board issues a Boutique Service Registration, at no cost, for persons engaging in boutique services. The scope of services covered under the boutique services registration are shampooing, braiding, threading, and makeup artistry.

Business Licensing: Beauty salon and cosmetology school licenses are issued by the Board and are designated according to the scope of practice rendered: cosmetology, esthetics, manicuring, hair design, natural hair styling, or boutique services.

In addition to its licensing duties, the Board routinely inspects businesses (barbershops, salons, tanning facilities, and schools) engaged in the provision of barbering, cosmetology, and tanning services. The Board also receives and processes complaints from the public (41).

The **Environmental Protection Agency (EPA)** was created in 1970 to protect human health and to safeguard the natural environment, such as air, water, and land. The EPA is the agency that is responsible for reviewing disinfectants used in the salon for infection control. The EPA establishes the standards that a disinfectant must obtain to be used in the salon – using a concept called **efficacy**, which means the ability to produce results or effectiveness – and maintains lists of antimicrobial products registered for healthcare use against the most common emerging pathogens, including HIV, hepatitis, and Ebola, available at <https://www.epa.gov/pesticide-registration/selected-epa-registered-disinfectants>.

Each disinfectant used in the salon is required to have an efficacy label, which informs the user what the disinfectant is effective against. For example, an efficacy label might state that a disinfectant is “Effective against human hepatitis B virus, HIV-1, and tuberculosis.” As we will discuss later in this module, you are required to use certain products in the salon based on the information the efficacy label. You will also notice that reading the manufacturer’s directions plays an important role in infection control practices (9).

Lastly, the **Occupational Safety and Health**

Administration (OSHA) is the regulating agency under the Department of Labor that enforces safety and health standards in the workplace. While OSHA does not promulgate regulations specific to the cosmetology industry, several general standards apply: OSHA requires that employees be informed of the dangers of the materials they use in the workplace and the exposure they might have to toxic substances, and ensures that the workplace conditions are sanitary.

HAZARD COMMUNICATION STANDARD

Safety Data Sheets (SDSs), formerly referred to as Material Safety Data Sheets (MSDSs), and the labeling of products are two important regulations that OSHA has instituted to assist in safe operations. OSHA’s Hazard Communication Standard (HCS) requires chemical manufacturers, distributors, or importers to provide Safety Data Sheets (SDSs) to communicate the hazards of hazardous chemical products.

As of June 1, 2015, the HCS will require new SDSs to be in a uniform format, and include the section numbers, the headings, and associated information under the headings below:

Section 1, Identification includes product identifier; manufacturer or distributor name, address, phone number; emergency phone number; recommended use; restrictions on use.

Section 2, Hazard(s) identification includes all hazards regarding the chemical; required label elements.

Section 3, Composition/information on ingredients includes information on chemical ingredients; trade secret claims.

Section 4, First-aid measures includes important symptoms/effects, acute, delayed; required treatment.

Section 5, Fire-fighting measures lists suitable extinguishing techniques, equipment; chemical hazards from fire.

Section 6, Accidental release measures lists emergency procedures; protective equipment; proper methods of containment and cleanup.

Section 7, Handling and storage lists precautions for safe handling and storage, including incompatibilities.

Section 8, Exposure controls/personal protection lists OSHA’s Permissible Exposure Limits (PELs); ACGIH Threshold Limit Values (TLVs); and any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the SDS where available as well as appropriate engineering controls; personal protective equipment (PPE).

Section 9, Physical and chemical properties lists the chemical’s characteristics.

Section 10, Stability and reactivity lists chemical stability and possibility of hazardous reactions.

Section 11, Toxicological information includes routes of exposure; related symptoms, acute and chronic effects; numerical measures of toxicity.

Section 12, Ecological information*

Section 13, Disposal considerations*

Section 14, Transport information*

Section 15, Regulatory information*

Section 16, Other information includes the date of preparation or last revision.

*Note: Since other Agencies regulate this information, OSHA will not be enforcing Sections 12 through 15 (29 CFR 1910.1200(g)(2)).

Employers must ensure that SDSs are readily accessible to employees (42).

BLOODBORNE PATHOGENS STANDARD

Bloodborne pathogens are bacteria or viruses that flow through the bloodstream or through body fluids. These bloodborne pathogens cause infectious diseases such as HIV and HBV. OSHA's Bloodborne Pathogens Standard articulates what employers are required to do to protect workers, like licensees, whose jobs may bring them into contact with blood or other potentially infectious materials (OPIM), including the use of EPA-registered disinfectants with an efficacy against HIV, HBV, and tuberculosis.

All blood encountered in the salon should be treated as infectious. Therefore, universal precautions should be observed; the following general rules of thumb also apply (44):

In the case of licensee injury:

- PROTECTION – If a cut is sustained, stop the service and clean the injured area.
- APPLY antiseptic and/or liquid or spray styptic as appropriate.
- DRESSING – Cover the injury with the appropriate dressing.
- COVER with finger guard or glove as appropriate.
- CLEAN client and station as appropriate.
- DOUBLE-BAG and dispose of all contaminated objects. Clean hands with antimicrobial cleanser.
- RETURN to service.

In the case of client injury:

- STOP service.
- GLOVE hands of licensee.
- CLEAN injured area as appropriate.

- APPLY antiseptic and/or liquid or spray styptic as appropriate.
- COVER the injury with the appropriate dressing to prevent further blood exposure.
- DOUBLE-BAG and dispose of all contaminated objects. Clean hands with antimicrobial cleanser.
- RETURN to service.

INFECTION CONTROL PROCEDURES

As you learned in previous sections of this module, microbes are everywhere. As a licensee, it is your responsibility to protect your clients, co-workers, and yourself from infection. This section of this course will reinforce concepts of infection control and offer a review of infection control procedures.

Infection control is a term used to describe concerted efforts used in a salon to prevent the spread of pathogens that cause disease while destroying microbes.

Standards for infection control – created in an effort to protect the consumer, and carried out by every member of the salon staff – are developed by the Ohio State Cosmetology and Barber Board, are mandatory, and are strictly enforced. A list of The Ohio State Cosmetology and Barber Board Facility and Infection Control Standards is available online: <https://cos.ohio.gov/Portals/0/Files/COS/Sanitary%20Standards.pdf>.

The goal of infection control is to eliminate the transfer of microorganisms, and as such, infection control requires teamwork: if there are four licensees and only one follows proper infection control procedures, then the salon is not really clean (10).

The terms **porous** and **non-porous** are essential to infection control. **Porous** items are made from absorbent materials, such as paper, cloth, or wood. Porous items that can be disinfected via a washing machine using laundry detergent and chlorine bleach, like smocks or cloth towels, can be re-used. All other porous items, such as orangewood sticks, cotton, nail files, etc., cannot be disinfected – thus they are considered single-use items, and must be used once then discarded. **Non-porous** items, on the other hand, are composed of hard materials that do not absorb, like glass, plastic, or metal. These multi-use items, such as glass bowls, nippers, metal files, etc., can be disinfected and re-used. (We will cover disinfection in more detail as we move through this section of the module.)

Infection control principles are practiced at three varying levels, each requiring a specific set of tools to be effective in the fight against infection. The lowest level of infection control is **sanitation** (cleaning). The second level of infection control is **disinfection**. The third level, which is the highest level of infection control, is **sterilization** (10).

SANITATION (10)

Sanitation, also referred to as cleaning, is the building block on which all other levels of infection control rests. It begins the process of protecting you and your clients from the transmission of diseases.

Sanitation is the physical removal of debris, and a reduction in the number of microbes present – for example, washing with soap and water. Sanitation can also be a preliminary step before disinfection: for instance, it can remove organic matter such as hair clippings and skin particles, which might interfere with proper disinfection procedures during immersion.

Within the salon, there are many sanitation guidelines that are effective in reducing microbes and the transmission of diseases.

An integral part of sanitation guidelines is to ensure your salon is equipped with hot and cold running water, as it is very difficult to sanitize the salon properly without it. If the salon is going to provide drinks for its guests, it is helpful to provide disposable drinking cups, as that too will alleviate the transmission of pathogens in the salon. It is also of prime importance to ensure the salon's restroom is clean and that it is well stocked with liquid soap, toilet tissue, and paper towels; these items will help prevent the transmission of infection by salon guests and salon personnel alike. All sinks and water fountains should also be cleaned regularly throughout the day, as they too can be the source of infection transmission if they are not clean.

On a personal level, wash your hands with a liquid antibacterial or antimicrobial soap immediately before and after each service.

Side Note: Handwashing

Good hand hygiene – as in the use of antibacterial hand soap, alcohol-based sanitizers, and surgical hygiene/antiseptics products – is very effective in fighting the transmission of infection. An Austrian-Hungarian physician named Ignaz Semmelweis made this discovery over 150 years ago.

Semmelweis, who worked in a teaching hospital in Vienna, noticed that maternity patients under his care and the care of his students were dying at a rate that was alarming. However, when he compared his students' patients to those that were taken care of by midwives, he realized that the women that were taken care of by the midwives fared better. He then began to observe his students as they worked, and saw that they would complete autopsies on women that had died after childbirth, and they would not wash their hands and implements prior to assisting in labor and delivery.

He hypothesized that debris from the autopsy was under the fingernails of his students, and that it was

being transmitted to women during delivery, leading to their infection and impending death. He then implemented hand hygiene and made it mandatory that the students wash their hands with a chlorine solution.

Semmelweis discovered that this practice drastically reduced the deaths on the maternity ward, which we know today was because of blood poisoning, or septicemia. And while the importance of hand washing and the effect it has on the reduction of microbes is not questioned today, it took Semmelweis over 50 years to convince the medical personnel of his day that hand hygiene is the most effective infection control practice available (13).

Proper handwashing is essential to infection control in the salon. Before and after each client, you should wash your hands thoroughly. The guidelines below have been proven to be most effective in your fight to prevent the transmission of microbes in the salon (9):

- Moisten your hands with warm water and liquid antibacterial (antimicrobial) soap
- Spend at least 20 seconds working up a good lather. Pay particular attention to the fingers, the spaces between the fingers, and the fingernails
- Rinse hands well with warm water. Position hands downward so that the rinse progresses from wrist to fingertips
- Dry hands thoroughly to remove any remaining microorganisms using a disposable paper towel. Use the paper towel to turn off the faucet
- Throw the disposable paper towel into a covered refuse container

There has been recent discussion that the widespread use of antibacterial soaps and hand sanitizers might lead to bacteria and microbes growing resistant to them. While there have been laboratory studies on this topic, they generally do not relate to real life situations; thus nothing has been conclusively decided on this issue. What has become increasingly apparent, though, is that many people have gained a false sense of security from using these antibacterial agents, and have become increasingly lax with personal hygiene. While these agents do help fight bacteria and other microbes, personal hygiene is still an integral part of infection control as well.

Antibacterial agents are most effective where there is a need for additional infection control, such as in the case of hospitals, daycares, and salons. In the home, antibacterial agents should be used only if absolutely necessary, as in the case of caring for someone with an impaired immune system using the protocol prescribed by a physician (17).

Walls, ceilings, furniture and equipment must be kept

clean and dust-free. Hair should never accumulate on the floor – it must be swept up and placed in a covered waste receptacle. Waste receptacles should be emptied daily. All work surfaces must be sanitized before and after each use with an EPA-approved disinfectant for surfaces.

Porous items that can be laundered via a washing machine using laundry detergent and chlorine bleach, like smocks or cloth towels, can be re-used. You should provide freshly laundered towels for each salon guest. The towels should be kept in a clean, airtight, dust-free cabinet until ready for use. Soiled towels should be kept in a covered receptacle that is labeled “Soiled Towels” until they can be laundered. Likewise, you must wear freshly laundered clothing, and never carry implements in the pockets.

Make sure a file of Safety Data Sheets (SDSs) is kept for all products used in the salon. All products must be labeled and kept in a cool, dry place for storage until needed. All products should be dispensed with a shaker, dispenser pump, or spray type container, or you must use a disposable applicator or spatula. You should never double dip when using an applicator or spatula, as this can spread bacteria and contaminate the product. Always discard disposable items, porous implements, and sponges after each use.

Insufficient ventilation can lead to the growth and transmission of allergens and pathogens, so it is vital to infection control that proper ventilation occurs in the salon. Proper ventilation also rids the salon of stale, musty odors, as well as odors from the various chemicals that are used in the salon. Air conditioners can be effective sources of ventilation: as they regulate the temperature of the salon, they also impact the quality and quantity of air in the salon, helping to dehumidify the room and eliminate the air pollutants (all filters in the salon air conditioning units should be changed regularly). Exhaust fans are also effective, helping to remove the chemical odors from the salon as you work.

As you are servicing clients, it is important that you avoid touching your face, mouth, or eyes. You should always wear protective gloves if you are performing a service that could potentially expose you to a client's blood or body fluids.

The salon should be kept free of insects and rodents. You should never allow pets or animals in the salon unless they are approved service animals.

As you can see, there are myriad elements that go into proper sanitation procedures in the salon. As we discuss disinfection, you will see it requires even more tools and methods than sanitation.

Safety and Sanitation in the Salon – Part 2

7. **To date, there are _____ documented cases of hepatitis infections associated with salon services.**
 - a. No
 - b. 27
 - c. 327
 - d. Over 500
8. **An adult louse _____.**
 - a. Can live up to 30 days after falling off its host's head
 - b. Is about the size of a pumpkin seed
 - c. Has four legs and is black in color
 - d. Relies on the blood of its host to survive
9. **If ringworm is found on the foot, it is called _____.**
 - a. Tinea capitis
 - b. Tinea cruris
 - c. Tinea manus
 - d. Tinea pedis
10. **_____ is the regulating agency under the Department of Labor that enforces safety and health standards in the workplace.**
 - a. The Environmental Protection Agency (EPA)
 - b. The Occupational Safety and Health Administration (OSHA)
 - c. The Ohio State Cosmetology and Barber Board
 - d. The Safety Data Sheet Center (SDSC)
11. **Since other Agencies regulate this information, OSHA will not be enforcing _____ of the Safety Data Sheets as of June 1, 2015 (29 CFR 1910.1200(g)(2)).**
 - a. Section 1
 - b. Section 5
 - c. Sections 6-9
 - d. Sections 12-15
12. **Sanitation guidelines, including "_____", are very effective in reducing microbes and the transmission of diseases in the salon.**
 - a. All sinks and water fountains should be cleaned weekly
 - b. Ensure your salon is equipped with hot and cold running water
 - c. Animals can be allowed in the salon if they are pets
 - d. Waste paper receptacles should be emptied weekly

Chapter 3:

Safety and Sanitation

in the Salon, Part 3

Timothy E. Johnson

DISINFECTION (10)

Disinfection is the second level of infection control. Disinfection processes (products and methods) kill or destroy bacteria and a broad spectrum of viruses, but chemical disinfectants cannot destroy bacterial spores – this is what differentiates disinfection from sterilization.

You must always take into account the disinfection requirements that are set forth by the Ohio State Cosmetology and Barber Board: by regulation, licensees are required to disinfect all tools and implements regardless of whether they have come into contact with blood or body fluids.

As we've discussed, because most disinfectants are toxic, they are regulated by law through the EPA.

As you begin working with chemical disinfectants, it is important to always read the manufacturer's label: you must know what a product has been proven effective against (remember from our previous discussion that the EPA must approve the efficacy of these disinfectants; this information is provided to you on the efficacy label). **Broad spectrum** disinfectants will state they are germicidal, fungicidal, and virucidal. Note how each ends in "-cidal." Any time you see this suffix, it means "to kill" or "deadly." **Hospital grade** disinfectants will state they are germicidal, fungicidal, pseudomonocidal, and virucidal. If a disinfectant is not proven effective against pseudomonas aeruginosa (or pseudomonocidal), it is not a hospital grade disinfectant. Both broad spectrum and hospital grade disinfectants must also be effective against the human immunodeficiency virus (HIV) and hepatitis B virus (HBV), and be tuberculocidal (3).

Listed here are a few disinfectants you may encounter in the salon that are NOT broad spectrum (10). It is important to be aware of their limitations:

- **Iodophor Germicidal Detergent Solutions** - These relieve skin irritations and work well as antiseptics. They are not suitable disinfectants due to inconsistency in concentrations from product to product.
- **Phenolic Germicidal Detergent Solutions** - Phenol (carbolic acid) may be used with numerous other

derivatives such as ortho-phenylphenol or ortho-benzyl-para-chlorophenol. 3% phenolics are not considered high level disinfectants due to their inability to inactivate bacterial spores, mycobacterium tuberculosis, fungi. In addition, they tend to destroy plastic containers and implements.

- **Ethyl (70%) or Isopropyl (90%)** - These alcohols are antibacterial, antifungal, and antiviral. They do not destroy bacterial spores. They are not recommended for high level disinfection because of their inability to inactivate bacterial spores and hydrophilic viruses.
- **Stabilized Hydrogen Peroxide** - Hydrogen peroxide is effective as an antibacterial, antiviral, and antifungal. It is stable and effective when used on inanimate surfaces. Since it is not a broad spectrum product, it is rarely used in the salon.
- **Quaternary Ammonium Germicidal Detergent Solution** - Quaternaries that are sold as disinfectants are antifungal, antibacterial, and antiviral, but are not sporicidal or tuberculocidal. They are recommended for environmental sanitation such as floors, furniture, and walls.
- **Glutaraldehyde-Based Formulations (2%)** - Lower levels of glutaraldehyde phenate are no longer considered high level disinfectants, so a 2% solution must be used. Disinfection time is 20 minutes. Glutaraldehyde products have a shelf life of 28 days; once activated by an alkali solution, the shelf life is 14 days.
- **Sodium Hypochlorite** - A liquid chlorine disinfectant that is found in household bleach. It has a wide range of antimicrobial activity, and is both inexpensive and fast acting (20 minutes). However, this product is corrosive and unstable. *In Ohio, household bleach is designated by law as an effective disinfectant for all purposes in a salon. It should be used in a nine to one ratio (nine parts tap water and one part bleach); this solution must be mixed daily.*

When you are choosing a disinfectant, consider the following: is it non-irritating to the skin, does it meet the Ohio State Cosmetology and Barber Board's compliance

guidelines, is it economical to use, is it easy to use, does it work quickly, is it safe for plastic and metal, and finally, is the recommended storage container sufficient for usage?

Side Note: Disinfectants vs. Antiseptics (14)

Both **disinfectants** and **antiseptics** are effective agents for infection control in the salon – but sometimes there can be confusion as to the differences between the two products.

As we've discussed, **disinfectants** are chemical agents used to disinfect non-porous implements and surfaces.

Antiseptics are chemical agents applied to living tissue (the skin) to prevent infection. Antiseptics are generally weaker solutions that are less toxic than disinfectants, because they are formulated to come into direct contact with living tissue. Examples of antiseptics include iodine, 70% ethanol, and 3% hydrogen peroxide. In the salon, antiseptics are used prior to manicures, pedicures, and other services.

REMEMBER: antiseptics can be used safely on the skin to reduce microbes, while disinfectants should never be used on the skin as they are very strong, can be caustic, and over time could be damaging to living tissue.

Now that you've refreshed your knowledge of disinfection products, let's take a look at some specific disinfection guidelines that are paramount to proper infection control in the salon.

Disinfection of Implements

- Mix the broad-spectrum disinfectant for the wet sanitizer using the manufacturer's directions. (A wet sanitizer is any container that will hold enough of the disinfectant to immerse the implements completely. If the container does not allow for full immersion, you should purchase a larger one.)
- Remove all dirt and debris from the implements.
- Thoroughly wash the implements in hot, soapy water or a commercial detergent such as Ship Shape. Thoroughly rinse the implements before placing them in the disinfecting solution.
- Immerse the implements in the disinfecting solution for ten minutes (or the manufacturer's required contact time). Remember, if the contact time is not followed as prescribed, the disinfectant is not effective in controlling the microbes it was created to control.
- Remove the implements from the disinfecting solution with a gloved hand or tongs. Rinse thoroughly, dry with a clean towel or disposable paper towel, and place in a dry cabinet sanitizer for 30-45 minutes to continue drying. (If you do not have a dry cabinet sanitizer, you can leave the implements on a towel to dry in a clean disinfected area that is specifically for

infection control services in the salon.)

- Remove the disinfected implements from the dry cabinet sanitizer and place them in an airtight container until ready to use. (You may also store disinfected items in the dry cabinet sanitizer until ready for use, but it is not required.)

REMEMBER: always use clean implements on each client. Never place dirty implements in your station after using them, as they will contaminate the disinfected implements.

It is common to see an ultraviolet light sterilizer in salons. It utilizes ultraviolet light to kill bacteria in a dry setting. While it is called a sterilizer, for our purposes, this is actually a misnomer – it is *not* effective in eliminating all microorganisms and it cannot be relied upon to kill all bacterial spores. Implements are normally pre-cleaned and immersed in a broad spectrum disinfectant for the required contact time, and then placed in the UV sterilizer for 30-45 minutes before removing the implements and placing them in a disinfected, airtight container for storage until use. You can also use the UV sterilizer as a holding area for implements that have been properly disinfected (3).

STERILIZATION (10)

Sterilization is the highest level of infection control. Sterilization destroys all pathogens including bacterial spores, which are not affected by sanitation or disinfection or extreme temperatures.

Per the Ohio State Cosmetology and Barber Board, sterilization is considered "hospital level" and is not required; that said, licensees may voluntarily use sterilization as an extra safety/infection control precaution after disinfection. Sterilization is only utilized in the case of objects that are considered critical; in other words, objects that puncture or invade the skin or that come into contact with sterile tissue. Some examples of critical objects include electrolysis needles, lancets, or microdermabrasion tips.

Sterilization methods are expensive and require a great deal of time to complete properly, so many manufacturers have developed disposable goods to eliminate the need for sterilization. Examples of disposable goods include single use lancets for carrying out extractions during a facial, and single use microdermabrasion tips used while resurfacing the skin.

There are two main machines used for sterilizing implements. The first is an **autoclave**, which is a pressurized, steam-heated vessel that sterilizes objects with high pressure and heat. An autoclave is expensive to operate and requires constant monitoring of the sterilization cycle for it to be effective: spore test strips must be utilized weekly to verify proper sterilization function. Autoclaves also require calibration (adjusting

the settings on a piece of equipment so that it safely operates within the manufacturer's guidelines). The second method of sterilization is a **chemiclave**, which is a machine that sterilizes implements with high pressure, high temperature water, alcohol, and formaldehyde vapors.

The table below offers a brief recap of what we have discussed thus far.

Infection Control Guidelines

Level of Infection Control	Item	Procedure
Sanitation Items categorized as non-critical. They make contact with intact skin.	Countertops, sinks, floors, toilets, and towels.	Use an EPA registered cleaning product. Efficacy label will state "appropriate for floors, countertops, sinks, toilets, towels, and/or linens."
	Your hands before and after each service.	Use antibacterial (antimicrobial) liquid soaps.
	Your hands and clients' hands/feet prior to manicure or pedicure.	Apply antiseptic for hands or feet or use antibacterial (antimicrobial) liquid soap.
Disinfection Items categorized as semi-critical. They may contact mucous membranes or skin that is broken.	All non-porous tools and implements , regardless of whether they have come into contact with blood or body fluids.	Use a broad spectrum, EPA registered bacterial, fungicidal, pseudomonocidal disinfectant mixed according to the manufacturer's directions. Use an antibacterial, EPA registered disinfectant effective against HIV, HBV, or a tuberculocidal. Mix and immerse implements according to the manufacturer's directions.
Sterilization Items are categorized as critical. They are intended to puncture or invade the skin.	Tools and implements that are used to puncture or invade the skin.	Use a liquid sterilant or moist or dry heat sterilizer calibrated to the specific temperatures to produce a microbe-free result on non-porous substances.

COMMON INFECTION CONTROL VIOLATIONS

Obviously, there are a lot of details to keep your eye on, but it's important to do so – violations endanger your health, your clients' health, and your salon's reputation.

The Board is authorized under Chapters 4709 and 4713 of the Ohio Revised code to inspect facilities licensed by the Board. Additionally, the Board may investigate complaints filed by consumers. Pursuant to the findings of inspections, the Board may impose disciplinary action against individual licensees, barbershops, salons, schools,

or tanning facilities for violating standards of practice in the provision of services.

In FY 2020, the Board field inspectors attempted 12,733 inspections representing 11,774 businesses visited. Of these, 959 were reported as "No Contact," meaning the business was not open or the inspector could not enter the premises.

During FY 2020, the Board received 1152 complaints. Of those, 995 were closed and 146 are in the pending status. There were 88 violations issued on these 561 complaints.

Board Inspectors found 1,061 violations in FY 2020. The top 10 violations noted were (41):

Violation Type	FY 2020 (Violations)
R.C. 4713.14(B)(1) - Aiding and Abetting the Practice of a Branch of Cosmetology Without a Current, Valid License	114
R.C. 4713.14(I) - Operating a Salon Without a Current, Valid License	92
R.C. 4713.14(H) - Practicing a Branch of Cosmetology in a Salon Without a Current, Valid Independent Contractor License	88
Practicing a Branch of Cosmetology Without a Current, Valid License	88
Ohio Adm.Code 4713-15-03(B) - Reusing/Failing to Discard Used Porous Implements	86
R.C. 4713.14(B)(1) - Aiding and Abetting the Practice of a Branch of Cosmetology as an Independent Contractor Without a Current, Valid Independent Contractor License	67
Ohio Adm.Code 4713-15-01 – General Infection Control	63
Ohio Adm.Code 4713-15-15(B) - Cleaning and Disinfecting Pedicure Units	41
Ohio Adm.Code 4713-15-15(D) - Electrical Equipment Sanitation	40
R.C. 4713.14(D) - Employing an Individual to Practice a Branch of Cosmetology Without a Current, Valid License	37

Details of many common sanitation and disinfection violations seen by inspectors include the following (36, 51):

Furniture, equipment, and/or fixtures are unclean or not in good repair

Some salons receive a citation simply because they do not sweep up hair promptly after each service, or they fail to mop regularly. In addition, salons sometimes neglect their retail area, leading to an accumulation of dust and other debris. Licensees also fail to disinfect work surfaces such as stationtops and countertops. Finally, if there are cracks or holes in wood, Formica, or solid surfaces, they should be filled in or repaired to create a smooth, washable surface.

Failure to store clean implements in a clean, dry, debris-free environment or failure to separate clean implements from soiled implements or non-cosmetology supplies

When working in a salon, it is advisable to store dirty implements in a closed container marked “soiled” in a separate area from the service area until they can be

cleaned and disinfected. If available, it would be ideal to have an area in the salon that is set aside just for disinfection and handling of implements that could ensure a clean environment for such an activity. Once the implements are disinfected, they should be kept in a clean, dry, debris-free environment such as a drawer or airtight disinfected container. Non-cosmetology items such as coins, cell phones, pencils etc. should be stored in a separate drawer or location away from disinfected implements and other cosmetology-related supplies.

Failure to properly label, store, and use products

Some salons have received citations because products are stored incorrectly or not labeled correctly, or the incorrect product is found in the container. In addition, licensees sometimes neglect to use a spatula to remove product, or double dip into products, which leads to contamination and possible infection for subsequent clients.

Incorrect mixing of disinfectants

Salons are often cited because they do not mix disinfecting solutions according to the manufacturer's directions. If disinfectants are too weak, they are ineffective in fighting the microbes they were created to destroy. If they are mixed too strong, they can damage the implements or surfaces they are used on. Always follow each manufacturer's directions when mixing disinfecting solutions.

Use of inactive disinfectants due to contamination

Remember, disinfectants are inactivated and ineffective when contaminated with debris, hair, dirt, particulates, etc. Implements should be cleaned prior to disinfection. Disinfectants should be freshly prepared at least daily, and more often if the solution becomes contaminated.

Re-use of non-disinfectable implements

As a general rule, implements used in the salon must be disinfected or discarded. Items and implements that are non-porous can be disinfected. Items or implements that are porous must be discarded after a single use. Some salons are cited because they reuse non-disinfectable items such as emery boards, orange wood sticks, or nail files. These are one-use items and should be discarded after each client.

Insufficient disinfectant in container for total immersion

Salons are often cited because they fail to have sufficient amounts of disinfecting solution in their wet sanitizer. It is required by most regulating agencies that wet sanitizers contain enough disinfecting solution for total immersion of implements. If implements are not completely immersed, you may have to obtain a larger wet sanitizer to allow for complete immersion.

Improper storage of towels

Salons are often cited because they do not store their

towels properly. Clean towels should be stored in a closed, dustproof cabinet. Towels should be used once and placed in a container with a lid, marked as “soiled towels,” until they are laundered. They can be stored in a laundry bag or a container without a lid if it is in a laundry room separate from the service area.

Failure to post most recent inspection report

Salons are often cited because they fail to post their most recent inspection report. It is a requirement that the inspection report be placed in a conspicuous area along with the salon license and the licenses of everyone that works in the salon. Salon clients that walk through the door rely on these documents to give credibility to you and your business: posting them allows your clients to see that you are following all prescribed sanitation and disinfection practices as prescribed by the Ohio State Cosmetology and Barber Board.

Failure to keep a record of the date and time each daily and weekly cleaning occurs on whirlpool footbaths

Any salon offering pedicures in whirlpool foot spas must record the date and time of each cleaning and disinfecting session. The foot spa has to be washed and disinfected after each client; at the end of each day, it must also be washed and disinfected; every week, it must receive additional disinfection; all per the Ohio State Cosmetology and Barber Board’s guidelines. All of these cleaning sessions must be recorded, and the record must be available to your inspector each time he/she comes to inspect your salon.

ADDITIONAL HEALTH ISSUES IN THE SALON

Finally, let’s get a little more personal, and address the day-to-day issues that may impact each licensee’s health. There are many health issues that can affect salon staff members in addition to the risk of infection. Musculoskeletal complaints, as well as respiratory and skin irritation problems due to chemical exposure, are all valid concerns; in addition, stress and burnout are factors. This section reviews these health issues so that you might easily recognize them, and proposes ways of alleviating them.

MUSCULOSKELETAL CONCERNS

Complaints of musculoskeletal problems in the arms, neck, shoulders, and back of salon employees are common. These problems are associated with the postures those staff members use as they provide services: prolonged periods with elevated arms, a bent back, a bent head, and repetitive motions may create muscle fatigue. Likewise, tendon-related disorders and carpal tunnel syndrome may occur because of a lack of ergonomically designed workplaces, tools, and equipment. In addition,

many licensees wear high heels as they work, which create and compound musculoskeletal problems by causing knee issues, back issues, and premature varicose veins (32).

Considering and adapting each staff member’s workspace can go a long way towards combating musculoskeletal problems when working in the salon: it is imperative that each staff member has sufficient workspace and that the styling station and styling chairs are appropriate for each staff member. As such, the following guidelines are recommended to combat musculoskeletal problems for manicurists (53):

Stations

Nail stations: Generally, these are 29-32” from the floor so that they are positioned at an appropriate height for the manicurist to service their guests. The use of height-adjustable manicure stools also aids in proper ergonomic working positions.

The Occupational Safety and Health Administration (OSHA) suggests the following additional options for nail salon workers (49):

- Make sure there is enough space between the back of your knees and the front edge of your seat to improve blood flow to your legs.
- Adjust the lighting. Good lighting can help you see without having to bend over.
- Raise the client’s hand or foot. Use a cushion to raise the client’s hand or foot so you do not have to bend over as far.
- Use safety glasses with magnifying lenses. These glasses reduce the need for you to bend over to see the client’s hand or foot.
- Put a towel or foam pad on the table edge to soften it for hands, arms, wrists, and elbows.
- Put soft pads on tools to make handles larger and easier to hold.

Flooring should be of a non-slip material because of the wet services that are provided in a salon. If the floor is of a hard nature such as tile, a rubber mat positioned at the base of the chair would be beneficial to prevent leg and back fatigue (53).

Licensees can personally take action to help prevent musculoskeletal problems and to alleviate fatigue as well. For instance, they should take breaks whenever possible in between servicing guests. While on break, take the time to do some stretching in the breakroom. Stretches can actually loosen muscles and relieve the stress of working long periods of time (49).

CHEMICAL CONCERNS

In addition to musculoskeletal problems, salon staff can have problems arise from chemical exposure. Salon processes such as acrylic nail application involve chemical ingredients that have been linked to allergies and lung problems; in addition, airborne chemicals in products used throughout the salon, such as hairsprays, can impact every staff member. As each workday progresses, salon workers may absorb these chemicals through their skin and/or breathe them in as fumes.

Nail products, such as polishes, strengtheners, removers, and artificial nail liquids, can contain potentially hazardous chemicals. Some potentially hazardous chemicals, the types of products they can be found in, and how they can affect your body include (49):

- Acetone (nail polish remover): headaches; dizziness; and irritated eyes, skin, and throat.
- Acetonitrile (fingernail glue remover): irritated nose and throat; breathing problems; nausea; vomiting; weakness; and exhaustion.
- Butyl acetate (nail polish, nail polish remover): headaches and irritated eyes, skin, nose, mouth, and throat.
- Dibutyl phthalate (DBP) (nail polish): nausea and irritated eyes, skin, nose, mouth, and throat. Long-term exposures to high concentrations may cause other serious effects.
- Ethyl acetate (nail polish, nail polish remover, fingernail glue): irritated eyes, stomach, skin, nose, mouth, and throat; high concentrations can cause fainting.
- Ethyl methacrylate (EMA) (artificial nail liquid): asthma; irritated eyes, skin, nose, and mouth; difficulty concentrating. Exposures while pregnant may affect your child.
- Formaldehyde (nail polish, nail hardener): difficulty breathing, including coughing, asthma-like attacks, and wheezing; allergic reactions; irritated eyes, skin, and throat. Formaldehyde can cause cancer.
- Isopropyl acetate (nail polish, nail polish remover): sleepiness, and irritated eyes, nose, and throat.
- Methacrylic acid (nail primer): skin burns and irritated eyes, skin, nose, mouth, and throat. At higher concentrations, this chemical can cause difficulty breathing.
- Methyl methacrylate (MMA) (artificial nail products, though banned for use in many states): asthma; irritated eyes, skin, nose, and mouth; difficulty concentrating; loss of smell. *PLEASE NOTE: In Ohio, it is illegal for any person, in the practice of cosmetology, to use or possess a liquid nail monomer containing any trace of MMA.*

- Quaternary ammonium compounds (disinfectants): irritated skin and nose and may cause asthma.
- Toluene (nail polish, fingernail glue): dry or cracked skin; headaches, dizziness, and numbness; irritated eyes, nose, throat, and lungs; damage to liver and kidneys; and harm to unborn children during pregnancy.

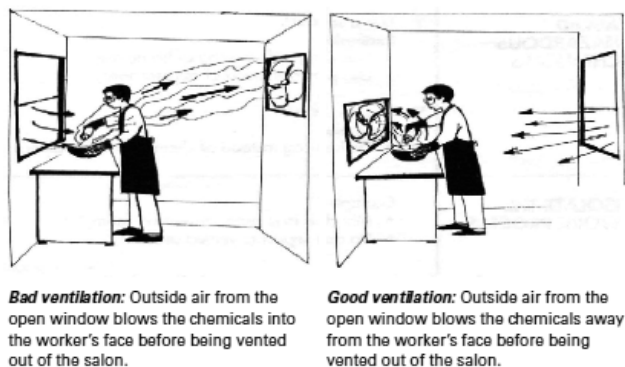
It is crucial that all staff members are familiar with the products they use and the ingredients they contain. Product labels and SDSs can give you very specific information about the products you use and the ingredients that are in each, including any associated health hazards and what should be done to protect yourself as you work. Also, even if the FDA has cleared an ingredient, it is possible to be exposed to it in ways that are not necessarily healthy, as is the case with Brazilian Blowout products. OSHA, and most state boards of cosmetology, will release alerts about these products as information becomes available.

In addition, make sure your staff understands that it's possible for them to use a product for years without any issues, and suddenly develop an allergy to it without warning. Sometimes these allergies can even make them allergic to products used in other venues. For example, if a licensee develops an allergy to the persulphate salts found in salon products, they might also now be allergic to products that their dentist uses containing persulphate salts.

To alleviate the risk of these health problems, the salon should always be properly ventilated. This is the easiest and best way to lessen the level of chemicals. The following steps should be followed (49):

- Open doors and windows when possible to let in fresh air. If the salon has a ceiling vent, it should be turned on and working.
- Always keep the nail salon's exhaust system on.
- If your salon does not have an exhaust system, always keep the heating, ventilation, and air conditioning (HVAC) system on during work hours. The HVAC thermostat fan switch should always be in the "on" position (not "auto") so that it runs even when the heat or air conditioner is off. The salon owner should have a HVAC contractor clean the HVAC system and replace the filters at least once a year.
- Place fans near open doors or windows. Fans should pull air in one end of the salon and push it out of the other end.
- If the salon has ventilated tables:
 - Make sure they are turned on.
 - Change the charcoal filters at least once a month.
 - Clean out the catch basin at least once a week.

- If the salon has portable ventilation machines, use them in your work area to pull harmful vapors away from you and your clients.



You also have the option of purchasing or building ventilated nail application tables, or converting those you already own. The National Institute for Occupational Safety and Health (NIOSH) provides step-by-step instructions and specifications.

The staff members should also have the option of wearing gloves. Different kinds of gloves are best for different kinds of products, so be sure to consult each product's information and SDS. If a staff member is extremely sensitive, a protective mask should be worn. The most commonly-used masks are paper or cloth medical masks. You should be aware that these masks do not have filtering facepieces (like dust masks do). They are not designed to protect workers from all gases, vapors, and dusts. Stuffing these masks with tissues, as some salon staff do, does not improve protection. If the levels of dust and/or chemical vapors in the salon pose a risk to workers, respirators may be necessary (11).

If you are an employee of a salon, the salon owner is responsible for providing you with gloves and protective masks and/or respirators. If you rent a booth or a suite, you are an independent contractor and you must provide your own.

STRESS AND BURNOUT

Finally, stress and burnout are becoming more prevalent in the salon industry. The causes are different for each individual, but there are some common sources in the salon environment.

Stress

The first source of stress is the long hours that are common for successful licensees. To make six figures a year in the various cosmetology industries, it's not unusual to work 10-16 hour days, not to mention those emergency services rendered after hours, when a client attempts to do their own styling and fails. Often these long hours come with very few breaks, and the

consistent influx of guests with different personalities and attitudes can compound the problem.

Job conditions can also evoke stress. For example, a staff member who is having trouble with the physical demands of the job, is constantly exposed to loud noises or uncomfortable temperatures, or is having reactions to salon chemicals, is likely to experience stress.

The roles a salon staff member assumes could also be a source of stress. For example, a salon manager that works at the nail station, oversees the salon staff, handles bookkeeping and inventory, and orders retail products and back bar items for the shop, could easily find him/herself stressed out!

At times, salon management can cause stress for salon employees. For example, if the salon staff is not allowed to give input during decision-making, or if there is a lack of organized job descriptions and salon policies, this is stressful. Issues with other salon staff or management and fear for the future of the salon can also make an individual feel stress (43).

This stress can contribute to work-related injuries, as well as burnout (discussed below), and a myriad of health issues. Heart problems, back pain, depression, and immune system problems can all be caused by stress.

Some symptoms of stress include frequent headaches, upset stomach, trouble sleeping, problems in personal relationships, feeling unhappy in your job, and feeling angry or short tempered.

Some ways to manage stress include taking breaks, reviewing your job description to get a better sense of what is expected of you, setting reasonable goals for yourself, and not taking on more than you can handle. Another thing that can make your job less stressful is to make sure you organize your day and work efficiently in your tasks. Also, be sure to do things you enjoy when you are off work, and finally, take advantage of your vacation time (56).

Burnout

Burnout is usually caused by physical and mental exhaustion, often due to stress, worry, fatigue, and other factors. As salon professionals, burnout can decrease our performance at work leading to loss of revenue and clientele if we do not catch and combat it early.

Warning signs that you may be experiencing burnout include lack of motivation, stress, fatigue, complacency, and depression. These signs are your body telling you to slow down.

Doing seven things can alleviate burnout (16):

- 1) Take breaks throughout the day.

- 2) Learn and employ daily self-motivation techniques – for example, read a motivational or self-help book and apply its lessons
- 3) Practice positivity: find ways to have fun and laugh, count your blessings, and always try to turn the negatives into positives.
- 4) Develop a competitive spirit – for example, taking advantage of continuing education can help alleviate burnout.
- 5) Ask your salon owner or manager for help, and remember to take your days off!
- 6) Change up your routine: do something you would not normally do. Go to the zoo with your child, take an unplanned trip, or simply go out to a new restaurant with your family.
- 7) Exercise, refuel, and rest – for example, go for a walk, eat a healthy diet, treat yourself to a facial or to a full body massage.
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CONCLUSION

As you can see from the materials covered in this module, sanitation and disinfection are of utmost importance to the salon. Without following the procedures set forth by local and national regulating agencies, you are putting you and your clients at risk for the transmission of infectious diseases. In addition, the challenges to your health and wellbeing posed by additional physical and mental concerns related to salon work should not go unanswered. Your attention to these details adds much credibility to your work as a licensee of the Ohio State Cosmetology and Barber Board.

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Safety and Sanitation in the Salon — Part 3

- 13. When you are choosing a disinfectant, consider the following: _____.**
- Does it meet the Ohio State Cosmetology and Barber Board's compliance guidelines
 - Does it work quickly
 - Is it safe for plastic and metal
 - All of the above
- 14. Sterilization methods are expensive and require a great deal of time to complete properly, so _____.**
- Many manufacturers have developed disposable goods to eliminate the need for sterilization
 - Salons should avoid using critical objects
 - Salons should disinfect critical objects instead
 - Salons should sanitize critical objects instead
- 15. A common sanitation violation seen by inspectors: _____.**
- Posting the most recent inspection report
 - Properly labeling, storing, and using products
 - Re-use of non-disinfectable implements
 - All of the above
- 16. Licensees can personally take action to help prevent musculoskeletal problems and to alleviate fatigue as well. For instance, _____.**
- Take breaks whenever possible in between servicing guests
 - Wear high heels
 - Work on flooring of a hard nature, such as tile
 - None of the above
- 17. Regarding chemical concerns, it is crucial that all staff members are familiar with the products they use and the ingredients they contain. Product labels and _____ can give you very specific information about the products you use and the ingredients that are in each.**
- Food and Drug Union (FDU) Bulletins
 - Occupational Health Administration (OHA) Data Blasts
 - Safety Data Sheets (SDSs)
 - None of the above
- 18. Symptoms of stress include _____.**
- Organizing your day
 - Problems in personal relationships
 - Setting reasonable goals for yourself
 - All of the above

Chapter 4:

Modern Manicures

Angelica Jungbluth

LEARNING OBJECTIVES

At the end of this module, the licensee will be able to

- Recall facts pertaining to nail and nail salon trends in recent history
- Distinguish between types of manicures
- Recognize aspects of modern client care
- Recognize aspects of modern nail technician care

MODULE OUTLINE

- I. Recent History – the 21st Century Manicure
- II. Types of Modern Manicures
Wet Manicure, Dry Manicure, Lotion Manicure
- III. Today's Client Care
Sanitation, Disinfection, and Sterilization, MMA Damage, Allergies, Diseases and Disorders
- IV. Protecting Today's Nail Technician
Chemical Hazards, Musculoskeletal Issues
- V. The Future of Manicures

The manicure has been around for centuries – but today, it's a more important, and more accessible, part of beautification than even before. This course traces the evolution of the modern manicure, considering the culture of present-day nail salons and the style trends they support.

RECENT HISTORY – THE 21ST CENTURY MANICURE

With the turn of the century, we waved goodbye to the days of Madge the Manicurist, whose 27-year run of manicuring commercials featured her soaking clients' nails in Palmolive dish detergent. The nail industry was now firmly established, featuring a wide range of dedicated products, and coming into its own with dedicated venues as well.

1990s

In the early 1990s, we see the beginning of a big industry shift. Stand alone Vietnamese nail salons began in California: businesses that specialized in providing cosmetic nail care services to men and women, offering manicures at below-market prices. Traditional multi-service salons, with their larger overheads, could not keep up with the rapidly dropping prices, and the nail techs working there could no longer make a living due to their reduced income. Some multi-service salons, unable to compete, dropped manicures from their menus altogether.

Trend-wise, a major player in the 1990s nail industry was the French manicure. Gone was the oval shaped nail; in came the squared off nails with white tips and a nude top coat. But on the flip side, some darker edgier shades made the scene as well: along with other bold colors such as midnight purple, CEO blood, or chic black, Chanel Vamp typified 90s style.

2000s

Beginning in the 2000s, we see the roots of several trends that are still with us today. An emphasis on maintaining an overall healthier lifestyle fueled the gradual return of the well-kept, elegant natural nail and the almond-shaped nail, and much more neutral tones in polish came to the fore.

This decade is also defined by the beginning of intricate nail art. The recently-perfected acrylic nail extension technique provided a large, relatively stable canvas for this impactful, low-commitment personal statement: clients could choose a design, and when finished with it, rub, soak, or clip it off.

Perhaps most significantly, the 2000s brought the stand alone nail salons to the Midwest, where they rapidly became entrenched. Today, nail salons provide manicures, pedicures, artificial nail services, and nail art. Most of these nail salons also utilize the electric manicure: given with a small portable electric drill which uses a variety of attachments including an emery wheel, cuticle pusher, brush, and nail filing disk, the electric manicure is quicker than a standard manicure, allowing for swifter turnaround and more flexible pricing. Today, according to census data, there are more than 17,000 stand alone nail salons in the United States, with more popping up in locations like strip

malls all the time. In New York City alone the number of nail salons has more than tripled over this last decade.

Interestingly, while the stand alone salons have continued to attract clients who focus on price and speed, by the mid 2000s clients who enjoyed a more leisurely, high-quality, one-stop experience quality service were once again willing to pay for it. Thus nail services were re-incorporated into the multi-service salon as well.

TYPES OF MODERN MANICURES

Remember, there is no “one-size-fits-all” manicure. Every nail technician should diagnose each client’s nail conditions and recommend the process that suits them best.

Wet Manicure

The industry standard well before Madge put her mark on it, the wet manicure, or classic manicure, consists of filing to shape the free edge, soaking in a water bath to soften the cuticle, pushing and clipping the cuticle, massaging the hands, and the application of polish.

Even today, most nail technicians would agree that a water-based soak is the best way to pamper the client and also prepare her cuticles for the service: especially if a client has a lot of overgrowth, it will soften the cuticle in the most comfortable way. Plus, the water and soap not only soften the cuticles, but will also loosen dirt, dead skin, and dust from buffing and filing.

The modern nail technician may add aromatherapy scents or special softening agents to the soak, such as 1/2 cup bath oil mixed with 1/2 cup of warm water. Another solution that is very fragrant and useful is a lemon juice soak, made with warm water, lemon juice... and a teaspoon of honey to make the soak more effective, boost hydration, and temper the acidity of the lemon juice. (Not recommended for those clients with cuts on their fingers or damaged nails.)

Dry Manicure

This newer technique, first appearing in the late 2000s, is also called a waterless or a soakless manicure. As the name implies, the client’s fingers are not soaked in a bath; instead, cuticle oil, gel, or cuticle remover is used to soften the cuticles. Next comes a sugar scrub, using either a commercial product, or a salon-made paste (2 tablespoons of lemon juice and 2 tablespoons brown sugar, for instance). The scrub is applied generously to the cuticles, which are then rubbed with a nail brush, loosening them enough to be pushed back. After the scrub, the hands are rinsed and moisturized.

What are the advantages of the dry manicure? Well, it turns out the water used in wet manicures may be compromising the manicure itself. When fingernails are soaked they absorb some of the water, causing them to slightly expand; the nail technician then polishes the semi-expanded nails. Once they eventually dry out, though, the nails contract again, which can cause the polish to chip. (The swelling caused from the soaking can also make the

nail plates more susceptible to dryness in the future.) There is also the question of sanitation: when you put your soak in a plastic bowl, no matter how you clean and disinfect it, the bowl can absorb debris. Glass bowls can be disinfected more easily, but they don’t keep the water as warm as plastic. Chalk up at least one point in favor of the wet manicure, though: filing natural nails when they are a bit damp makes it easier for them to withstand the action of filing, so they’re less likely to be damaged.

So how do you convince a client to try a dry manicure? With sanitation in nail salons constantly in the limelight, it may be as easy as mentioning the reduced risk of contamination. Another benefit worth sharing: by eliminating the soaking step, the nail technician can shorten the manicure by several minutes, making it a swifter experience for the client on the go (or for the client, particularly some men, who simply dislikes soaking their nails). Finally, you can reassure your clients that luxuries like floral, citrus, or herbal lotions can create the spa-like atmosphere of pampering that they crave.

Lotion Manicure

This is bit of a catch-all category, encompassing any type of manicure that is not water or dry. For example, an old standby in salons is the oil manicure, usually offered to combat winter weather effects: if clients have dry, flaky cuticles, or severely damaged nails, the oil manicure is a nourishing option. Blends of heated olive, almond, coconut, sunflower, and/or vitamin E oil, plus a few drops of essential oils for scent, can be individualized for cleaning nails and softening cuticles. Remember to give the client’s nails “resting” time between your hot oil manicure and application of nail polish, to assure a longer-lasting manicure

Lotion manicures, one of today’s popular spa manicure treatments, come in many forms; the most basic calls for mixing about a half cup of your favorite lotion with *warm* water (not hot or cold as this may shock the skin), and incorporating optional add-ons like a few flower petals to enhance the experience. Other products used for lotion manicures are seaweed wraps, mud treatments, salt scrubs, and glycolic treatments, all of which were formerly body treatments that have now been scaled down to size. Whatever your mixture of choice, it will soften hands and cuticles, making your manicure treatment a breeze.

In a paraffin manicure, the whole hand is a priority, and health and relaxation are the ultimate goal. Paraffin wax, a non-toxic wax approved by the U.S. Food and Drug Administration for use in cosmetics and medical applications, is very oily, and is known for its ability to hold in moisture. When heated and melted to form a warm dip, it can help restore skin suppleness and increase circulation, relieve sore muscles and joints, and ease symptoms of carpal tunnel, arthritis joint pain, and other ailments. In a salon setting, the entire hand is dipped in the warm wax (either before or after the polish is dry) in order to seal in moisture and softness. The wax is usually left on between 10-30 minutes; sometimes heated gloves are added. Once the wax is removed the skin will feel silky soft.

The price of any of these lotion-type manicures will be substantially higher than either the wet or dry manicures.

TODAY'S CLIENT CARE

As professionals, hearing even one story about dirty nail salons and careless nail technicians endangering their clients is too many. And yet, those stories are out there! In early 2014, 20/20 did an investigation into the sanitation practices of nail salons. Most salons profiled displayed unsanitary conditions that could cause infections. Inspectors found nail buffers and emery boards being used on multiple clients instead of being thrown away, as well as nail techs diluting disinfectants – and some not disinfecting their implements at all. Tests done on one set of clippers even found bacteria from human feces.

Every single one of these incidents is preventable – and every nail technician can do his or her part to improve the image of nail salons. It's imperative we all know and understand how to control the contamination that can cause infection in our salon – and make our clients aware of the steps we're taking as well.

Sanitation, Disinfection, and Sterilization

While a full discussion of decontamination is beyond the scope of this module, issues surrounding sanitation, disinfection, and sterilization remain one of the most common violations plaguing salons nationwide. And yet, not much has changed in our understanding of these topics over the years – we simply don't pay as much attention to them as we need to. As rules and regulations tighten and fines increase – while at the same time we're encouraged to service more and more clients every day – it's more important than ever to commit to decontamination.

Let's look at nail services specifically: consider the tools you use daily. Almost everything that has to do with manicures comes into direct contact with a client's skin which means all these articles need to be sanitized and/or disinfected, or discarded, after each client.

Sanitation, also called cleaning, is the lowest form of decontamination. It removes visible debris, and can significantly reduce the number of pathogens (a bacteria or virus that can cause disease) on a surface. It's performed on non-critical objects: objects that come into contact only with intact skin. It can also be performed as a first step on items that require disinfection.

Laundering porous items like towels and smocks is an example of sanitation. So is wiping manicuring tabletops and cleaning your non-porous manicure tools (manicure bowls, nippers, metal files, etc.) prior to disinfecting them. Many porous items cannot be sanitized; these are considered single-use items and must be discarded: cotton balls, gauze pads, orange wood sticks, toe separators, emery boards, and electric file sleeves, for example.

Your hands are another set of tools you use, and hand washing is also a form of sanitation; frequent washing removes many types of pathogens, dirt, oils and product

residues. It is important to always wash your hands prior to serving each client, ideally with soap and warm water; alternately, an alcohol-based hand sanitizer that contains at least 60% alcohol is acceptable.

Disinfection, a chemical process that eliminates bacteria and most viruses, is the second level of decontamination. It's performed on semi-critical objects: non-porous objects that often come into contact with mucous membranes or broken (non-intact) skin. All non-porous items require disinfection, and should be sanitized first, to remove visible debris.

In an attempt to make sanitation and disinfection easier, there have been occasional new single-use items brought to market; however, they are usually not cost-effective, making them non-compete items. In 2016, for example, disposable manicure bowls came out: there was no need to sanitize or disinfect them, but they were too costly for the average nail technician. A disposable file system – a hard plastic board with peel and stick files in sealed plastic – also recently came to market. The theory was that after each client the tech could peel off the old file and attach a new one; unfortunately this proved to be both difficult and time-consuming, so most nail technicians went back to regular emery boards.

How do you know which disinfectant is the right one to use in the salon? In the United States, the Environmental Protection Agency (EPA) regulates disinfectants and sets those standards. Each disinfectant has an efficacy label, which tells you what it's effective against. In general, broad spectrum disinfectants (also called hospital grade disinfectants), which are germicidal, fungicidal, pseudomonocidal, and virucidal, are your best choice. In addition, each manufacturer will provide directions for the effective use of their specific disinfectant, and those directions must be followed. Finally, if your disinfectant becomes contaminated – for instance, by putting a tool that has not been sanitized first in it – it needs to be replaced immediately. (Note: disinfectants are not appropriate for use on skin. Contact with skin should be avoided.)

What about the liquids and creams used during nail services – how do you ensure that those stay free of contamination? Certain items, like nail polish and primers, are considered self-disinfecting because they do not support the growth of bacteria, viruses or fungi. In the case of others, like creams, lotions, scrubs, paraffin wax, masks or oils, single-use spatulas should be used to remove the amount needed and then discarded.

Sterilization, the highest level of decontamination, destroys all pathogens including bacterial spores, which are not affected by sanitation or disinfection. It's performed on critical objects: those that puncture or invade the skin, or that come into contact with sterile tissue. It is dependent on the previous levels – implements must be sanitized before they can be sterilized.

In Ohio, sterilization is considered “hospital level” and not required for nail services, since they should not

include any procedure that is invasive. In recent years, however, some states have begun to require FDA-listed sterilizers for nail technicians: Texas, Iowa and New York so far. In the absence of requirements, some businesses voluntarily decide to add an extra layer of safety for their clients – after all, elevating client confidence can increase client retention, providing a competitive advantage. Thus, a growing trend in salon decontamination is the use of sterilizers – but do they really sterilize? Some do. The others range in effectiveness from providing an additional source of disinfection to, arguably, providing only a psychological benefit.

Wet/Steam Sterilization

An autoclave – a popular hospital grade sterilizer – is a steam-heated container that uses high pressure and temperatures to complete the sterilization. This process is true sterilization – in other words, it kills not only bacteria but also bacterial spores. Implements are placed into pouches, which are sealed, and loaded into the autoclave. The pouches' color changes once the correct sterilization conditions have been met, eliminating any guesswork. Autoclave pouches should remain sealed until the instruments are needed, and should be opened in front of the client. Autoclaves are on the pricey side, but marketing to clients who are willing to pay more for high-end decontamination practices can make them a worthwhile investment.

Dry Sterilization

As the name implies, this method uses high levels of dry heat. All implements need to be dry before sterilization, since water will interfere with the process. Like in an autoclave, a pouch can be used to hold implements; it should be sealed prior to the process and opened just before the instruments will be used on a client. The process takes longer and runs hotter than an autoclave – standard operating time is 340° F for 60 minutes – and may not be appropriate for tools with plastic or rubber parts. Metal tools such as nippers and cuticle pushers, however, will be less prone to rust and/or dulling than in an autoclave. A *US FDA registered* dry heat sterilizer is also a true sterilizer (eliminates bacterial spores).

UV “Sterilization”

An ultraviolet (UV) sterilizer uses short wavelength ultraviolet light to kill or damage cells by disrupting their DNA. A UV sterilizer does not use heat or moisture, and as such will not harm your tools – it doesn't matter what they are made of. The UV lamp can be easily removed when it needs to be replaced. On average the process takes 40 minutes, and kills 95% of bacteria – in other words, it is not true sterilization, or even true disinfection! It is, however, a very visible method of sanitizing implements, and you can use it to store them as well.

Quartz/Glass Bead “Sterilization”

Quartz and glass bead sterilizers uses extremely hot air (450°F and above) to heat beads. Implements are then held by the handle and dipped into the beads for 10-15 seconds, removed, allowed to cool, and used. The extreme

heat may alter the shape and/or sharpness of lower-quality implements. A more major concern, though, is that only the portion of the implement immersed in the beads is sterilized; the handle remains subject to possible contamination. As such, this is not a true sterilizer. It can, however, be used in addition to standard sanitation and disinfection procedures to assure clients that you're looking out for their health.

Throughout the process of decontamination, it is the responsibility of the nail technician to protect the client by sanitizing, disinfecting, and sterilizing in accordance with all applicable state laws. Also, bear in mind that more and more states now have quick and easy consumer complaint forms online, allowing the public to communicate possible violations to the regulation board with ease. Keeping a clean salon will not only protect your client, it will keep you from fines and possible revocation of your license. It is absolutely imperative that all nail techs make themselves aware of the laws and regulations regarding sanitation, disinfection, and sterilization for their state.

MMA Damage

It's important to note up front that liquid MMA (methyl methacrylate) is banned in all 50 states for use in nail salons. Often referred to as “dental acrylic,” MMA originally was used, in its cured state, by dentists for crowns and bridges. In the late 1960s and 70s, nail technicians started using liquid MMA for their artificial nails as it was less expensive than the safer ethyl methacrylate. However, this chemical was not designed to come in contact with skin or nails: exposure to MMA can cause permanent damage to the natural nail, redness, swelling, skin sensitivity, discoloration of the nail, and nail deformities. In addition, once cured, MMA is extremely hard and very rigid, which makes its bond difficult to break. Should a client jam a nail or get it caught (in a closing drawer for example), because the natural nail is filed thin so the MMA can adhere properly, the natural nail will break instead of just the nail enhancement. This can seriously injure, or possibly permanently damage, the nail.



In 1974 the FDA declared liquid MMA to be poisonous and harm-causing in nail services, taking action against any manufacturer using it. However, there are still some nail salons using MMA illegally due to its inexpensiveness, and clients who've been exposed to MMA may end up in your salon. How can you tell, in the absence of any of the extreme symptoms discussed above? First, MMA acrylic on the nails looks a bit thick and may also be milky-looking. The bond between the acrylic and the nail will be very strong, requiring extensive soaking to remove. MMA also has a strong, distinct, chemical odor, which you'll notice when you move from soaking to filing. (You may end up only filing instead of soaking to save time and reduce acetone exposure.)

Here's where you'll need to revisit your consultation. Your client needs to know about the dangers of MMA, and what to look out for to prevent repeated exposure. You may also want to leave a very thin layer of acrylic on the nails for awhile, since the natural nails will be thinned out. And rather than moving right back into wearing acrylics, your client's nails may need to "rest" for a bit to restore their health. All of this needs to be discussed and agreed upon before you proceed with services.

Allergies

Just as clients can be allergic to skin care products, soaps, or fragrances, or even the dust in the air of your salon, clients can be allergic to the products you use during their manicures. In these cases, one of the most common things you and your client may see is some of the signs of contact dermatitis, which can include redness, swelling, and blistering, usually on the skin around the nail. You may also see a psoriasis reaction in the nails: nails with dry, scaly patches.

Exactly which product is causing the problem can be challenging to figure out. It can sometimes take months of using the same product before a reaction may occur. The reaction may even appear somewhere other than on the hands, like the face or chest – anywhere a person touched before their treatment was 100% dry.

Allergies have become more common in today's nail industry. Resins used in base coats to improve staying power, nail polish remover, and the actual desired color itself can all create an allergic reaction. As gel polish in particular has become more and more popular, related allergic reactions have emerged. The active chemicals in uncured (not dried) gel polish, particularly methacrylate, acrylate oligomers, and monomers, are often culprits. And if the polish is not cured properly, the chance of reaction is increased: applying polish too thickly, mixing brands, or using/maintaining UV bulbs incorrectly can all cause improper curing. (Note: it's important to change UV bulbs every 6-12 months.)

It's also sometimes hard to tell if a product is causing an allergic reaction, or if it's an irritant. Irritant reactions, which are more common than allergic reactions, tend to happen right away – within minutes or hours – and usually go away when the offending product (gel polish, for example) is removed. Allergic reactions often occur after repeated exposures to a product (sensitization), may

have a delayed onset, and involve the immune system.

There's only one way to tell for sure what you're dealing with – recommend that your client visit a dermatologist. Dermatologists can conduct a patch test: they apply potentially problematic chemicals to the skin and observe the reactions, identifying allergies. Once the issue has been identified, and the skin is clear and healthy, you can resume nail services, taking care to avoid products that contain the problem ingredient. For example, there are several nail polishes on the market which are made without formaldehyde, toluene, and dibutyl phthalate, some of the most common and harmful chemicals: OPI, Chanel, and Dior make them, to name a few.

Should a client ever react with shortness of breath or hives instead of a surface rash, stop the service immediately until a doctor determines the cause.

Diseases and Disorders

Clients who come into your salon for services may present with nail diseases or disorders that they don't even know about! While we can't diagnose or treat, it's important for nail technicians to be aware of common and emerging disorders and diseases of the nail, so that we can safeguard our own health, make clients aware of the potential situation and make the appropriate referrals, and protect their other clients. Below are several common conditions that you may notice during a normal manicure treatment.

Nail Biting – Not strictly speaking a disease or disorder on its own, nail biting makes the list for several reasons. First, so many people do it, techs and clients alike. Second, it can leave your client susceptible to colds and other illnesses – realistically, your client is repeatedly putting their unwashed fingers in their mouth over and over again. Not healthy! Finally, nail biting can lead to other nail conditions: one common risk is paronychia, an infection of the tissue folds around the nails that begins with symptoms of pain, swelling, and redness, but may also cause abscesses filled with pus in its more acute form. **YOU CAN:** Proceed with the service if no infection is present. You can also educate! Gently point out chewed nails, and make sure your client understands the health risks. You might mention that there are some over the counter products available to help stop nail chewing. For example, Orly makes a "no bite" deterrent, a bitter-tasting clear top coat for the nails; Onyx has a similar product called "stop the bite," another clear coat can be worn alone or over polish. For the best results, manufacturers recommend applying two coats twice daily for at least 3 months after the habit has stopped. Finally, when the urge to gnaw strikes, a client can put something else in their mouth, such as a sucker or gum perhaps.



Pseudomonas – Often called “greenies” by nail techs, *pseudomonas* is a bacterial infection that occurs either between the nail plate and the nail bed, or between the nail plate and an artificial nail. The green color, which many nail techs call “mold,” is actually a byproduct of the infection, caused mostly by iron compounds. The bacteria are often associated with nails, and cause a problem when conditions are favorable for their growth – like the moist, oxygen-free air under an artificial nail. If the bacteria were on the nail plate and were not removed prior to the service, or if post-service lifting allows bacteria to get between the nail plate and the product, *pseudomonas* can result. This underscores how important it is for both the nail technician and the client to wash their hands before the service. Nail technicians should also clean the nail plates before applying any product, ridding the surface of moisture and oils (and bacteria). Be alert during the service, too – if a client touches her nails to her face, for example, the nail plates need to be re-cleaned so the chance of infection does not rise. To prevent *pseudomonas* post-service, clients should be discouraged from gluing their own lifted nails – instead, they should return to the salon to have them redone. **YOU CAN:** Proceed with the service as long as the nail plate is not damaged. To help remove the infection, lightly buff the nail to open the nail plate, and remove all the moisture. Do not use that file on any other nails; instead, wrap it in plastic and throw it in the waste can. Instruct the client to keep the nail plate dry at all times – wear gloves when using household cleaners and immersing her hands in water, for example.

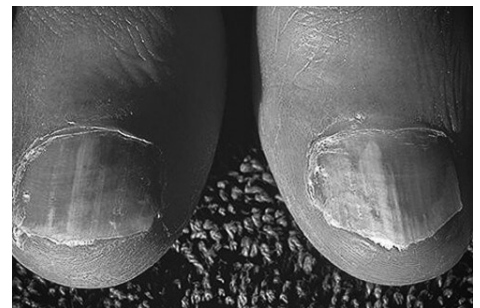


Yeast Infections – Yeast lives on your body all the time, but when conditions are favorable for it to grow uncontrollably, it can cause a yeast infection. In the nails, a yeast infection is characterized by a painful red swelling that may also leak fluid. In severe cases the fingernail may separate, exposing a discolored nail bed. Note that one of the causes of yeast infections in the nails is improperly done nail services – yet another reminder to take care! **YOU CAN:** Stop services and provide a referral. Although yeast infections are not contagious, they need to be treated by a doctor (often, in the case of the nails, a dermatologist). Patience will likely be required, as eliminating the infection will take time and recurrences are common.

Nail Fungus – When a client’s nail(s) is thickened, distorted in shape, brittle, darker in color than other nails, or dull with no shine, nail fungus may be present. There are many ways a client might be susceptible to a nail fungus, including having circulation problems, having a minor nail or skin injury, or sweating heavily, but one way that’s of particular concern to us is via unclean manicure implements. As we discussed earlier in the context of decontamination, it’s vitally important to make sure all your implements are thoroughly disinfected. **YOU CAN:** Nail fungus can be contagious, so should you suspect a client has a nail fungus you should stop the service and refer them to a dermatologist for tests and treatment. There are some therapies waiting to be approved by the FDA next year that include two new topical treatments that look promising.



Ringworm of the Nail – One of the most common fungal infections, also known as tinea unguium or onychomycosis, ringworm makes the nails look whitish, thick, and brittle. People with diabetes and/or vascular disease, or people who often have warm, damp fingers or toes, are among those at higher risk for ringworm. While it’s more often seen in toenails, wearing artificial nails, both acrylics and wraps, can also increase the likelihood of contracting ringworm of the nail: the emery board used to rough up the nail may carry fungus, which can collect and grow in the moist environment under the artificial nail. To avoid this issue always use a brand new emery board on each client, and dispose of it when finished. **YOU CAN:** Ringworm is very contagious – it’s possible to pick it up from the floor, discarded clothes, or even animals (especially cats). Most state laws prohibit servicing clients with suspected ringworm. Should you suspect ringworm, discontinue the service at once, and be very careful not to touch any skin particles as you clean up. Refer the client to a doctor or dermatologist. Treatment is usually topical antifungal cream, either over the counter or prescription.



Nail Atrophy – Also called onychatrophica, nail atrophy describes a nail that is wasting away. It may present as a nail that does not grow out all the way or a partial loss of the nail, and is often permanent. It can be due to damage – hitting the nail with a hammer or slamming it in a door, for example – or an underlying health issue. **YOU CAN:** Nail technicians need to be careful when dealing with clients who have this condition. It's recommended not to work on clients with atrophy, but to refer them to a medical professional.

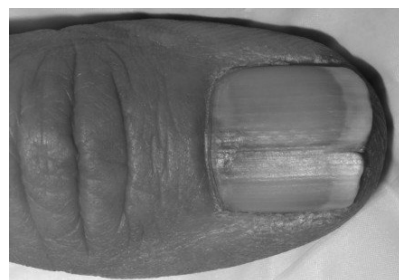


Brittle Nails – Cracked, chipped, split or peeled nails are generally a cosmetic issue. They are most often caused by overexposure to moisture (swimming, dishwashing, etc.); sometimes nail cosmetics can also cause nails to split. They can also be symptoms of vitamin deficiencies (such as low vitamin C or iron) or underlying medical issues, like psoriasis (covered below) or hypothyroidism (abnormally low activity of the thyroid gland). They become more common as clients age as well. **YOU CAN:** Proceed with the service, and take the opportunity to educate. Advise your clients keep their nails out of water as much as possible and keep them trimmed. Moisturizing may help, both after soaking in water and at night; they may wish to also wear gloves at night to hold moisture in. You can recommend Biotin, a vitamin supplement that can help with brittle nails. Finally, you can also suggest they visit a doctor to rule out any underlying cause.

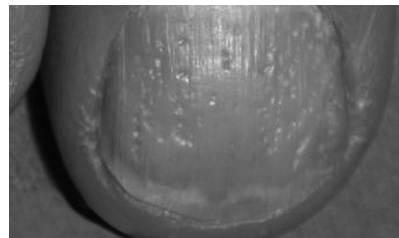


Split Nails – Nail splitting, mentioned briefly under “brittle nails,” is generally considered a cosmetic issue. Both vertical splits and horizontal splits may be related to immersion in water or overuse of nail services. They can also be symptoms of vitamin deficiencies or underlying medical issues. **YOU CAN:** Proceed with the service, and take the opportunity to educate. Advise your clients keep their nails out of water as much as possible, moisturize

them regularly, and keep them trimmed. Biotin, a vitamin supplement, may help. Nail hardeners may also help, particularly if they include acrylate. Should the splitting become particularly worrisome to the client, you can also recommend medical help.



Psoriasis of the Nails – Usually appearing in those clients who have psoriasis, nail psoriasis causes changes in the nails. It is not contagious, and appears more frequently on the fingernails than the toenails. Nails may turn yellow or brown, develop ridges, grooves or small pinprick holes on the nail surface, or develop small red or white spots under the nail. In some cases a painful white chalky material may gather under the nail, causing the nail to lift from the skin. **YOU CAN:** Gently proceed with modified services. The cuticles should not be clipped or pushed, and should the nail be lifting, keep cleaning underneath to a minimum to avoid making the lifting worse. Gently buff the nail to smooth the surface, and finish with polish if desired. You may also wish to recommend a medical evaluation: there has been limited success treating the condition topically with vitamin D ointment. A medical professional may recommend corticosteroid (steroid hormone) injections into the nail bed, or light therapy. In some severe cases the nail bed is surgically removed so a new nail can grow in.



PROTECTING TODAY'S NAIL TECHNICIAN

The products that nail salons use are critical to the high quality end result that clients crave, and new products coming on the market every year. Likewise, demand for nail services is up, but so is inflation – today's nail technician is working longer hours and seeing more clients in order to earn a living wage. It's more important than ever to know how to take care of yourself.

Chemical Hazards

Salons are full of chemicals, many of which come with exposure risks. In particular, nail technicians should be aware of:

Acetone, most often used for soaking off artificial nails and gel polish. Acetone is also used for thinning polyester resin and cleaning tools – note that it will dissolve some plastics. Be aware: long term exposure can cause

headaches, dizziness, and irritated eyes, skin, and throat.

Ethyl acetate (EMA), a type of acrylic monomer (liquid) that is used in most acrylic systems. Be aware: long term use can cause asthma and irritated eyes, skin, nose, and mouth, as well as difficulty concentrating. Exposure while pregnant may affect your child.

Methacrylic acid (nail primer), used prior to the application of acrylic nails to prepare the nail for the acrylic to adhere properly. Be aware: it can cause skin burns and irritated eyes, skin, nose, mouth, and throat. At very high concentrations it can cause difficulty in breathing.

Quaternary ammonium compounds (Quats), used for disinfecting. Be aware: overexposure can cause irritated skin and nose, and sometimes asthma.

The more we know about chemicals and the effects they have, the more the nail industry needs to emphasize protection. There are specific steps that both employers and nail technicians can take to protect their health when working with nail products.

On a basic level, ventilate the room – letting in fresh air is very important. Some modern salons have a built in ventilation system; there may also be a ventilation system built into the styling table itself. If your table has its own ventilation, make sure to change the charcoal filters at least once a month, and clean out the catch basin at least once a week. Should your salon not have a ventilation system of any kind, always keep the heat or air conditioning running during working hours: the HVAC fan switch should always be in the “on” position (not “auto”) so it runs continually, not just when the heat or air is on. If none of this is possible, you can open doors and/or windows, and place fans near them: fans should pull air in one end of the salon and out the other end.

In terms of products, always read the labels and follow the manufacturers’ instructions for proper use, including precautions like “wear water-tight gloves.” Use only the amount of product needed for the service, and unless using a product, keep all containers closed tightly to prevent both accidental spills and fumes getting into the air. Follow safety instructions when disposing of all materials and products, paying attention to any specific requirements: used liquid acetone, for example, needs to be put in a metal container and disposed of as hazardous waste. Always use a metal trash can with a tight self closing lid, and never pour chemicals down the sink or toilet. Finally, choose safer products whenever possible: some now claim to be made without harsh chemicals, such as “acid-free” primers made without methacrylic acid.

Looking at self-care, be sure to cover any cuts or cracks in your skin, to avoid any increased chemical absorption. Always wash your hands before eating, drinking, or applying cosmetics. Keep your food and drink covered at all times, and don’t eat too close to your work area.

Musculoskeletal Issues

If you’re like most nail technicians, you arrive home after a full day at the salon with aches and pain in your hands, shoulders, and back. Plus, after years of repetitive movements, nail techs often develop carpal tunnel, arthritis, or tendonitis. Just a hazard of the job, right? Maybe – but there are steps you can take to reduce these symptoms.

Improved posture and better ergonomics, for example, can make a big difference. The chair you sit in all day is very important: it should be adjustable with good back support, at a height that allows you to keep your feet flat on the floor. Also, make sure there’s enough space between the back of your knees and the front edge of the seat, to maintain proper blood flow to the legs. When working on clients, position their hands to keep your back straight rather than leaning over the table, and use a soft towel or pad at the edge of the table to create a softer surface for your arms.

Still stiffening up? In between clients, take the opportunity to relax and give muscles and joints a chance to move. A hand or occupational therapist can teach you the correct ways to stretch the muscles and create a personalized prevention plan for you – and don’t forget massage! 15 minutes of massage each month, combined with stretches to relieve the muscles in the wrist, can help keep you injury-free.

3 easy hacks to prevent pain:

- Compression - Place a golf ball on a hard surface. Push down and roll the ball around for a few minutes.
- Stretching - Keeping your arm straight, pull your fingers back towards your body. Hold for 2 seconds. Repeat as often as necessary.
- Massage - Have a friend massage your hands in a circular motion. Pressure should be steady but should not cause pain.

THE FUTURE OF MANICURES

As we’ve seen, the modern manicure is very different from nail treatments of the past – from the techniques used, to the products available, and even its location!

Where are manicures heading tomorrow? Maybe we’ll flash back to the 1980s with color-changing nail polish or real gold nails on our pinkies. Maybe we’ll embrace health consciousness and stick with the “short and natural” look. Maybe we’ll get futuristic: robots will paint detailed designs on our nails, or “smart nails” instead of smart watches. The nail industry is full of amazing trends, and the possibilities are endless!

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IMAGES

Image 1

<https://www.quora.com/What-are-the-drawbacks-of-wearing-acrylic-nails>

Image 2

<https://www.davidwolfe.com/nail-biting-sign-personality-trait/>

Image 3

<http://www.nailsmag.com/article/40049/pseudomonas>

Image 4

<https://theashleylawfirm.com/you-can-get-nail-fungus-from-visits-to-the-salon-what-it-is-what-to-do-and-where-to-complain/>

Image 5

https://www.medicinenet.com/image-collection/ringworm_of_the_nails_picture/picture.htm

Image 6

<http://www.nailpro.com/nail-clinic-atrophy-of-the-nail/>

Image 7

<http://www.newhealthguide.org/Brittle-Nails.html>

Image 8

<http://www.newhealthadvisor.com/nails-splitting-down-middle.html>

Image 9

<https://www.healthline.com/health/nail-psoriasis>

Modern Manicures

- 19. With the advent of stand alone nail salons in the early 1990s, _____.**
- a. Businesses that specialized in providing cosmetic nail care services offered manicures at high, luxury-based prices
 - b. Some multi-service salons, unable to compete, dropped manicures from their menus altogether
 - c. Traditional multi-service salons did even more business
 - d. None of the above
- 20. Especially if a client has a lot of cuticle overgrowth, a _____ manicure will soften the cuticle in the most comfortable way.**
- a. Dry
 - b. Soakless
 - c. Wet
 - d. None of the above
- 21. _____, also called cleaning, is the lowest form of decontamination. It removes visible debris, and can significantly reduce the number of pathogens on a surface. It's performed on non-critical objects: objects that come into contact only with intact skin.**
- a. Disinfection
 - b. Sanitation
 - c. Sterilization
 - d. Wiping
- 22. In general, sterilization is considered "hospital level" and _____ for nail services.**
- a. Illegal
 - b. Mandatory
 - c. Not required
 - d. None of the above
- 23. Not strictly speaking a disease or disorder on its own, nail biting _____.**
- a. Can lead to nail conditions such as paronychia
 - b. Can leave your client immune to colds and other illnesses
 - c. Has no real impact on the health of your client
 - d. None of the above
- 24. In the nails, _____ is characterized by a painful red swelling that may also leak fluid. In severe cases the fingernail may separate, exposing a discolored nail bed.**
- a. A yeast infection
 - b. Nail splitting
 - c. Pseudomonas
 - d. Ringworm

Chapter 5:

Golden Nail Care:

The Essentials, Part 1

Angelica Jungbluth

LEARNING OBJECTIVES

At the end of this module, the licensee will be able to:

- Recall characteristics of mature nails and skin
- Distinguish between health considerations that apply to the mature client
- Identify aspects of infection control that are particularly relevant to the mature client
- Recognize adaptations that can improve the salon experience for the mature client

MODULE OUTLINE

- I. Introduction
- II. Our Nails
Purpose and Structure, The Aging Nail
- III. Our Skin
Purpose and Structure, Aging Skin
- IV. Health Considerations
Brittle Nails, Hammertoe, Psoriasis, Eczema, Athlete's Foot, Arthritis, Diabetes, Cancer, Parkinson's Disease, Dementia
- V. Cleanliness and the Mature Client
Sanitation, Disinfection, Sterilization, Blood Spills and Universal Precautions
- VI. Adapting to the Mature Client
Taking Care of Yourself
- VII. Marketing to the Mature Client
- VIII. Conclusion

INTRODUCTION

The word manicure comes from the Latin “manus” (hand) and “cura” (care); pedicure, similarly, is from “pes” (foot) and “cura” (care).

Caring for and polishing the nails are processes that were embraced by several ancient cultures. In ancient Egypt (c. 3500 BC), hands were rubbed with oil and incense, and nails were stained with henna. The ancient Babylonians were coloring their nails black and green with kohl at around the same time; in fact, the world's oldest manicure set, made from solid gold, has been attributed to this culture and dated to around 3200 BC. During the Ming Dynasty in China (1368-1644) both men and women filed and shaped their nails, then dyed them (and sometimes the fingertips as well) red and black with various combinations of rubber, wax, vegetable dyes, egg whites, and gelatin.

Leaping ahead to more modern times, painting and manicuring nails arrived in the United States in the early 1900's, but didn't really begin to gain traction until the 1930's. In 1932, the newly-founded Revlon helped forward the mass production of dedicated nail polish, introducing long-lasting formula nail enamel and making it readily available in drugstores. Soon after, Max Factor's cuticle creams and cuticle removers joined polish on the store shelves. Painted nails became increasingly common among movie stars throughout the 1930's, and in the 1940's, the average American woman began to paint her nails as well.

Manicuring, once considered a luxury, is now very commonplace for the well-groomed female or male client. And while all your clients will appreciate both your caring touch and your awareness of style, the mature client is particularly well-placed to do so. In order to successfully serve this expanding demographic, nail technicians should both be aware of the changes mature clients are dealing with, and take the time to understand and meet their needs.

Providing manicures and pedicures to mature clients rewards their hard-working hands and feet, and can help keep them healthy, too. You'll be taking a close look at the hands, feet, and nails for any irregularities,

noticing things like hangnails, possible infections, and indications of the presence of disease. You'll be removing dead skin and leaving softer, cleaner, healthier skin behind. And you'll be giving them the regular benefit of touch, which can soothe tension and decrease pain.

OUR NAILS

Before we look specifically at the changes that mature nails undergo, let's review nails in general.

Onyx is the technical term for the nail, whether a fingernail or a toenail. Like hair, horns, or hooves, nails are made of keratin, a strong, insoluble, translucent protein.

Purpose and Structure

Nails are more or less flattened forms of claws, and are one of the things that make humans and other primates different from most mammals. While we're not 100% sure, the theory is that primates developed broader fingertips to help them grasp smaller tree branches; once early humans began to use tools, their fingertips got even broader than other primates'. Fingernails may have specifically developed to support the broad fingertips, or may simply be a side effect of the loss of claws.

Purpose

Today, nails serve a range of biological purposes. For example, fingernails help enhance the fingers' ability to do things like dig, scratch, tear, pick, etc., while toenails may help with balance and geographical awareness. Nails also help protect the fingers and toes from injury. Finally, they act as a counterforce, enhancing the sensory input provided every time the fingers or toes touch something.

In addition, just like in the ancient world, today's fingernails and toenails make a social statement – for women certainly but increasingly for men, too. Basics like keeping the natural nails well-groomed are a factor, and we've developed all kinds of tools to cut, shape, and refine them. Enhancements – ranging from press-on nails, acrylics, or gels, to artistic expressions like painted nails of all varieties, to additional adornments like freehand art, stickers, and little rhinestones and jewelry we can glue on – help nails signal wealth, creativity, and more.

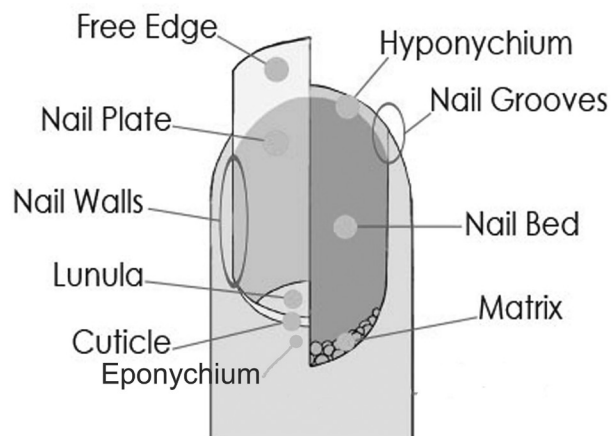
Finally, the condition of a person's nails can tell you something about their overall health. The normal healthy nail is flexible but firm, and slightly pink in color. The surface is smooth, and usually slightly curved, although it can be straight as well. Nails that vary from this description may be a warning sign of systemic disease (a disease that affects the entire body, as opposed to a single organ or body part): for example, brown stripes on the nails can mean that the person has AIDS or melanoma. Likewise, malnutrition can change the coloring of the nails, and small pits in

the nails may signal the presence of the skin condition psoriasis. Interestingly, doctors and paramedics often examine a patient's fingernails, looking for signs of dehydration or shock.

Structure

In my opinion, the best way to review the nails' structure is to break it up into tiny pieces.

First, note that the bone of the fingers and toes supports and shapes both the nail matrix and nail bed: in other words, the flat or curved shape of the overall nail is determined by the shape of the underlying bone.



The mantle, also called the nail fold, is the pocket-like fold of skin at the base of the nail. It holds the matrix and protects it from damage.

The nail matrix, sometimes called the nail root, is the active tissue located in the mantle. Full of blood vessels, lymph vessels, and nerves, it creates nail growth by generating cells which harden as they move towards the nail plate. Its size and shape determine the nail's thickness; if damaged, it produces damaged and/or disordered nail.

The lunula is the whitened, half-moon shape at the base of the nail (its name comes from the Latin for "little moon"). It's the visible part of the root, and the point at which it meets the nail bed; typically the nail is slightly softer in this area. It can best be seen in the thumb, but sometimes will not be visible at all, most likely hidden under the skin. Some say that a hidden lunula can indicate anemia, malnutrition and or depression: this theory has been disproved.

The nail bed is the skin which the nail body rests on, and slides along as it grows. It contains nerves, blood vessels, and lymph vessels, which supply continuous nourishment to the nail.

The nail plate (nail body) is the visible nail area, extending from the root to the free edge. Functioning to protect the nail bed beneath it, it's made of many layers of keratin, packed tightly together. While its top is typically smooth, its underside is grooved, helping it anchor to the nail bed. It has very little water content,

and contains no nerves or blood vessels: its pink color comes from the blood vessels in the nail bed.

The free edge is the part of the nail plate that extends past the end of the finger; it's attached to the nail bed and is generally white. In other words, it's the part we file and shape to suit the client's desires. The free edge protects the fingertip and the hyponychium.

The hyponychium, or quick, is the soft tissue seal under the free edge. Its job is to protect the nail bed from infection.

The nail grooves are the tracks on either side of the nail plate that it moves on as it grows.

The nail walls, or nail folds, are the folds of skin on either side of the nail groove and below the cuticle. They protect the nail plate's edges.

Finally, the cuticle is the loose, pliable skin that surrounds and overlaps skin the nail, protecting the matrix from infection. When it's removed, the nail is exposed to damage from bacteria and fungus – particularly if it's removed with tools that haven't been disinfected properly! This is why cuticles should not be cut during a manicure. One more time for the folks in the back: cuticles should not be cut during a manicure. Pushing cuticles, and nipping residual skin, leaves nails looking perfectly healthy without risking damage.

On average, fingernails grow 3 millimeters per month in adults, so the growth of a new finger nail plate, from the root to the free edge, takes about 4-6 months. Toenails, although much harder, grow much more slowly – just 1 millimeter per month – so it takes 12-18 months to grow a toenail from root to tip. Under normal circumstances, nails grow constantly; growth slows with age and poor circulation, and can also be affected by poor nutrition or disease.

The Aging Nail

As the client ages, so does the nail, resulting in changes ranging from aesthetic to health-related.

Characteristics

Nail growth slows with age: some studies have shown differences in growth rates as early as age 25, with significant slowdowns taking place after age 40. These slower-growing nails will be exposed to environmental influences for a longer time, which can impact both their strength and appearance; likewise, any diseases or disorders that crop up will take longer to resolve. In addition, the nail plate doesn't adhere as well to the nail bed.

The nails themselves tend to thicken, possibly due to the slower rate of renewal discussed above: the trauma of extended rubbing or impact can cause increased thickness. Another cause of thick nails may be fungal infections. We'll discuss them further below.

In contrast, the nail matrix begins to thin, which can

cause vertical ridges (onychorrhexis) to form along the nail; these ridges can also be caused by less-efficient circulation in the extremities. We'll discuss them further below.

The shape of the nails may change, particularly their curve. Extremely curved nails, or "clubbing," can indicate oxygen deprivation. Likewise, the nails' color can change, becoming yellowed, gray, or pale; the nails may also become more opaque. Other color changes, like blue patches or vertical brown lines, can be symptoms or underlying conditions. We'll discuss this further below.

The lunula tends to appear smaller, and may disappear altogether.

Dehydration often impacts the mature client, as the body produces and retains less oils and moisture; season variations can speed or slow this process. Dry nails may become brittle and split, peel, chip and ridge. The skin around the nails may appear dry, and even crack.

Diseases and Disorders

Let's take a closer look at some of the conditions that often affect mature clients. Remember that it is not within the scope of manicuring to diagnose – if you are concerned that a disease may be present, you should refer your client to a medical professional like a podiatrist. Similarly, if a condition is complex and requires special instruments to resolve, a referral should be made.

We briefly discussed some color changes that can be seen in aging nails above. Others include the blue-purple patches caused by subungual hemorrhage – in other words, an injury causes blood to collect under the nail – and the dark stripes along the nails' length called longitudinal melanonychia, which are made up of melanin and appear with most frequency in people with dark skin. In some cases, however, dark stripes can indicate the presence of skin cancer, most often when they appear on only one digit. Other color changes which may signal a serious underlying condition include blue nails, which (especially combined with clubbing) may be due to insufficient oxygen in the bloodstream; blue lunula, on the other hand, may be a sign of poisoning. If the entire nail is pale, the client may be anemic; if it's white, liver disease or diabetes may be present; half pink/half white nails suggest kidney disease. Yellow, thick nails that appear to have stopped growing (yellow nail syndrome) may signal something as simple as an infection, or something more global, like lung disease or rheumatoid arthritis. And to double back to clubbing: the presence of dramatically rounded nails, possibly in combination with swollen fingertips, can be caused by oxygen deprivation and may signal a problem with the lungs, heart, liver, stomach, or intestine.

Onychocryptosis (ingrown nails) – as the toenails thicken, the risk of ingrown toenails becomes greater; if not

dealt with, this can result in pain and infection. Regular trims, performed straight across, can help resolve this condition.

Onychoschisis (brittle, splitting nails) – often age-related, as discussed above, splits can also be caused by too much wetting and drying of the nails, and may be a sign of an underlying condition like psoriasis. Soaks or moisturizers may help, as can regular trims.

Onychorrhexis (vertical ridges) – often age-related, as discussed above, ridges can also be a sign of an underlying condition like psoriasis or nutritional deficiency. They may appear on one nail or all the nails.

Koilonychia – spoon-shaped nails. Thin nails that dip down in the middle like little spoons can be a sign of an iron deficiency.

Onycholysis – when the nail plate loosens or separates from the nail bed. This is often caused by over-aggressive cleaning under the nails. Keeping the nails cut short can help keep them clean without exacerbating this condition. It can also be caused by fungal infections or psoriasis.

Pitting – tiny dents in the nails, often described as looking like they were made with an ice pick. Pitting may be a symptom of a whole body disorder like psoriasis, dermatitis, or alopecia.

Onychomycosis – a fungal infection which accounts for about half of all nail disorders and is even more common in the mature client. It can cause the nail to thicken and discolor (usually white or yellow); the nail may also separate from the nail bed. Toenails are particularly affected.

Onychogryphosis (ram's horn nails) – when one side of the nail (usually the toenail) grows faster than the other, they may thicken, turn yellow or brown, and curve like a ram's horn. This can cause ingrown toenails, pain, and infection. Causes range from foot trauma, to fungal infection, to other underlying conditions. It should be diagnosed and treated by a medical professional; regular trims may help to keep it in check.

OUR SKIN

Since you'll be examining your mature clients' hands and feet, let's also quickly review the characteristics of skin. As you know, the skin, with an area of about 20 square feet, is the body's largest organ. Together with its accessory structures (the hair and nails) it makes up the integumentary system.

Purpose and Structure

The skin has six basic functions (sensation, secretion, absorption, regulation, protection, and excretion) and three layers (the epidermis, the dermis, and the subcutaneous layer).

The epidermis is the outermost layer, and is often referred to as the cutis, cuticle, or scarfskin. It has four ("thin skin") or five ("thick skin") distinct layers (the stratum germinativum, stratum spinosum, stratum granulosum, stratum lucidum, stratum corneum). All of the layers except the deepest contain cells called keratinocytes. These cells create and hold a protein called keratin, which give the hair, nails, and skin the traits of water resistance and hardness.

The dermis is composed of two layers of connective tissue (the reticular layer and papillary layer), creating a mesh of collagen proteins, which are strong and flexible, and elastin fibers, which are soft and pliable. It helps to support the epidermis, and provides the overall structure with elasticity. Within the dermis are blood vessels, lymph vessels, and nerves, as well as hair follicles. It also holds both the sudoriferous (sweat) and sebaceous (oil) glands. The sudoriferous glands excrete waste products and assist with the regulation of body temperature. The sebaceous glands secrete sebum. Sebum and sweat, mixed, create the skin's acid mantle – a very fine film on the skin's surface that protects it from dirt and debris, minimizes drying and chapping, and helps to keep it smooth.

Below the dermis, the subcutaneous layer (or hypodermis) is made up of loose connective tissue (collagen and elastin) and adipose tissue, which stores fat, cushioning and insulating the skin as a whole. It connects the upper layers of the skin to the fascia, and contains larger blood vessels and nerves than the dermis.

Aging Skin

What changes as we age, and why?

Skin ages at different rates due to both external influences and internal factors – some of which can be modified. Exposure to extreme climates, too much sun, wind, and polluted air can all hasten the aging process. In addition, general poor health, disease, and emotional problems can contribute to the skin appearing older; likewise, extreme weight loss tends to cause loss of muscle tone and lined and sagging skin, which also gives the skin an "aged" appearance. Finally, some medications, a poor diet, smoking, and misuse of alcohol can also affect the skin's appearance.

Overall, the connective tissue in the skin changes: collagen and elastin production both lessen with age, reducing both the skin's strength and its elasticity. Let's also revisit each layer.

In the epidermis, while the number of cell layers stays the same, the overall thickness lessens. In addition, there's a decrease in the number of melanocytes, while those that remain are larger. This leaves the skin thinner and paler/clearer, with the potential for large spots of pigment.

In the dermis, blood vessels become more fragile, increasing the chances of bleeding under the skin and

bruising. The sebaceous glands produce less oil, and the sudoriferous glands produce less sweat, which can leave the skin dry and itchy, and make body temperature harder to regulate.

In the subcutaneous layer, the fat thins: the loss of padding may increase the chances of skin injury, while the loss of insulation again makes it harder to regulate body temperature.

Taken together, this means several things:

First: Mature skin is often dry. This is due to the body's natural aging process: as a person ages the body's processes slow down, and cells are not replaced as rapidly as they once were. (This can be exacerbated by simple dehydration: drinking enough water can improve the color and texture of the skin over time by ensuring cell turnaround. A simple rule of thumb is "drink half your body weight" – for example, if you weigh in at 120 pounds, you would need to drink 60 ounces of water a day.)

Second: Mature skin often lacks elasticity. As you know, you can test the elasticity of the skin simply by taking a small section of the facial skin between the thumb and forefinger and pulling gently outward. When the skin immediately returns to its previous shape, it has good elasticity; if the skin is slow to return to its previous shape, it is lacking in elasticity.

Third: Mature skin is often fragile. It's thinner, so pressure, rubbing, or pulling may cause skin tears and/or broken blood vessels. Likewise, it also heals more slowly – up 4 times, in the case of wounds.

HEALTH CONSIDERATIONS

Next we're going to take a closer look at a range of maladies that may impact your mature clients, from conditions to diseases to infections. While, once again, you can't diagnose, you can and should make the appropriate referrals. As a general rule, you might suggest seeking medical advice when you notice brittle or discolored toenails, your client mentions a tingling or a burning sensation in their feet or toes, you feel that the feet are very cold or numb, you see that the feet or ankles are swollen, and/or you find blisters, very cracked skin, sores, or open wounds.

IN OHIO, you can't perform a service on a client who has visible swelling, eruption, redness, bruising on skin, rash, or a parasitic infestation in the area where a service is to be performed without written permission from a physician. Further, all areas and equipment that came in contact with the individual shall be cleaned and disinfected with an appropriate disinfectant. (We will return to the definition of "appropriate disinfectant" later in the module.)

Brittle Nails

We've mentioned them briefly before, but let's dig deeper. As you know, these nails are softer and thinner than normal, visibly dry, and prone to breakage:

sometimes they split at either side of the nail; sometimes they tear. Brittle nails in mature clients can be related to an ongoing health issue, such as anemia, hypothyroidism, iron deficiency, circulation problems, eczema, or psoriasis, so a visit to a doctor is highly recommended. In the absence of a specific diagnosis, brittleness may simply be caused by the increased dryness that we see in both nails and skin as it ages. Helping a client with brittle nails requires work on two fronts: in the salon, and in the home between visits.

Restoring moisture is an important step. During your appointments, be sure to apply cuticle oil, and don't cut back the cuticles – the waterproof barrier they provide between the skin and the nail will help to prevent further drying. Keep your warm water soaks short – if the nails absorb too much water, the resulting expansion and contraction can worsen the brittleness. A paraffin wax treatment can help nourish both skin and nails, allowing the creams and oils you apply to penetrate more deeply. On the home front, your client can apply cuticle oil every day as well. In addition, because being immersed in water dries out the skin, your clients should apply hand lotion after every wash. This not only makes the skin happier, it helps the nails: if the skin at or below the cuticles is dry, the underlying nail matrix is too, and the nail it grows will be prone to splitting, breaking, and cracking. Recommend that they use a rich hand cream, like Shea butter, throughout the day, paying close attention to the area around the matrix and the cuticle, and extending all the way down to the second knuckle of each finger.

Also, educate your clients on the importance of weekly or bi-weekly manicures: cleaning and shaping the nails, and treating the cuticles, is important for their health and strength. Also, make sure they know that not all mani/pedis have to end with polish! All polishes dry out the nail plate to a certain extent, and as polish ages, the drying continues. Clients with brittle nails should consider removing their polish after 5-10 days of wear, using a non-acetone remover, and leaving their nails unpainted until their next salon visit. And, if brittleness continues, they may wish to take a break from nail polish altogether.

Hammertoe

If, when looking down at your client's feet, you see a bend in the joint of the second, third, fourth, or fifth toe that causes it to curl under – as if it's hammering into the floor – that could be a sign of hammertoe. It's caused by an imbalance in the toe's tendons and muscles, which gradually creates the bend in the toe. While hammertoe is occasionally helped along by consistently wearing badly-fitting shoes, it's more likely that the primary cause is either genetic, or damage to the joint due to trauma.

Should you suspect hammertoe, recommend that your client seek a doctor's opinion – and the sooner the better. If the condition is diagnosed early, non-surgical

treatment options exist, including the use of pads and medications to relieve pain, stretching, orthotics, and/or splinting. If these don't work, or the toe is already rigid, surgery may be the only option. Also, caution your clients against self-diagnosing: while it may be tempting for them to try over-the-counter pads, a doctor will be better able to suggest which to use and which to avoid.

You may perform a pedicure as you normally would if the skin is not broken. Should sores be present, recommend a doctor visit prior to providing services.



Psoriasis

Psoriasis is a chronic condition that most commonly affects the skin, causing red, raised, flaky patches to appear. It often develops between the ages of 15-35, but can appear at any age. Plaque psoriasis, the most common, is easy to mistake for eczema: it appears as red, raised patches covered with grayish-white dead skin cells. The exact cause is still not known, but it's related to the immune system, and genetics are a factor. It is not contagious.

You may see psoriasis on the arms and hands, or legs and feet. It can impact the nails as well: up to 55% of people with skin psoriasis also experience it in the nails (while only 5% of people with nail psoriasis do not also have skin psoriasis). Signs of nail psoriasis include pitting, discoloration, crumbling, loosening, thickening, or horizontal lines. Note that fungal infections causing thickening of the nails appear in conjunction with nail psoriasis in about 1/3 of those affected – these infections are contagious, and services should be avoided while they are active. If you're not sure what you're seeing, refer your client to a doctor.

If your client has psoriasis, remember that water pulls moisture out of the skin, which can worsen the condition. Consider reducing the amount of time you soak the hands and feet, and use gentle soaps – or eliminate the soak altogether in favor of a dry manicure or pedicure. A pumice stone can be used to gently smooth the bottoms of the feet, but more significant callus should be referred to a podiatrist. In terms of the nails themselves, treat them gently, as

roughness can cause a flare-up. Recommend to your client that you keep them short so they are less likely to snag, loosen, or lift, and to reduce the amount of build-up underneath. Be careful when clipping the nails or shaping them with a file, and don't scrape the buildup out – this can cause the nails to loosen, potentially leading to infection. Leave the cuticles alone: cutting or pushing them can injure the skin, also increasing the risk of infection or flare-up. Buff them lightly, and polish as usual – unless you see signs of infection (redness, discoloration, swelling). Advise the client that any infection should be allowed to heal before polish is applied.

In general, nail enhancements should be avoided: they can increase the risk of the nails lifting and separating from the fingers, and your client may have an adverse reaction to the glue. That said, a recent study looked at people with nail plate abnormalities, including psoriasis and brittle nails, who received gel nail applications. Extra care was taken to avoid damage to the cuticle, and pre- and post-care photographs documented the service. The people who participated reported high levels of satisfaction and an absence of side effects. While more research is needed, gel nails may prove to be a suitable enhancement.

Note that people with psoriasis may also suffer from psoriatic arthritis, which we'll touch on shortly.

Eczema

Eczema, which inflames and irritates the skin and usually presents as an itchy red rash, is caused by allergens. The potential for eczema increases in the mature client, in part due to age-related skin changes like fragility and dryness as well as impaired circulation. Eczema can also be aggravated by medications. It's not contagious, but is easy to mistake for other conditions like psoriasis (also not contagious) or a fungal infection (contagious). If you're not sure what you're seeing, refer your client to a doctor.

Should a client with eczema request services, you'll need to decide together whether to proceed or reschedule: there's always the possibility that the products you use could trigger or worsen an outbreak. To reduce the risk, advise the client to hydrate the skin and cover the affected areas pre-appointment. You can help, too, by using gentle, fragrance-free products and avoiding enhancements.

Athlete's Foot

Both psoriasis and eczema are sometimes mistaken for athlete's foot – so let's take a quick look at the culprit. Athlete's foot, or *tinea pedis*, is a fungal infection that often begins between the toes. The symptoms include dry, flaky, scaly skin, and it often causes the feet to burn or itch. You may see it more frequently with your mature clients, for several reasons. Their immune system may be weaker in general, due to age-related changes or the existence of conditions like diabetes.

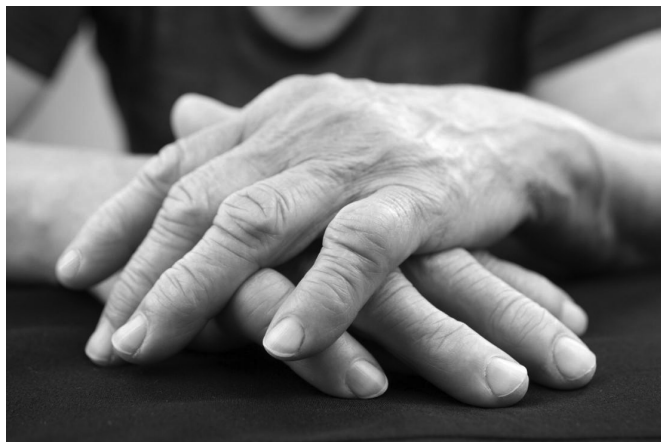
In addition, the mature client may not be able to keep their feet as clean and dry as other clients, due to decreased mobility. Finally, it's easier for infectious agents to enter the body through dry, cracked skin or open sores, which also appear more often in mature clients. And regardless, be aware that you'll see more of it in the summer, because the feet are sweating more.

Since this condition is contagious, you need to stop services at once: the risk of spread aside, the moisture, filing, and scraping that takes place during a pedicure can worsen the condition. It is particularly important to double down on your disinfection standards, should an exposure occur – wear gloves, use a hospital-grade disinfectant, and individually disinfect all reusable implements as well. Refer the client to a doctor for treatment.



Arthritis

Affecting more than 50 million Americans, arthritis is a joint disorder characterized by inflammation. The odds are good you've got a client who's affected by it to some degree – it impacts, women, men, and sometimes even children – and the likelihood of its occurrence increases with age.



In general, arthritis symptoms include swelling, localized pain, tenderness, stiffness and some limited

range of motion. The symptoms, which may be more or less severe, can also come and go, and may progress over time. Arthritis can cause permanent joint changes, which can sometimes alter the appearance of the affected joints (knobby finger joints, for example), but can usually be seen only by X-ray. These changes usually don't directly affect the nails, but if the hands and feet are swollen or twisted, the nails may also be altered.

There are many different kinds of arthritis. The two most common are osteoarthritis (OA) and rheumatoid arthritis (RA). OA is a joint disorder that breaks down the cartilage, which functions as a kind of cushion between bones. It's usually caused by overuse, injury, or sickness; genetics also plays a role. Affected joints are often less flexible, tender, and inflamed. RA is a systemic disorder – in other words, it impacts the whole body – in which the immune cells attack the joints, leading to fluid build-up, swelling, and redness. The cause is unknown, but genetics and hormones are likely to contribute. Another type, psoriatic arthritis (PsA), is seen in about 30% of people with psoriasis. Symptoms include swollen, sausage-like fingers and toes, reduced motion, and (as we discussed above) nail changes like pitting, crumbling, discoloration/lines, or separating.

With arthritis, the key is to help your client feel comfortable – and one of the best ways to know is to ask! Typical considerations include booking appointments later in the day, since affected joints tend to be stiffest in the morning. Find your client a comfortable chair that's easy to get in and out of, and encourage them to take their time filling out any forms. If you offer beverages, provide light, easy-to-hold cups. During services, remember that arthritic joints are sensitive – allow the client to rest their hands and feet on a comfortable surface rather than holding them.

Gentle massage may provide some relief, although inflamed joints should be avoided. Likewise, if your client is not on anticoagulants (drugs that prevent the formation of blood clots), you may consider incorporating those essential oils that are notable for reducing arthritis pain, such as chamomile, rosemary, ginger, or lemon.

Paraffin wax treatments, with their moist warmth, can be very soothing to clients with arthritis, and help increase their blood circulation. That said, the mature client may be more sensitive to heat due to their thinner skin and/or the influence of medications. Always review your clients' information sheet first to see if the heat can be tolerated, note any additional precautions that should be taken for clients with health risks, and do a patch test. And of course standard precautions like "only use equipment specifically designed for paraffin wax treatments" still apply! Avoid paraffin treatments in the presence of open wounds, rashes, burns, eczema, or swollen veins.

Diabetes

Insulin is a hormone that acts as a kind of key – it allows the cells of the body to use blood sugar, or glucose, for energy. Diabetes is a disease that affects insulin levels, which in turn means that the glucose levels in the body are too high. When the body doesn't make any insulin, that's type 1 diabetes. Type 2 – which is far more common, and the one you're most likely to see in mature clients – means that the body doesn't use insulin effectively (also called insulin resistance).

In general, if your client's diabetes is well controlled, you can proceed with services; the following adaptations will make those services safer.

Diabetes reduces sensation to the feet and increases dryness, due to poor blood circulation to the limbs. A person with diabetes may not be able to feel pain in their feet due to nerve damage (neuropathy); therefore, extra care is needed to avoid scratching or injuring the skin, as the client may not be able to provide feedback to the nail technician. Should you remove too much dead skin on the feet or too much cuticle, creating a small wound, this in turn can create entry points for bacteria and fungus, which could turn into an infection. An infection can raise blood sugar levels, which can interfere with proper healing and increase the risk of serious complications like ulcers or even amputation.

The practice of extreme hygiene is necessary in dealing with someone with diabetes. Sterilization of all tools is necessary; the footbath needs to be disinfected before every client but special attention to this for diabetics is necessary. Make sure your disinfection practices are visible to the client to reassure them. (Some medical professionals will advise patients with diabetes to bring their own implements; however, nail technicians have no way of knowing how clean those implements are. Some discussion between patient/client and nail technician is required.)

When manicuring and pedicuring the client with diabetes, use no metal tools: you risk pushing cuticles too hard, causing bleeding. Instead, apply some cuticle oil and gently push back the cuticles with a non-metal, orangewood stick. Likewise, don't scrub – gently soak the nails. Nails should not be cut too short, as this can cause ingrown toenails and lead to infection. Make sure toenail edges are not sharp; they should be rounded off with a file – but avoid rough porous files. Never use unsafe implements such as blades.

Lastly, as your client may not be able to feel the temperature of the water in the foot bath, test it before having your client insert their feet to avoid burns. It should be 90-95 F.

Cancer

When providing a service for a person undergoing chemotherapy, there are pertinent questions to be asked, among them:

- Are you currently receiving treatment?
- Are there any side effects you are experiencing in your legs or feet?
- Is there any other information I might need to know?
- Would it be ok to contact your medical doctor to ask permission to do the service?

Clients undergoing chemotherapy have a suppressed immune system, making them very susceptible to serious infections, which can be deadly. All tools used on these clients need to be disinfected with an EPA-REGISTERED HOSPITAL DISINFECTANT in the same way a hospital sterilizes equipment before surgery. Likewise, the foot bath for the pedicure needs to be thoroughly sanitized and disinfected prior to the service.

These clients need to personally see your disinfection techniques, beginning with washing your hands prior to their service. All equipment needs to be visible to the client to assure them that it is clean and sterilized, but not left out in the open to collect any dust or other particles: sealing it in plastic or a clear hard container is ideal. If an implement cannot be sterilized, such as a nail buffer block or emery board it must be thrown away immediately after use – let the client see you do this as well. When working on this client you always need to wear gloves that are fresh from the box – again, pull them out in front of the client. (Some medical professionals will advise patients undergoing chemotherapy to bring their own implements; however, nail technicians have no way of knowing how clean those implements are. Some discussion between patient/client and nail technician is required.)

During treatment the patient can experience nail changes. The most common is a skin reaction called hyper-pigmentation, which can lead to darkening in the nails as well. There are many drugs given during chemotherapy that can cause this darkening in the nails. This condition is temporary and will eventually resolve in a few months when the nails grow out. It is not recommended to have nail polish or nail extensions (acrylics) until the nails have grown out and returned to normal, as there is the possibility of trapping bacteria between the natural nail and the artificial nail.

Other possibilities to be aware of when performing services include:

- Dryness and sensitivity of the skin
- Chemo-induced neuropathy (lack of feeling or any sensation in the feet)

- Hand/Foot syndrome (redness, tenderness, and possibly peeling of the soles)
- Bacterial or fungal infections
- Nail changes: nails that appear green or blackish could indicate an air bubble under an artificial nail where dirt or bacteria has accumulated

Discuss your findings with your client, and refer them to their doctor.

Be very careful to look for any cracks or splits in the finger or toe which could cause infection. Never cut cuticles or calluses – this could put the client at risk for infection. Electric nail drills should never be used: drills can easily go too deep and into the natural nail, putting the client at risk for infection. Cuticles can be safely pushed with an orangewood stick; dry skin can be lightly filed and/or exfoliated and moisturized. A gentle massage may be an option for some clients; be careful not to press on any bones as this may cause pain.

If you opt to finish with a polish, consider water-based nail polish or five-free polish brands (which are free of formaldehyde, toluene, dibutyl phthalate, formaldehyde resin, and camphor, five of the most toxic chemicals).

Finally, make sure to have excellent ventilation during your service. A patient undergoing chemotherapy is very sensitive to odors; even a manicure can cause nausea.

Parkinson's Disease

Parkinson's disease is a progressive nervous system disorder that affects movement. Symptoms tend to start and accumulate gradually: tremors, stiffness, and/or slowing of movement are common. The cause is unknown, but both genetics and the environment appear to play a role.

Should one of your clients have Parkinson's disease, there are no special precautions needed for manicures, pedicures, and massage. In fact, the massage in particular can reduce muscle tension and promote relaxation, and may be greatly appreciated. Do be aware that, due to disease progression, the hand or foot of a client with Parkinson's may not flex in the way you're used to; it's important to not force any movements, as this can cause injury. Also, some people with Parkinson's may have specific times of day when their dexterity and mobility are better ("on" times) or worse ("off" times), so you may wish to schedule appointments accordingly.

Dementia

Dementia is a term that describes a group of symptoms – among them decline in memory and/or thinking skills – not a disease. Alzheimer's disease is the most common form of dementia; vascular dementia, which is stroke-related, is second. Many dementias increase in severity over time.

Studies have found that dementia patients who visit salons retain more vivid memories, based in part on familiar, repeated experiences (and even scents). They also have a stronger sense of identity and dignity. And by helping them to keep their nails groomed and clean, you're keeping them healthier and helping them avoid infections, too.

In adapting to a mature client that may have dementia, the key is to keep things simple and establish a routine. If possible, seat them in a quiet area. Approach them from the front, maintain eye contact while talking, and use a calm, soothing voice. Offer them simple choices: "Here are three polishes that I think would look great on you – which would you like?" is better than telling them to pick from the polish wall. Allow them extra time with paperwork and payment, and be prepared to assist if necessary.

Understand that the client may not always be able to clearly communicate if there is a problem, so pay attention, watch for signs of agitation, and be gentle. During services, keep a keen eye out for any signs of irritation, discolorations, swelling, or other changes that might suggest a problem with the hands or feet (or possible poorly-fitting shoes). It's a huge help if you can catch any issues while they are minor, before they progress to serious problems.

The salon experience can also be a relaxing one for people with dementia – consider adding essential oils to your soak, or playing soothing background music. Massage in particular can be an important part of the mani/pedi experience – using warm lotion and massaging the hands and feet for 3-10 minutes can reduce agitation. In fact, a pilot study during which trained massage therapists gave subjects with dementia a 5 minute massage on each foot once a day for 2 weeks resulted in reduced agitation and behavioral problems.

Golden Nail Care: The Essentials — Part 1

25. **Like hair, horns, or hooves, nails are made of _____, a strong, insoluble, translucent protein.**
- a. Calcium
 - b. Cartilage
 - c. Gelatin
 - d. Keratin
26. **Which of the following is NOT true of the lunula?**
- a. It can best be seen in the thumb, but sometimes will not be visible at all
 - b. It's the visible part of the root
 - c. Its name comes from the Latin for "little loon"
 - d. Typically the nail is slightly softer in this area
27. **Nail growth slows with age: some studies have shown differences in growth rates as early as age _____.**
- a. 12
 - b. 18
 - c. 25
 - d. 32
28. _____: **A fungal infection which accounts for about half of all nail disorders and is even more common in the mature client. It can cause the nail to thicken and discolor (usually white or yellow); the nail may also separate from the nail bed. Toenails are particularly affected.**
- a. Onychomycosis
 - b. Onychorrhexis
 - c. Pitting
 - d. Subungual hemorrhage
29. **Clients with brittle nails should consider _____.**
- a. Leaving their nails painted until their next salon visit
 - b. Removing their polish after 5-10 days of wear
 - c. Using an acetone remover
 - d. All of the above
30. **When manicuring and pedicuring the client with diabetes, _____.**
- a. Apply some cuticle oil and gently push back the cuticles with a non-metal, orangewood stick
 - b. Cut nails very short, and leave edges pointed
 - c. Keep your disinfection practices hidden from the client, to keep from worrying them
 - d. Use metal tools and avoid cuticle oil

Chapter 6:

Golden Nail Care:

The Essentials, Part 2

Angelica Jungbluth

CLEANLINESS AND THE MATURE CLIENT

While a full review of infection control is beyond the scope of this module, it's critical that we at least touch on it. Impeccable standards are important at all times – and they're even more important with the mature client, who may be more susceptible to infection.

Consider this scenario: you're very ill, so you go to the doctor. You're brought into an exam room that looks dirty, plus there are contaminated gauze, dirty cotton, and gowns lying around. You're asked to sit on the exam table, but the disposable covering was not changed from the previous patient. How confident would you feel the doctor knew what they were doing? Do you think you would be well taken care of?

Now think about your salon. Can you say with certainty that your sanitation, disinfection, and sterilization standards are 100% perfect? Is your station set up to inspire confidence in your clients? Do they feel that their beauty and their health are in good hands with you?

As a professional in the nail industry you will be exposed to microorganisms like bacteria, viruses, and fungi, which grow and breed in damp, dark, dirty places, every day. You are working directly with the nails of clients, which may harbor microorganisms. Your hands, and the implements you use, are other places microorganisms may grow. So it's vitally important to have a working knowledge of infection control, for your own safety and that of your clients.

Sanitation

Let's start with sanitation, also simply called cleanliness – the first level of infection control. In short, it involves physically removing debris, which reduces the number of microorganisms present. It's performed on non-porous objects that come into contact with intact skin only.

IN OHIO, "cleaning" – ie, sanitation, or removing surface or visible dirt or debris – is defined as using soap, detergent, or a chemical cleaner, followed by rinsing with clean water.

In practice, this means that your nail salon should look spotless: clean surfaces are an indication of good overall salon practices. Floors, work surfaces, and fixtures should be clean, mirrors should be streak-free, waste receptacles should be emptied regularly, and no stray nail clippings should ever be visible.

Air quality is another aspect of sanitation. The air in any salon contains odors, vapors, and dust: nail products evaporate as they dry, and tiny nail particles (possibly containing chemicals from polishes or acrylics) are created by clipping and filing. Several ingredients commonly found in nail products can irritate the eyes, throat and lungs, such as:

- Formaldehyde, used in nail polish and nail hardener, can cause allergic reactions, asthma-like attacks, or difficulty breathing
- Ethyl methacrylate (EMA), the main substance in artificial fingernails, can cause allergies, asthma, or dermatitis
- Toluene, a common ingredient in nail polish and fingernail glue, can cause light-headedness, dizziness, or drowsiness.

Air quality, which is important for the health and safety of everyone in your salon, can be of particular importance to the mature client. A good ventilation system is a must: air circulation will ensure that any harmful substances in the air are diluted.

All buildings should have a ventilation system already in place, to provide fresh air and remove mold, mildew, dust, etc. This standard system is called the HVAC (Heating, Ventilating, and Air Conditioning) system. It should be maintained on a yearly basis by an HVAC specialist. To up your salon's game, consider an air purification system: the salon's air is circulated through the unit, and filters inside not only control odor, but absorb chemical vapors. Source-capture ventilation, which pulls dust and vapors away from the nail techs while they work, is another option for each station.

Also, consider your own appearance: is it neat and professional, and are you wearing a clean smock? Clothes that are stained or cloudy with nail dust send

a clear message that professional cleanliness is not a priority.

Hot and cold running water should be readily available. I can't stress enough the importance of washing your hands between each client – and providing your client with a clean place to wash their hands as well. You may wish to post a copy of proper handwashing steps:

- Wet your hands with running water – either warm or cold.
- Apply liquid, bar, or powder soap to a cupped hand.
- Lather well.
- Rub your hands, palm to palm, vigorously for at least 20 seconds (need a timer? sing the Happy Birthday song twice). Remember to scrub all surfaces, including the backs of your hands, wrists, between your fingers, and under your fingernails.
- Rinse well.
- Dry your hands with a clean towel.
- Use the towel to turn off the faucet.

All of the products you use should be covered and clearly labeled, and either dispensed with a shaker, pump, or spray, or via a disposable spatula – never double dip. Get used to setting out your disposable tools in front of each client, so they can see that they're new, and disposing of them in front of your clients, too.

In addition to creating a clean work environment, sanitation can be a step performed before disinfection: for example, making sure there are no nail fragments on your clippers before immersing them in disinfectant.

Disinfection

Disinfection is the second level of infection control. The standard of disinfection requires the use of broad-spectrum (hospital grade) disinfectants: products that destroy or kill bacteria and a broad spectrum of viruses. What each disinfectant is proven effective against will be listed on the product's label. Note: disinfectants are toxic, so it is important to follow all manufacturer instructions in their use, and avoid spilling or inhaling them. They can also irritate the skin, so you should wash hands with soap and water after handling them, and you may wish to wear gloves when using them.

Any implement that comes in contact with a client must be either thrown away or disinfected. All implements you use as a nail technician that are not disposable must be disinfected after each use.

IN OHIO, an "appropriate disinfectant" is defined as follows:

For objects that come in contact with intact skin – either an EPA-registered, hospital disinfectant or sterilant that is bactericidal, virucidal, and fungicidal and is mixed and used according to the manufacturer's directions, or active bleach, mixed in a solution of one part bleach to nine parts cool or cold water. If using a bleach solution, the contact time shall be at least ten minutes.

For objects that come in contact with bodily fluids or blood – either an EPA-registered, hospital disinfectant or sterilant that is bactericidal, virucidal, and fungicidal, registered as effective against mycobacterium tuberculosis, human HIV-1, and hepatitis B virus, and is mixed and used according to the manufacturer's directions, or active bleach, mixed in a solution of one part bleach to nine parts cool or cold water. If using a bleach solution, the contact time shall be at least ten minutes.

A very important area for disinfection is your pedicure spa. Foot spas are breeding grounds for fungi and bacteria that like to live in pools of water: their screens and tubes are particularly good places for bacteria to collect and grow, often forming dense layers of cells and proteins called biofilms, which can be very hard to remove. Infections of the nails, toes, or even legs – some serious enough to require antibiotics – can result. Infections from a pedicure spa can also take time to show up: weeks, or even months. So it's vitally important to make sure the foot spa is completely disinfected between each client (foot spa liners can greatly aid in ease of cleaning), as well as following all daily and weekly cleaning standards.

IN OHIO, all pedicure units and all removable parts must be sanitized and disinfected after each use; in addition, this equipment should be flushed and maintained as per its manufacturer's specifications.

Remember, foot spas should not be used on clients who have skin wounds or open sores. Also, always recommend that your client not shave or wax their legs just before a pedicure, as it increases their susceptibility to infection.

Before moving on, let's revisit the difference between sanitizing and disinfection. Sanitizing reduces the presence of microorganisms, but does not kill all bacteria, viruses and fungi. In a salon setting, non-porous items that only come into contact with intact skin, like chairs, station tops, mirrors, counters, etc., should be sanitized. Disinfecting kills microorganisms as per the specific product's label specifications: broad-spectrum (hospital grade) disinfectants kill bacteria and a broad spectrum of viruses. In a salon setting, non-porous items that could come into contact with broken skin and/or blood must be disinfected, including all implements used directly on clients.

Sterilization

Sterilization is the third level of infection control. It destroys even bacterial spores, which aren't affected by disinfection or sanitization. It's used on implements

that puncture the skin. *IN OHIO, this level of infection control is considered “hospital level,” and is not required in the salon.* However, an increasing number of salons are voluntarily sterilizing implements, using an autoclave (also called a steam sterilizer).

Given that your mature clients in particular may be reassured by the presence of an autoclave, let's spend some time on them.

First, a little history: invented in 1879 by Charles Chamberland, the autoclave uses steam as a sterilizing agent. Why steam? Well, in order to destroy a cell using heat, you've got to raise its temperature high enough to break down the proteins in its cell wall. Steam transfers heat very efficiently: when it meets a cooler object, like the cell, it condenses into water and dumps the resulting energy into the cell, heating it.

The basic machine hasn't changed much since the late 19th century: the majority of updates have focused on things like keeping the user safer, or keeping track of the process better, or tweaking sterilization cycles to optimize them for specific kinds of objects. In general, an autoclave functions similarly to the pressure cooker you might have in your kitchen: the door is locked, creating a sealed chamber; steam flows in to displace the air; once all the air is gone, the steam is pressurized to reach the sterilization temperature for a set amount of time; finally, the steam is exhausted so the door can be opened once again.



To break things down a little further, a sterilization cycle has three phases:

1. Purge: Steam begins to displace air; temperature and pressure increase slightly
2. Exposure (Sterilization): The exhaust valve closes, increasing temperature and pressure until it reaches its setpoint; temperature and pressure are then maintained for a predetermined amount of time
3. Exhaust: The exhaust valve reopens, releasing pressure and reducing temperature

Most salon autoclaves have enough space to hold a few sets of manicure tools, and are simple, three dial devices: a timer, temperature settings, and a way to

switch between active and maintenance modes. For the user's safety, a double lock prevents the door from being opened once the interior is pressurized; should the electronic controls fail, autoclaves are equipped with a safety valve through which pressure can be vented.

A more modern feature of the autoclave is autoclave pouches, which have indicators that react to heat, changing color once sterilization has been achieved. Implements are placed in the pouches, which are then sealed and put into the autoclave. After sterilization, the pouches should remain sealed until you open one in front of your client.



Blood Spills and Universal Precautions

We should also briefly look at blood spill protocol, since particularly when you're working with the fragile skin of a mature client, an accident is a possibility. And strange but true – mature clients are often more likely than others to harbor bloodborne pathogens.

For example, baby boomers (people born from 1945-1965) are 5 times more likely than other adults to have hepatitis C, an incurable disease that can cause liver damage, cirrhosis, and even liver cancer. And recent studies have shown that the hepatitis C virus can survive outside of the body for as many as 6 weeks, so it could easily be spread through contact. Hepatitis B, which is more common in the population as a whole, can survive outside the body for as many as 7 days. HIV and AIDS remain a risk among older populations as well: in fact, 10-15% of new HIV/AIDS cases occur in people who are 50 or older.

First, use Universal Precautions: all human blood should be treated as if it were known to be infectious.

Second, *IN OHIO:*

All spills of blood and/or bodily fluids shall be cleaned as soon as possible and disinfected with an appropriate disinfectant (as recently defined above).

- *Nonporous, single-use gloves shall be used to pick up waste.*
- *Any towel, cloth, or other item used to clean a spill of blood or bodily fluids shall be discarded by placing in double bags, or in a biohazard container.*

- *Any clothing affected by the spill shall be removed prior to returning to work.*
- *Any mops, brushes, buckets, or similar items used to clean the spill area shall be disinfected by immersing in a bleach solution: one part bleach to nine parts cool or cold water; the contact time shall be at least ten minutes.*

In addition, if styptics are used to arrest bleeding, they must be in liquid or powder form, and applied by a single-use, disposable item.

We refer to gloves above, so to clarify: in order to protect against health concerns like bloodborne pathogens, disposable gloves must be exam grade (designed for non-surgical medical procedures). Latex gloves are the most common; in the presence of a latex allergy, nitrile gloves are an option.

ADAPTING TO THE MATURE CLIENT

There are many reasons why your mature clients are an attractive demographic: for example, unlike career clients looking for evening and weekend appointments, they often have daytime availability. In addition, the mature client is more likely to set up a standing appointment, will rarely if ever miss an appointment, and is more likely to both turn up on time AND call if running late.

Plus, they may well turn out to be your most devoted clients. We know that increased isolation often is a part of aging – it may be that your interaction with them is the first they’ve had in awhile! Your clients’ bi-weekly – or even weekly – appointments can become a highly-anticipated social ritual.

This age group is rejecting the old notions of “old age beauty” – so you’ll need to be ready to support them with modern services. At the same time, as we’ve seen, they’re going through physical changes – so you’ll need to keep those services relevant and safe.

Let’s start from the second your newest mature client walks in the door. Assess your salon and your workspace through their eyes – is it clean, bright, and welcoming? Walk out from behind your station to greet them (remembering to make eye contact). Offer to hang their coat, and put their purse, bag, or other possessions in a safe place. If possible, match your pace to your client’s pace – if they’re not in a hurry, you shouldn’t be, either. Take time to personalize the experience: offer them a drink, or some pillows for the back of their chair, and remember their answers for next time. Once you’re both seated, ask them how they’re doing, and chat a bit before rushing into the service – it’s polite, and you may also begin to gather information that will factor into your consultation.

Your initial consultation is always important, but it’s critical for the mature client. You’ll want to be especially careful to gather all relevant medical information – pay particular attention to mentions

of diabetes or arthritis and the presence of varicose veins, and make a note of the medications they’re currently taking. This, combined with your own evaluation, will tell you a great deal about what sort of treatments you’re going to be able to perform, and what adaptations you’ll need to make.

Plus, nail technicians are often the first to notice a client’s hand- or foot-related issues. Some issues, of course, will be aesthetic. As we’ve discussed, the slower rate of growth of mature nails means the environment has more time to act upon them, which may impact both strength and appearance. Subungual hematoma may take longer to fade. Other issues may indicate the presence of a medical condition – and while you can’t diagnose, you can refer. Swelling or pain around the nails, for example, should be addressed by a doctor. Toenail fungus, if present, will take longer to resolve. Likewise, a small injury on the extremities that’s taking unusually long to heal might indicate diabetes, or if a client’s formerly-warm extremities are now always freezing cold, a circulation issue may need to be addressed. Make the client aware of these or any other issues you notice, and advise them to speak with a physician.

Because it may be harder for the mature client to perform nail care – they may not be able to reach the toes, for instance, or have difficulty handling nail clippers – you’ll likely want to schedule an appointment specifically focused on nail care every four weeks or so. That said, depending on the condition of each client’s nails, the content of this appointment may vary: while some may be up for a mani/pedi each time, others may just need (or be able to afford) trims.

In fact, this brings up an important point – when was the last time you sat through a whole class on how a process or a product works? You’ll need to cultivate technical awareness overall, so you’re able to readily apply it to mature clients in particular. Consider gels, for example. You know that the longer the gel is on the nail, the harder it is to remove: getting a gel product off the day you apply it is much easier than doing so three weeks later. You also know that mature clients’ nails may be more brittle, break more easily, and recover more slowly. If mature clients wait three weeks to remove their gels, whether you’re soaking or scraping, you’re almost certainly damaging the nails. So, you’ll want to encourage these clients to stay within the recommended two week window for removal, to keep the nails as healthy as possible.

In general, keeping the nails short can help with issues ranging from reducing the impact of brittleness, to helping with cleanliness, to preventing ingrown toenails (as we’ve discussed, this is another issue that becomes more frequent with age). Remember to trim the toenails straight across rather than shaping them to the toe. When filing, make sure the edges of the nails are not sharp.

In the presence of onycholysis (separation of the nail from the nail bed), talk to your clients. Let them know you're aware of the condition, and that you'll be gentle. If any separation exists, avoid cleaning under the nail. If no separation exists, and you must clean under the nail, use an orangewood stick: keep your insertion shallow, and be very careful not to put upward pressure on the underside of the nail. Avoid using nail brushes, which cannot be adequately disinfected. And here again, a shorter nail is easier to keep clean.

Let's not forget the skin!

The mature client faces changes to the skin as well as to the nails, and the skin on the hands and feet is no exception. As it ages, skin becomes dryer, loses elasticity, and is also more fragile and heals more slowly. Your nail work should take this into account, both for health and safety reasons (which we'll discuss in greater detail below), and because opportunities exist to provide some additional services! Ranging from anti-aging options – like skin lightening/age spot treatments, exfoliation, and paraffin dips – to pure pampering – like gently warmed lotions, electric mitts and booties, and even aromatherapy oils – these additions can be particularly appealing to mature clients.

Let's double back to dryness: as we know, skin can lose its ability to retain moisture as the years go by. I personally can attest to having extremely oily skin through my life – until around the age of 50, when I noticed that if I did not use moisturizer my skin would actually itch! If a client's skin is dry but NOT cracked, using a super-rich moisturizer cream that contains ceramides (a lipid) and hyaluronic acid (for absorption) can be helpful in creating a barrier for the skin that locks in moisture.

If cracking IS present, proceed with caution, and double down on your disinfection techniques (as we discussed previously). Even if there is no bleeding present, dry, deeply cracked skin on the hands and feet can lead to infection; if bleeding is visible, it's best to avoid mani/pedis unless your client has written clearance from their doctor. And if you know your client has type 1 or 2 diabetes, boost your caution levels even further: an infection could possibly raise their blood sugar levels, which can slow the healing process and increase the risk of more serious complications.

Even if there's no evidence of dryness, remember that mature skin can be increasingly fragile, and take care of it. For example, advise your clients not to shave their legs for a day or two prior to a pedicure appointment: shaving can cause tiny nicks, sometimes too small to be seen, which increases the chance of infection.

Calluses, caused by pressure and friction from repetitive actions, are very common in the mature client. If using callus removers to dissolve the thick scaly tissue buildup, be aware that they can cause burn

problems. Know whether your client has experienced sensitivity to similar chemical in the past BEFORE applying, apply only to the callus, steer clear of the sensitive toe area, and use it only for the directed time. Bear in mind that calluses shouldn't be completely removed – this leaves the newly-exposed skin vulnerable. Finally, using a cream with salicylic acid on the feet can help to prevent calluses from returning.

Massage can help warm and relax the tissue in the feet and hands, unclenching tendons and inviting relaxation. It's also known to increase blood flow to the extremities, and as such, it can be particularly beneficial to your mature clients, who may be experiencing reduced circulation, arthritis, chronic pain, etc. This can help with balance and gait by improving your clients' proprioception (the awareness of the position and movement of the body), thereby reducing their chance of falling. In addition, massage can produce feelings of connection and caring in clients who may be feeling touch-deprived. Just 5 minutes of hand massage, for example, has been found to produce a physiological relaxation response and reduce cortisol (the stress hormone) levels.

If massage is a part of your service, use a less vigorous technique on your mature clients, and avoid deep tissue massage and petrissage massage. This is particularly important in the presence of frail skin, varicose veins, swollen/shiny skin, or discolored blue or red skin with either hot or cold temperature changes. Do not provide massage to clients with high blood pressure, a heart condition, or a history of stroke. Talk with your clients throughout the massage, and adjust your touch accordingly.

While you certainly want to encourage regular visits, you'll need to stress the importance of your clients' doing nail maintenance in between appointments. A simple Home Care Handout can be a really nice touch (in large print, of course)! Simple pointers like reminding them to moisturize the hands and feet regularly, giving them tips on how to protect their nails from environmental hazards, and encouraging them to dry their feet well and inspect them for cracking can go a long way.

Taking Care of Yourself

You work long hours making repetitive movements including filing and buffing, resting your wrists and hands on a hard table which causes muscle, joints, ligaments, nerves and tendons to strain. In addition, bending over or being in the same hunched position for long periods of time can lead to chronic aches and pains, both on and off duty. These issues can be heightened when working with mature clients. You may end up compensating physically for your clients' conditions: for example, someone with arthritis may not be able to fully extend their hands, so you'll have to reach even further over the table to accommodate them. It's vitally important to remember to take your breaks, stretch, and let your body recover.

MARKETING TO THE MATURE CLIENT

So how can you embrace the mature market? Well, you need to make sure potential clients are aware of your services, so you need to reach out to them in the right ways.

For starters, consider clients you already have – might any of them have mature parents? These clients are certainly aware of the benefits of your services, so it's a simple step to get them thinking about how their parents could also benefit. Whether in person or by email, these promotions are particularly beneficial before particular holidays: think Mother's Day, Father's Day, Grandparent's Day, etc. A salon experience is a nice, practical present from an adult child (and might even be something that mature parent and adult child could do together!).

When going directly to the mature client, though, it can be helpful to think beyond e-marketing and take at least some of your efforts offline. Remember direct mail? Consider sending flyers – offering specific, relevant, daytime services – to local community centers, senior clubs, and retirement centers/communities. Churches and hospitals may have bulletin boards where you can post flyers as well. If representatives from any of these agencies contact you, you've got another opportunity to reach their members. Do they want to host a manicure demonstration? Have a special "event-only" discount ready to hand out to attendees. Are they planning a fundraiser? Offer them gift certificates.

You can supplement this kind of promotion with print ads – in the phone book (yes, it still exists), the local paper, the retirement community newsletter, etc. Be sure to specifically mention the services and skills you offer mature clients – and if your salon is walker/wheelchair accessible, say so.

When a new mature client books an appointment, you can reach their friends, too – word-of-mouth is still powerful! Have literature ready for them to take away; offer a two-for-one appointment if they bring a friend with them next time; give them a free gift they can show off – the sky's the limit.

Finally, don't be afraid to promote your infection control savvy! Coverage of sanitary practices in beauty and fashion magazines has become the norm: clients are more educated than ever, and aren't shy about their expectations. Let them know, ahead of time, that you're able to meet and exceed those expectations. Consider adding information about your infection control practices to your brochure, or highlight it on a sign in your front window or a tent card right at your station. Got an autoclave? Let people know! And of course, make sure your state license is displayed in a prominent place so clients can easily see it and be reassured.

CONCLUSION

Manicures and pedicures are essential to absolute health, particularly for the mature client: hands and feet are among the hardest-working body parts, and deserve the same attention that you would give to your face or your cardio health.

Once you've armed yourself with the knowledge of their needs, the mature client can be the perfect demographic for your salon. Providing manicures and pedicures can be both a luxury, and an investment in their quality of life, for a long time to come.

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Golden Nail Care: The Essentials — Part 2

31. Several ingredients commonly found in nail products can irritate the eyes, throat and lungs, including _____: a common ingredient in nail polish and fingernail glue, it can cause light-headedness, dizziness, or drowsiness.
- Ethyl methacrylate (EMA)
 - Formaldehyde
 - Glutaraldehyde
 - Toluene
32. The screens and tubes of foot spas are particularly good places for bacteria to collect and grow, often forming dense layers of cells and proteins called _____, which can be very hard to remove.
- Biofilms
 - Calcification
 - Hazmat
 - Polymers
33. The autoclave uses steam as a sterilizing agent because _____.
- It doesn't get very hot
 - It transfers heat very efficiently
 - Water is clean
 - None of the above
34. The practice of treating all human blood as if it were known to be infectious is called _____.
- Disinfection
 - Sanitation
 - Sterilization
 - Universal Precautions
35. When considering the impact of gel products on a mature client, which of the following factors are relevant?
- If mature clients wait three weeks to remove their gels, you're unlikely to damage the nails
 - Mature clients' nails may be more brittle, break more easily, and recover more slowly
 - The longer the gel is on the nail, the easier it is to remove
 - All of the above
36. The physical issues common to nail technicians can be _____ when working with mature clients.
- Avoided
 - Eliminated
 - Heightened
 - Intolerable

Chapter 7: Domestic Violence: Effecting Change for Your Clients

Angelica Jungbluth

LEARNING OBJECTIVES

At the end of this module, the licensee will be able to:

- Define domestic violence
- Recall statistics pertaining to domestic violence
- Recognize warning signs of domestic violence
- Identify resources for victims of domestic violence
- Recall aspects of reporting domestic violence and serving as a witness

MODULE OUTLINE

- I. What is Domestic Violence?
Emotional/Psychological Abuse & Threats, Statistics, Changing Times?
- II. Turning “Connecting” into “Helping”
Recognize the Signs, Listening and Responding, Resources, Reporting
- III. Serving as a Witness
- IV. Domestic Violence Education
Continuing Education, Training Companies
- V. Conclusion & Additional Resources

For someone who’s experiencing domestic violence, a salon can be a safe space.

Why is that, exactly? Well, cosmetology is a pretty touch-oriented profession: it’s one of the few non-medical fields where licensees regularly enter the client’s personal space (and since nothing we’re doing is life-and-death, we’re used to making our clients feel comfortable enough to accept us there). Similarly, salon workers tend to be nurturing people – after all, we’re in the industry to listen to our clients and use our skills to help them feel like their ideal selves.

So, over time, the worker/client relationship can develop into a very personal one. And increasingly, state legislatures are realizing that this special relationship may place cosmetology licensees in a position to address domestic violence. Legislatures are not only encouraging salon workers to learn about this issue – in some cases, they’re requiring it.

And if a little education could make all the difference to one of your clients, wouldn’t it be worth it?

WHAT IS DOMESTIC VIOLENCE?

Domestic violence is willful intimidation, physical assault, battery, sexual assault, and/or other abusive behavior, as part of a systematic pattern of power and control perpetrated by one intimate partner against another. It includes physical violence, sexual violence, threats, and emotional/psychological abuse: in other words, anything that may frighten, intimidate, terrorize, threaten, manipulate, hurt, blame, humiliate, or injure a person. The frequency and severity of domestic violence varies dramatically.

Domestic violence can happen to anyone: it crosses all races, cultures, religions, genders, education levels, and income levels. It can also happen at any age. For example, older adults who need help with their daily life are at an increased risk of being abused and or financially exploited, particularly by people with whom they have an expectation of trust, like spouses, adult children, grandchildren, or other family members, as well as non-related caregivers.

Victims of domestic violence are at an increased risk of contracting HIV or other STDs due to forced intercourse; they also have a higher rate of depression and suicidal behavior than the general population. Only 34% of women injured in domestic violence cases receive medical care for their injuries.

The traumatic consequences of domestic violence can cross generations and last a lifetime. They can also affect everyone around the victim, including friends, family, co-workers, and children.

SIDEBAR

If You Think You're Being Abused, There's a Good Chance You Are

- Are you afraid of your partner?
- Does your partner:
 - Bully, threaten, or control you?
 - Control your money?
 - Limit your access to family and friends?
 - Physically abuse you?
 - Sexually abuse you?

Emotional/Psychological Abuse & Threats

Physical violence is almost never the first type of abusive behavior, and may also not be the most terrifying part of domestic violence. Let's talk a little bit more about threats and emotional/psychological abuse. While not as widely understood as physical or sexual abuse, studies have shown they can be just as damaging, having long-term impacts on the victim's mental health.

Stalking, for example, is a threatening behavior, used by abusers to intimate and control their victims. Stalking victims suffer higher rates of depression, insomnia, and social dysfunction than the general population. Stalking may also be an indicator of other forms of violence: 81% of women who have been stalked by a current or former intimate partner were also physically assaulted by that partner.

Technology has opened up new ways for abusers to dominate, intimidate, and control the person in their lives through manipulating, cyber-stalking and emotional blackmail. Today's "smart home," full of Internet-connected devices such as locks, lights, cameras, thermostats, and speakers can be used for intimidation and control: abusers can use their smart phones to remotely control objects in the home. Doesn't sound too bad? Well, what if your air conditioner regularly shut down without you touching it, or your thermostat reset itself to 100 degrees over and over? What if the doorbell rang a few times a week and no one was there, or the digital lock on your front door changed every day? What if your lights blinked on and off at odd hours, or loud music blasted through your smart speakers without warning? All of these tactics, and others like them, are considered domestic violence.

Likewise, economic abuse may not be physical, but can also be used to control and intimidate; in addition, victims may feel unable to leave a violent domestic partner due to its effects. The abuser may prevent a victim from getting to work, or make the victim quit a job. The abuser may refinance their home without the victim's knowledge, or demand that the mortgage or other assets be in the abuser's name only. The victim can be forced to take out a loan, sign financial papers, access bank accounts, or open credit cards. All of these tactics use finances to keep the victim under the abuser's control.

Further examples of psychological/emotional abuse include humiliation and embarrassment, withholding information, denying access to family and friends, undermining the victim in public, and gaslighting (portraying the victim as crazy). Similarly, mental health disorders (whether real or feigned) on the part of the abuser may be used to excuse and/or deny abusive behavior. Additionally, abusers may use children and/or pets as emotional leverage to get the victim to do what they want.

Just like in cases of physical abuse, a victim of threats and emotional/psychological abuse can experience low self-worth, depression, stress disorder, difficulty trusting others, and an overwhelming sense of helplessness, all of which may require professional help to overcome.

Statistics

Nearly 20 people per minute are physically abused by an intimate partner in the United States. During one year, this equals more than 10 million women and men.

Intimate violence accounts for 15% of all violent crime.

Women between the ages of 18-24 are most commonly abused by an intimate partner.

1 in 3 women have been victims of some form of violence by an intimate partner within their lifetime.

1 in 4 women have been victims of severe physical violence by an intimate partner in their lifetime.

1 in 7 women have been stalked by an intimate partner during their lifetime to the point of being harmed or killed.

46% of rape victims in the United States were raped by an acquaintance; of that 46%, 45% were raped by an intimate partner.

Marital/spousal rape is the most underreported form of sexual assault. Many Americans do not believe marital rape is actually rape.

18% of spousal rape victims say their children witnessed the crime.

Approximately 1 in 10 American children saw a family member assault another family member and more than 25% have been exposed to family violence during their life.

Violence in a family negatively affects all members, especially children, who learn that violence is a way to cope with stress or problems or gain control over another person.

Once exposed to domestic violence, a child has an increased likelihood of multiple exposures, as well as exposure to other types of violence.

Changing Times?

The recent, nationwide #MeToo movement, while mainly addressing sexual harassment and abuse, may signal an increasing willingness to openly discuss topics like domestic violence.

In 2006, a social activist named Tarana Burke started a campaign to liberate women of color, especially young and vulnerable women, who have experienced sexual abuse in underprivileged communities. The hashtag phrase “#MeToo,” used on social media, was intended to show the extent of sexual harassment and assault by making it plain how many people have experienced it.

On October 15, 2017, after accusations against Harvey Weinstein surfaced, actress Alyssa Milano tweeted #MeToo. Since then it has been used more than 200,000 times, in the movie and music industries, the military, sports, and in households all across the country.

While it's a shame that it takes the backing of celebrities to truly address the topic of abuse, the #MeToo movement has begun widespread discussions on the best way for victims of sexual abuse or harassment to stop what is happening to them, fight back, and free themselves from the fear and control of dangerous abusers. The general consensus is that a lack of effective reporting options is a major factor that allows sexual violence to continue.

This may be where we, as cosmetology licensees, come in.

TURNING “CONNECTING” INTO “HELPING”

We have, at times, an amazing connection to our clients – not unlike a bartender, we provide a place they can let go and be themselves. We spend hours listening to them, giving advice and sometimes emotional support. In fact, some say we provide not one, but two services most everyone needs on a fairly regular basis: personal care and therapy! While of course we don't really lay claim to being therapists, it is interesting how often a client may confide personal information to a beauty professional. Why does this happen?

Consider the physical positions we're in. We are rarely if ever face-to-face: most often, clients can only see the tops of our heads as we sit off to one side or below them. This is perceived as less threatening: our position creates an illusion of distance between you and the client. The sense of distance can make the client feel more comfortable sharing life stories, and can also make the follow-up questions we ask seem a bit less intrusive.

Then, look at the nature of our relationship. We beauty professionals have conversational skills we have worked on and fine tuned for years – we're great to talk to. At the same time, our clients' behaviors don't really impact us, so we're unlikely to turn confrontational, attempt to hold them accountable, and/or try to change them. Finally, most clients only see us every few months, so it frees

them to share intimate details, without worrying that they'll have to face us again right away.

In the four decades I have worked in the beauty industry I have heard limitless stories from the clients who have been in my chair. Most times it's innocent chatting, albeit with the kind of details you might share with a significant other or best friend. But if the conversation becomes quieter, and starts to touch on things like their spouse choking them or chasing them, not being allowed to drive to the salon alone so their spouse knows where they are – what would you do?

I'm going to give you several answers to that question, including recognizing the signs, listening and responding, helpful resources for the victims, and reporting options for you. Together, these considerations will enable you to give a thoughtful response to a victim – one that takes into account their values, acknowledges the realities of their situation, and addresses any risks they may face.

It's widely assumed that most victims keep domestic violence a secret, when in reality most disclose domestic violence. The problem is the people they tell either can't, won't, or don't know how to, help. A victim may only reach out once, and a relatively small amount of education can make all the difference to the success or failure of their attempt.

Recognize the Signs

Learning what potential signs of abuse are is an important step. Remember, these are not always obvious: abuse is about controlling someone's mind and emotions as much as hurting their body

First, let's cover signs of physical abuse. These can be something you observe, or something your client mentions.

Your client may often turn up with injuries such as bruises, split lips, or sprains, offering explanations like “I'm so clumsy,” or “I slipped again!” They may also try to cover these injuries with makeup and/or clothing, including clothing that might seem too heavy for the weather (for example, wearing long sleeves in summer).

On the other hand, your client may bring up the topic personally. These statements may be specific, like talking about having been punched, hit, choked, slapped, or threatened with weapons, for example. They may also be more vague, such as a mention of not being allowed to sleep, or of being afraid to seek medical treatment or call the police.

But physical abuse is often not the first sign you see – as we've discussed, psychological abuse is also a problem. Here are a few things you may notice.

We've all had that client who over-confides, telling us all about sexual things going on at home. But if you're hearing things like a partner is cheating, becoming jealous, demanding, manipulating/lying, expecting your

client to watch pornography, forcing sex when your client doesn't want to participate, and/or being sexually insulting, these are all possible signs of domestic violence. Likewise, if a client mentions that she is constantly misplacing her birth control pills, this could be a sign that her partner is attempting to manipulate her into pregnancy. On the flip side, a client may tell you she's pregnant, and her partner is forcing her to go against her wishes and either get, or not allow her to get, an abortion.

Perhaps you've seen a formerly-confident client gradually seem to lose their confidence and self worth. Where once they were chatty and open, they may now be quiet and withdrawn, or anxious and nervous. They may confide that their partner is increasingly bad-tempered, and that they feel at fault. They could also express that they feel constantly criticized: their partner calls them worthless and/or humiliates them about their appearance. They may change their style of clothing or ask you to alter their look in the salon, saying their partner didn't like their previous look.

Possibly a formerly consistent client is now cancelling appointments without warning, or turning up late often. Alternately, perhaps their finances have suddenly changed; they're requesting significantly fewer services, or asking you to "hold" a check for them for a few days. They may mention that their partner has them on a budget, or is monitoring their spending. These can all be signs of financial control.

Even conversations about your client's digital life reveal clues. They may speak of threats or insulting messages over text, email, or social media, or mention that a partner is monitoring their social media activity or using a tracking app. Perhaps a partner is demanding that they hand over their phone in order to check the call history or texts, or you notice they're constantly taking calls or returning texts from a partner who's "just checking in."

Any one of these situations may be a sign of domestic violence; if we know how to respond, we may be helping to save a client from a dysfunctional life.

SIDEBAR

Have You Noticed Any of These Signs in Your Client?

- Excuses for injuries
- Personality changes
- Constantly checking in with their partner
- Never having money on hand
- Overly worried about pleasing their partner
- Skipping out on appointments for no clear reason
- Wearing clothes that don't fit the season

Listening and Responding

You've seen and/or heard some things that worry you. Now what?

First, it's important to know that it's normal to be afraid of saying the wrong thing at times like these – after all, you don't want to inadvertently make things worse! But speaking up is more important than using the perfect words. The following tips will give you some guidelines.

SIDEBAR

What to Say if you Suspect

- Ask if anything is wrong
- Mention specifically what concerns you
- Let the person know you're always willing to listen
- Let the person know you will respect their privacy
- Listen carefully and respectfully
- Offer to help (not solve)
- Support the person's choices

To begin with, you can ask if anything is wrong, and mention the things you've seen and/or heard. Let your client know that you're concerned, and available to listen to anything they want to tell you, as much or as little as they want. Assure them that anything they tell you is safe with you. Don't push, or try to convince your client that they have to talk to you – just let the conversation unfold naturally.

If your client decides to talk to you, it's vital that you are non-judgmental and respectful while listening. Don't offer advice or solutions – that can result in the victim blaming themselves. Likewise, don't bring up your own stories if you have them – the victim may feel demeaned by these comparisons. While it's okay to ask clarifying questions if you don't understand something the victim is telling you, try not use "why" questions – even with the best intentions, these can come across as accusatory. Overall, just actively listen, and give the victim a safe place to vent.

When a client says they are being abused, believe them and tell them so. Often, the victim is the only one who sees the violent side of the abuser, and fears that people will react with shock and denial if they try to tell them about it. Simply hearing "I believe you," can restore feelings of hope. Other helpful statements are "I'm glad you told me," "This is not your fault," and "You don't deserve this."

Similarly, reassure your client that the violence they are experiencing is not all right. Often, victims' emotions are all over the map, bouncing between love and terror, hope and hopelessness, sorrow and fury, etc. You can tell your client that these conflicting feelings are totally normal, while also confirming that abuse has no place in a good relationship. And on that note, never, ever sympathize

with the abuser, or try to explain away their actions.

Express your concern for your client's safety, and ask "What can I do to support you?" This is an important point – you are not offering to "solve," you are offering to "support." While your instinct may be to save them from the relationship, you need to be guided by what your client is willing to do. As we've seen, there are many reasons why people stay in abusive relationships; in addition, leaving can be almost as dangerous as staying. Sometimes, the fear a victim of abuse experiences is so intense they feel paralyzed: they are unable to make decisions, or act to protect themselves or others.

It may be that all you can do for now is to continue to listen and be supportive, so embrace that role. Offer to be there whenever your client needs to cry, vent, or just talk, and let them know how to easily get ahold of you. Never attempt to shame a victim into taking action; instead, empathize. Remind your client of their positive qualities, let them know you think they are brave, strong, and capable, and allow them to find the willingness to take action in their own time.

However, it may also be that your client is willing to begin to discuss ways to escape the abuse. Something tangible you can do, if so, is help them set an escape plan, also known as a safety plan: a personalized, practical plan addressing ways to remain safe while in a relationship, planning to leave, and/or after leaving. Responders at the National Domestic Violence Hotline, discussed in the next section, are available to plan with your client and/or their family and friends.

SIDEBAR

Making a Safety/Escape Plan

- Pack and hide an exit bag
 - Extra car keys
 - Extra clothes
 - Pay-as-you-go phone
 - Important papers and contact info
 - Money
 - Medicines
- Keep records of any abuse
 - Dates and events
 - Pictures of injuries
- Set a "help" signal with people you trust
 - Visual sign
 - Code word
- Know who to call and where to go
 - Hotlines
 - 911/Police
 - A local shelter

Resources

If your client does ask you for some sort of assistance, and you're willing and able to provide it, please do; if you're not able, be prepared to offer alternate ways to meet their needs. Either way, educating yourself as to the various places victims can get help is paramount.

RAINN (Rape, Abuse & Incest National Network)



24 hour hotline: 1-800-656-HOPE (4673) or connect with chat at <https://hotline.rainn.org/online/>

RAINN is the largest anti-sexual violence organization in the United States. In addition to operating the National Sexual Assault Hotline referenced above (in partnership with over 1,000 local sexual assault service providers), RAINN's areas of activism include preventing

sexual abuse, helping survivors, and ensuring abusers are brought to justice.

RAINN's hotline puts callers in touch with a nationwide network of sexual assault service providers, all of whom have agreed to abide by RAINN's confidentiality standards. Based on the first six digits of their phone number, callers are routed to a local organization (cell users may also choose to enter their zip code to improve accuracy).

Per RAINN's website, "Calling the National Sexual Assault Hotline gives you access to a range of free services including:

- Confidential support from a trained staff member
- Support finding a local health facility that is trained to care for survivors of sexual assault and offers services like sexual assault forensic exams
- Someone to help you talk through what happened
- Local resources that can assist with your next steps toward healing and recovery
- Referrals for long term support in your area
- Information about the laws in your community
- Basic information about medical concerns"

These services are free and confidential – complete phone numbers are not stored in RAINN's system.

National Domestic Violence Hotline

24 hour hotline: 1-800-799-SAFE (7233) or connect with chat at <https://www.thehotline.org/>

The Hotline, established in 1996 as an outgrowth of the Violence Against Women Act (VAWA), is now a key component of the largest anti-domestic violence

nationwide network. Per the website, “Callers to The Hotline... can expect highly trained, experienced advocates to offer compassionate support, crisis intervention information, educational services and referral services in more than 200 languages. Visitors to this site can find information about domestic violence, online instructional materials, safety planning, local resources and ways to support the organization.”

These services are free and confidential.

Loveisrespect (originally loveisrespect, National Dating Abuse Helpline)

24 hours hotline: 1-866-331-9474, text LOVEIS to 22522, or connect with chat at <https://www.loveisrespect.org/for-yourself/contact-us/>

Young people, new to dating and relationships and unsure of what to expect, also have a resource. Launched in 2007 via the National Domestic Violence Hotline and further partnering with Break the Cycle (<https://www.breakthecycle.org/>) in 2011, loveisrespect’s purpose is to engage, educate and empower young people to prevent and end abusive relationships.

Per the website, “Highly-trained advocates offer support, information and advocacy to young people who have questions or concerns about their dating relationships. We also provide information and support to concerned friends and family members, teachers, counselors, service providers and members of law enforcement.”

These services are free and confidential.

Reporting

Understandably, your first impulse may be to report what you have heard from, or what you suspect about what is happening to, your client. However, things aren’t always that simple.

Remember, your client is the one in the relationship, and they have the right to decide if, when, and how they want to leave. It’s not your responsibility to “fix” them or their situation – instead, show respect, support them, and honor their boundaries.

Also, be aware that notifying the authorities may endanger your client. If the victim does not have a safety plan in place, involving law enforcement can limit their options. They may not be able to speak freely with police, particularly if their abuser is present. The abuser may minimize the situation to the police as well, presenting their victim as hysterical or confused. After the police leave, your client may be in increased danger from their abuser. In some situations, the abuser may even be connected to the police department! All of these are factors to be considered seriously before making any kind of report.

Note that there are situations that may override the above considerations, and make contacting the authorities necessary: for example, if your client is in immediate

physical danger. Likewise, if you’re feeling endangered, you have every right to call the police on your own behalf!

All three of the hotlines we recently discussed regularly speak with family, friends, and concerned bystanders about what the options are when someone they care about is being abused. Checking in with one or more of them can help you organize your thoughts. In addition, while you’re weighing what to do, document what you’ve seen/heard and when. Should you eventually make a report, this type of specific information about the abuse can be very useful.

You’ve thought it through, and either have your client’s consent to report, or believe that making a report is absolutely necessary. So what do you do? Again, you can start with the three hotlines described earlier – they can connect you to local reporting options. Alternately, you can look up and contact your local law enforcement agency – or, in an immediate crisis, you can dial 911.

It’s important to understand that all of these choices give you the option of remaining anonymous. Your may choose to report anonymously because you fear confrontation with, or reprisal from, the attacker (or even the victim!), or because you’re not 100% sure that abuse is taking place and want to avoid potential embarrassment. However, if you report anonymously, the police are unlikely to be able to use any of the information you provide in court, which may make it difficult to prosecute the abuser. That said, you can also report anonymously and then come forward at a later date, identifying yourself as the person who made the report.

Mandatory Reporting

You may have heard the phrases “mandatory reporter” or “mandatory reporting.” What is it, and what professions does it apply to?

Most states today require some version of mandatory reporting surrounding domestic violence. The goals of mandatory reporting are to improve victim safety and provide them with better health care, to hold abusers responsible, and to improve documentation of domestic violence.

Mandatory reporters are, in general, health care providers – but precisely what that means can vary from state to state. For example, in some cases, this description may include counselors and/or social workers. Regardless, when a mandatory reporter uncovers injuries (for example weapons-related injuries, battery, rape, etc.) that lead them to reasonably suspect that their patient is a victim of abuse, they are required to report them – again, the timeline and method can vary from state to state. In California, for example, the mandatory reporter is required to file a report with local law enforcement by phone as soon as possible, or in writing with 48 hours.

The efficacy of mandatory reporting is under intense debate. Its proponents point to, among other factors, the necessity of witnesses and evidence in abuse trials –

mandatory reporters and the information they provide can be essential to prosecute offenders. However, some of its critics point to the already-discussed fact that reporting abuse can place the victim in even more danger than they were before. In one study, conducted during 2015 by the National LGBTQ Domestic Violence Capacity Building Learning Center (the Learning Center) in partnership with the National Domestic Violence Hotline, fully 50% of respondents stated that a report made their situation much worse; and an additional 12% stated that their situation became a little worse. One of the fears is that, knowing their healthcare provider is a mandatory reporter, victims may choose to avoid healthcare altogether. Other critics state that existing laws don't go far enough: while, for example, psychological abuse may create a range of health issues, these do not fall under most mandatory reporting umbrellas.

Regardless, at this time, no state requires cosmetology professionals to report abuse and/or the suspicion of abuse – in other words, you're not a mandatory reporter. As such, neither you nor your salon can be held criminally or civilly liable should a client reveal domestic abuse, whether or not you act or fail to act.

SERVING AS A WITNESS

When you involve yourself in a domestic violence case, either as support to the victim or as a reporter, there's a possibility that you'll end up as a witness: someone who, under oath, gives relevant information about the case in front of the court. Witnesses in domestic violence cases can be the people who actually saw or heard the incident with their own eyes and ears, or people who learned about the events from someone else – either of these may pertain to the client/stylist relationship.

Now what?

Maybe you volunteered to be a witness, at your client or law enforcement's request; maybe you were ordered to appear to appear by the court, via a summons (in a civil case) or a subpoena (in a criminal case). Either way, at some point before the trial, you will be asked to meet with a lawyer for the prosecution (often called a prosecutor) to review your evidence and prepare to testify.

It is against the law for anyone to threaten or intimidate a witness about appearing in court or giving evidence. Still, it's possible you may be subject to witness intimidation/tampering, or "conduct intending to silence a witness." Incidents can range from indirect, like vague verbal warnings or nuisance phone calls, to direct, like threats, property damage or even violence. If anything of this sort occurs, inform the prosecution team and the police immediately.

Trials are rarely a pleasant experience, and domestic violence cases may be particularly hard. There is the possibility that even if you're willing and able to testify, your client may recant their original statement and decide not to proceed against their abuser. If you're going to

testify, you should prepare yourself for this possibility, and avoid judgment.

During the trial itself, you will likely sit in the courtroom until you're called to testify. At that time, you'll take an oath to tell the truth; then the prosecutor will ask you questions, and you'll answer them to share your relevant information. Once the prosecutor is finished with his questioning the defense attorney may ask a few questions as well.

This can, of course, be a nerve-wracking experience! A few simple pointers can help:

Dress appropriately, professionally, and to feel confident. Although first impressions should not sway a court of law, the fact is, they matter.

Listen to each question carefully, and answer truthfully. You can ask that a question be repeated, and you are allowed to say things like "I don't know," or "I can't remember." However, you can't refuse to answer a question.

Speak loudly and clearly. Answer only what you are asked. Express facts, not opinions. If yes or no answers are all that is necessary, don't feel pressured to say anything else. If you misspeak, say so, and ask to correct yourself.

Avoid definitive statements like "That's all we talked about;" instead, use statements like "That's what I remember from our conversation right now."

Finally, the defense's attorney may try to call the honesty of, and/or motivation behind, your testimony into question. It's important to remain calm, even in the face of strong feelings. Losing your temper on the stand doesn't help your client – and may cause you to lose credibility as a witness.

Be aware going into the experience that very few abusers face imprisonment. A 2014 study found that, in 517 cases of domestic violence nationwide:

- Only about 1 in 4 cases (130) were reported to the police
- Less than 20% (103) were investigated by the police
- Less than 12% (61) resulted in an arrest
- Less than 10% (43) had charges filed
- Less than 5% (16) faced a guilty plea or conviction
- Less than 2% (10) saw jail time

SIDEBAR

Personal note: my husband, son, and daughter in law are all police officers, and they all agree that domestic violence calls are some of the most dangerous and challenging calls they're sent on – you never know what you're in for. Reports range from noise complaints to weapons fired. Could you walk into a volatile situation like that and tell right away who you should be arresting?

DOMESTIC VIOLENCE EDUCATION

In the face of statistics like these, it may seem as if there's nothing we can do. But experts across the board disagree – they emphasize that getting information into the hands of people who didn't have it before is a crucial grassroots tactic. And across the United States, legislators are considering the best way to do so.

Continuing Education

Illinois recently became the first state to require cosmetology licensees to receive training in recognizing victims of domestic violence in order to renew their licenses: a 1 hour continuing education course. The effort was led by Chicago Says No More, a local anti-domestic violence group, who worked with Democrats State Sen. Bill Cunningham and State Rep. Fran Hurley. Signed into law on August 12, 2016, the bill impacts more than 88,000 salon professionals, beginning with the 2019 and 2020 renewals.

Since then, several other states have introduced or passed similar pieces of legislation, among them Arkansas and Washington. At the moment, Ohio is not among them.

Training Companies

In addition to mandated continuing education, companies exist that can provide training in domestic violence awareness, with programming ranging from individual to an entire salon staff, both online and in-person. For example, the CUT IT OUT program features domestic violence professionals who offer seminars in schools and salons, and also offers free posters and safety cards on their website (<https://probeauty.org/cutitout/training/dvpro/>).

CONCLUSION & ADDITIONAL RESOURCES

It only takes one person to make a difference in the life of someone who's experiencing domestic violence – and for your clients, that person may be you.

Does this topic interest you on a deeper level? There are ways to help victims of domestic violence on a regular basis, from donating to volunteering. The National Coalition Against Domestic Violence (NCADV)'s Volunteer page (<https://ncadv.org/volunteer>) has a form you can fill out if you're looking for long-distance virtual/telework opportunities; their State Coalitions page (<https://ncadv.org/stay-connected/state-coalitions>) is a great place to start looking for local options.

Online Quiz

<https://www.breakthecycle.org/healthy-relationships-quiz>

Hotlines

RAINN (Rape, Abuse & Incest National Network)

24 hour hotline: 1-800-656-HOPE (4673) or connect with chat at <https://hotline.rainn.org/online/>

National Domestic Violence Hotline

24 hour hotline: 1-800-799-SAFE (7233) or connect with chat at <https://www.thehotline.org/>

Loveisrespect (originally loveisrespect, National Dating Abuse Helpline)

24 hours hotline: 1-866-331-9474, text LOVEIS to 22522, or connect with chat at <https://www.loveisrespect.org/for-yourself/contact-us/>

Free Materials

<https://www.thehotline.org/resources/download-materials/>

<https://nrcdv.org/dvam/catalog/82>

<https://www.loveisrespect.org/resources/download-materials/>

<http://store.rainn.org/>

Additional Information

Futures Without Violence

<https://www.futureswithoutviolence.org/>

Loveisrespect / National Dating Abuse Helpline

<https://www.loveisrespect.org/>

The National Center on Domestic Violence, Trauma & Mental Health

<http://www.nationalcenterdvtraumamh.org/>

The National Coalition Against Domestic Violence

<http://www.ncadv.org/>

The National Domestic Violence Hotline

<https://www.thehotline.org/>

National Resource Center on Domestic Violence (NRCDV)

<https://www.nrcdv.org/>

Office on Women's Health

<https://www.womenshealth.gov/relationships-and-safety/get-help/state-resources>

RAINN (Rape, Abuse & Incest National Network)

<https://www.rainn.org/>

Legal Aid

Battered Women's Justice Project

<https://www.bwjp.org/>

Legal Momentum

<http://www.legalmomentum.org/>

The National Clearinghouse for the Defense of Battered Women

<https://www.ncdbw.org/>

WomensLaw

<https://www.womenslaw.org/>

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Domestic Violence: Effecting Change for Your Clients

37. **Stalking may be an indicator of other forms of violence: _____ of women who have been stalked by a current or former intimate partner were also physically assaulted by that partner.**
- 12%
 - 37%
 - 62%
 - 81%
38. **_____ women have been victims of severe physical violence by an intimate partner in their lifetime.**
- 1 in 4
 - 1 in 8
 - 1 in 12
 - 1 in 20
39. **Conversations about your client's digital life that may reveal clues about domestic violence include mentions that _____.**
- A partner is demanding that they hand over their phone in order to check the call history or texts
 - A partner is monitoring their social media activity or using a tracking app
 - The client is receiving threats or insulting messages over text, email, or social media
 - All of the above
40. **Which of the following is NOT something you should say if you suspect that a client is experiencing domestic violence?**
- Let them know you're always willing to listen
 - Let them know you will respect their privacy
 - Offer to help (not solve)
 - Question their choices
41. **Launched in 2007 via the National Domestic Violence Hotline and further partnering with Break the Cycle in 2011, _____'s purpose is to engage, educate and empower young people to prevent and end abusive relationships.**
- 911
 - loveisrespect
 - RAINN (Rape, Abuse & Incest National Network)'s National Sexual Assault Hotline
 - The Violence Against Women Act (VAWA)
42. **As a witness in a domestic violence trial, you should _____.**
- Avoid yes or no answers, even when they're all that is necessary
 - Express facts, not opinions
 - Use definitive statements like "That's all we talked about."
 - All of the above

Notes

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CONTINUING EDUCATION

For Ohio MANICURISTS Manicurist / Advanced Manicurist Licenses

STEPS TO COMPLETE THE ENCLOSED COURSE:

- ☐ Read the enclosed course.
- ☐ Complete the exam questions throughout the book. (You need at least 75% correct to pass. If you fail, you can retake the course for free!)
- ☐ Fill out the answer sheet and pay for the course. Choose one of the following methods:

ONLINE: You can complete the exam and pay for the course online at www.beautyce.com. The online exam answer sheet is identical to the exam answer sheet in this book. After you pay with your credit card, you will receive an order receipt via email with a link to take the exam. Select the book version that matches the version on the front cover of this book. Then you simply enter your answers and the exam will be automatically graded. You can then print your certificate immediately.

MAIL: You can fill out the answer sheet (with a pen or pencil) on page 1 and mail it to us with a check payable to Beauty Academy, P.O. Box 449, Pewaukee, WI 53072. We will then email your certificate to you (or mail if no email is provided).

FAX/SCAN: You can call us at (888) 290-9739 with a credit card number and then send your answer sheet to us by fax at (888) 290-9739 or scan/email at support@pdhacademy.com. We will then email your certificate to you (or mail if no email is provided).



PRICE

Course Title	Hours	Cost
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for only \$48.00
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