MILADY STANDARD COSMETOLOGY COURSE MANAGEMENT GUIDE
CLASS SIGN-IN SHEET 5.0

INSTRUCTOR NAME:_____ **DATE TAUGHT:**_____

SUBJECT: GENERAL SCIENCES

TOPIC: INFECTION CONTROL: PRINCIPLES AND PRACTICES

LESSON OBJECTIVES:

Upon completion of the lesson, the student will be able to:

1. Understand state laws and rules and the difference between them.
2. List the types and classification of bacteria.
3. Define hepatitis and HIV and explain how they are transmitted.
4. Explain the differences between cleaning, disinfecting, and sterilizing.
5. List the types of disinfectants and how they are used.
6. Discuss Universal Precautions.
7. List the responsibilities of a salon professional.
8. Describe how to safely clean and disinfect salon tools and implements.

IMPLEMENTS, EQUIPMENT, SUPPLIES REQUIRED:

Student	Instructor	Items
x	x	*Milady Standard Cosmetology*
x	x	*Milady Standard Cosmetology Theory Workbook, Practical Workbook,* and *Study Guide: The Essential Companion*
x		Student notebook
x		Pens, pencils

TEACHING AIDS (Audio/visual equipment, handouts, etc. used by Instructor):

1. Board
2. LCD Projector and *Milady Standard Cosmetology Instructor Support Slides* OR Overhead Projector and Transparencies
3. *Milady Standard Cosmetology DVD Series* and DVD player

FACILITY: Theory Classroom

TIME ALLOTMENT: 2–4 hours (adjust based on school schedule and student activities/participation)

PRIOR STUDENT ASSIGNMENT:

1. Read Chapter 5, *Milady Standard Cosmetology*

EDUCATOR REFERENCES:

1. *Milady Standard Cosmetology*
2. *Milady Standard Cosmetology Theory Workbook, Practical Workbook,* and *Study Guide: The Essential Companion*

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NOTES TO EDUCATOR:

1. Review chapter, entire lesson plan, and *Milady Standard Cosmetology Instructor Support Slides* prior to lesson.
2. Review Learning Reinforcement ideas/activities and predetermine which are to be used.
3. Check the projector to ensure it is working properly.
4. Gather all materials and supplies needed for demonstrations prior to starting class.
5. Have students sign in for class and document attendance based on school's procedure.
6. During the Instructor preparation time and while students are entering and getting settled for the class, have the first *Milady Standard Cosmetology Instructor Support Slide* containing the inspirational quote projected (or write it on the board or flip chart). This will help get instructors and students into the appropriate mind-set for learning and for the day.
7. The information found in this lesson correlates to the information found in Chapter 5 of *Milady Standard Cosmetology Course Management Guide,* 2008 edition.

LEARNING MOTIVATION (WHY?)

Inspirational Thought for the Day:

"What progress, you ask, have I made?
I have begun to be friend to myself."
—Hecato, Greek Philosopher

Throughout your career in the field of Cosmetology, you will come into direct contact with many clients. As a result, the principles and practices of infection control are of key importance in your daily practice. These subjects have a direct bearing on your well-being and that of your clients. That is why it is so important for you to know the necessary steps to prevent the spread of disease. A basic understanding of how bacteria affect our daily lives is helpful in becoming competent in infection control procedures.

Contagious diseases, blood poisoning, and skin infections are caused by infectious bacteria being transmitted from one individual to another, or from a contaminated surface, tool or implement to a person. Disease is also spread by the use of unclean implements or dirty hands and fingernails.

As a professional cosmetologist, you will be exposed to a variety of germs or bacteria every day. You will be working directly on the skin, scalp, hair, and nails of your clients, all of which are ideal breeding grounds for bacteria. Your hands and the implements you use will be additional sources of passing bacteria. Thus, the applied practice of infection control is even more essential to your safety.

If you follow established guidelines and sound principles of cleanliness and decontamination, you should never encounter any problems with the spread of harmful bacteria. In fact, each state establishes detailed procedures for protection against the spread of disease. You will learn and practice those regulations throughout your course of study.

You must take care when using implements that can cut or pierce the skin. They must be cleaned and then disinfected before and after each use. Implements that cannot be disinfected properly must be disposed of as directed.

Consider this. How would you feel if you were very ill and went to the doctor only to find the examination room dirty with contaminated gauze, soiled cotton, and used gowns strewn about? Then, what if you were asked to recline on an examining table that the former patient had just vacated and the disposable covering had not been changed? You would not feel very confident that the doctor knew what he was doing or that you were going to be well taken care of, would you?

Your profession is one of high touch and contact. Therefore, it is critical for you to develop and practice infection control habits now, while you are in school. You will want to modify your behavior to ensure that good habits of infection control are routine in your daily activities. This behavior will endear you to your clients and increase their confidence in your professional abilities and your concern for their health and safety.

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PRESENTATION OF THE SKILLS AND/OR INFORMATION LESSON PLAN 5.0

SUBJECT OUTLINE	IN-DEPTH NOTES *(Information to share during presentation)*
I. REGULATION	Many different state and federal agencies regulate the practice of cosmetology. Federal agencies set guidelines for manufacturing, the sale and use of equipment and chemical ingredients, and requirements for safety in the workplace. State agencies regulate licensing, enforcement, and your conduct in the salon.
A. OSHA	The Occupational Safety and Health Administration was created as part of the U.S. Department of Labor to enforce safety and health standards in the workplace. The Occupational Safety and Health Act of 1970 established the Hazard Communication Rule, which requires manufacturers to assess hazards associated with their products.
B. MSDS	A Material Safety Data Sheet provides pertinent information. Have students look it over as you review the document.
a. Product content	
b. Associated hazards	
c. Combustion levels	
d. Storage requirements	OSHA standards are important to cosmetology because of the nature of the products used; mixing, storing, and disposal of products; general safety; and your rights to know what you are working with.
C. EPA	The Environmental Protection Agency registers disinfectants (chemical products that destroy all bacteria, fungi, and viruses, except spores, on surfaces).
1. Hospital disinfectants	Effective for cleaning blood and body fluids. They are used on any nonporous (no pores or openings and cannot absorb liquid) surface. Disinfectants control the spread of disease.
2. Tuberculocidal disinfectants	Are proven to kill the bacteria that causes tuberculosis. They are very powerful and can be harmful to salon tools and equipment. They may also require special methods of disposal. NOTE: Instructor should check with state regulatory agency and determine its position on these disinfectants prior to the class.
3. Disinfectant myth	The term *hospital grade* is not used by EPA, as it does not *grade* disinfectants; a product is either approved or it is not.

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D. STATE REGULATORY AGENCIES	Exist to protect salon professionals and consumers' health, safety, and welfare. They include boards of cosmetology, commissions, and health departments.
1. Laws	Laws are written by the state legislature and determine the scope of practice (what you are allowed to do) and establish guidelines for agencies to make rules.
2. Rules	Are also called regulations. They are more specific than laws. They determine how the law will be applied. Rules establish specific standards of conduct and can be changed and updated frequently without the passing of a law through the legislature.
II. PRINCIPLES OF INFECTION	Preventing the spread of infections is easy when you know proper procedures and follow them at all times.
A. Potential Infectious Microorganisms	Infectious disease is caused by pathogenic (harmful) organisms; an infectious disease may or may not be spread from one person to another or from one infected body part to another.
1. Bacteria	
2. Fungi	
3. Viruses	
4. Parasites	
B. Salon Disinfectants	To clean (cleaning): a mechanical process (scrubbing) using soap and water or detergent and water to remove dirt, debris, and many disease-causing germs. Cleaning also removes invisible debris that interferes with disinfection. Cleaning is what cosmetologists are required to do before disinfecting. To sanitize (sanitation): a chemical process for reducing the number of disease-causing germs on cleaned surfaces to a safe level To disinfect (disinfecting): a chemical process that uses specific products to destroy harmful organisms (except bacterial spores) on environmental surfaces
1. Bactericidal	Capable of destroying bacteria
2. Fungicidal	Capable of destroying a fungus
3. Virucidal	Capable of destroying viruses All must be mixed according to the label instructions.
C. Bacteria	Known as microbes or germs. They are minute, one-celled microorganisms with plant and animal characteristics. They can exist almost anywhere: on skin, in water, in air, in decayed matter, on environmental surfaces, in body secretions, on clothing, or under the free edge of nails. They can only be seen with a microscope.

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	For example: Mycobacterium fortuitum is a microscopic germ existing in tap water in small numbers that can, and has caused, serious skin infections that can linger for months and require strong antibiotics for treatment.
D. Types	
1. Nonpathogenic	These are helpful or harmless bacteria which perform useful functions such as decomposing refuse and improving soil fertility. They help metabolize food, protect against infections, and stimulate immune response.
2. Pathogenic	These are harmful and disease-producing when they invade plant or animal tissue.
E. CLASSIFICATIONS OF PATHOGENIC BACTERIA	Bacteria have three distinct shapes.
1. Cocci	Round-shaped bacteria that appear singly or in groups. See Figure 5–2 in the *Milady Standard Cosmetology* textbook.
a. Staphylococci	Pus-forming bacteria that grow in clusters like grapes; they cause abscesses, pustules, and boils. See Figure 5–3 in the *Milady Standard Cosmetology* textbook.
b. Streptococci	Pus-forming bacteria arranged in curved lines resembling a string of beads; they cause infections such as strep throat and blood poisoning. See Figure 5–4 in the *Milady Standard Cosmetology* textbook.
c. Diplococci	Spherical bacteria that grow in pairs and cause diseases such as pneumonia. See Figure 5–5 in the *Milady Standard Cosmetology* textbook.
2. Bacilli	Short, rod-shaped bacteria. They are the most common and produce diseases such as tetanus, typhoid, tuberculosis, and diphtheria. See Figure 5–6 in the *Milady Standard Cosmetology* textbook.
3. Spirilla	Spiral or corkscrew-shaped bacteria. They are subdivided into subgroups: Treponema papillida, which causes syphilis (an STD), or Borrelia burgdorferi, which causes Lyme disease. See Figure 5–7 in the *Milady Standard Cosmetology* textbook.
F. MOVEMENT OF BACTERIA	
1. Cocci	Rarely show motility (self-movement); they are transmitted in air, dust, or in the substance in which they settle.
2. Bacilli and Spirilla	Motile and use slender, hairlike extensions known as flagella or cilia for locomotion. Flagella use a snake-like motion and cilia move in a rowing-like motion. These hairs move the bacteria in liquid.

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G. GROWTH AND REPRODUCTION	Bacteria consist of an outer cell wall that contains liquid called protoplasm. Bacteria manufacture their own food, give off waste products, grow, and reproduce. The life cycle of bacteria consists of two stages.
1. Active	Bacteria thrive in a warm, moist, dark, and dirty environment. It only takes about 20 to 60 minutes for bacteria to reach full growth. They then divide into two new cells through a method called binary fission, and the new cells are called *daughter* cells.
2. Inactive or spore-forming	Bacteria such as anthrax and tetanus bacilli form spherical spores with tough outer coverings which are resistant to adverse conditions. This allows the dormant bacteria to withstand long periods without food. The spores can be blown about and can come to rest on various surfaces within the salon. When favorable conditions are restored, the spores become active or vegetative and begin to grow and reproduce once again. Therefore, even bacteria in the inactive stage can ultimately be a threat to the spread of disease or infection in the salon.
H. BACTERIAL INFECTIONS	Infections occur when body tissues are invaded by disease-causing, or pathogenic, bacteria. The presence of pus is a sign of infection. Pus is a fluid product of inflammation and contains white blood cells and the debris of dead cells, tissue elements, and bacteria.
1. Staphylococci	Most common human bacteria; they can be picked up on door knobs, countertops, by handshaking, or contaminated implements.
a. Responsible for food poisoning	
b. Responsible for toxic shock syndrome	
c. MRSA	Methicillin-resistant staphylococcus aureus. It occurs most frequently on people with weakened immune systems or those who have undergone medical procedures. MRSA initially appears as a skin infection, such as pimples, rashes, and boils that can be difficult to cure. Without proper treatment, the infection can become systemic and result in death.
2. Local infection	One that is confined to a single area such as a pimple, boil, or infected cut. The presence of pus is the sign of infection. Pus contains bacteria, waste matter, decayed tissue, body cells, and living and dead blood cells. Staphylococci is the most common pus-forming bacteria.
3. Systemic infection or disease	A disease that affects the body as a whole, often due to under- or over-functioning internal glands or

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	organs when pathogenic bacteria and their toxins are carried to all parts of the body by way of the bloodstream or lymphatic system. Examples include blood poisoning and syphilis.
4. Contagious or communicable	Diseases that are spread from one person to another by direct or indirect contact such as coughing, sneezing, unclean hands, unclean implements, open sores, common drinking cups, common towels, etc. Common contagious diseases preventing cosmetologists from working are tuberculosis, common colds, ringworm, conjunctivitis (pinkeye), viral infections, and nail, toe, or foot infections.
I. VIRUSES	Parasitic submicroscopic particles that infect cells of biological organisms and are capable of taking over the host cell's reproductive function. They are capable of infecting almost all plants, animals, and bacteria; they can pass through the pores of a porcelain filter. Viruses cause common colds and other respiratory and gastrointestinal infections. They include measles, mumps, chicken pox, smallpox, rabies, yellow fever, polio, influenza, and HIV (AIDS).
1. Live by penetrating cells	
2. Resistant to antibiotics	
3. Prevented by vaccination	However, vaccinations are not available for all viruses.
4. Common example	Often seen in salons is the human papilloma virus (HPV), also known as plantar warts.
J. BLOODBORNE PATHOGENS	Bloodborne pathogens are disease-causing microorganisms that are carried through the body in the blood or body fluids. Examples are hepatitis and HIV.
1. Hepatitis	Disease marked by inflammation of the liver and caused by a bloodborne virus similar to HIV/AIDS in transmission. It is present in the body fluids of an infected individual. Three types of hepatitis are of concern in the salon.
2. Hepatitis A	(NOTE: Not all this information is contained in the current edition of the textbook.) Illness lasts about three weeks. Symptoms are similar to the flu; may cause yellowing of skin and eyes in adults. It is spread through close contact; poor cleanliness and personal hygiene; contaminated food, milk, water, and shellfish; infected food handlers; and sexual contact. A vaccine is available.
3. Hepatitis B (HBV)	Can cause long-term hepatitis, cirrhosis, and/or liver cancer. There may be no symptoms or flu-like symptoms. It is primarily transmitted through sexual contact or blood transfusions or when

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	infected needles are shared. A vaccine is available. It is the most difficult to kill on the surface.
4. Hepatitis C (HCV)	Progresses slowly and about 1/3 of those with the illness show no symptoms. When symptoms exist they include fatigue and stomach pain. It is also transferable through parenteral contact and sexual activity with infected partners. No vaccine is available.
K. HIV/AIDS	HIV (Human Immunodeficiency Virus) is the virus that causes AIDS (Acquired Immune Deficiency Syndrome). AIDS breaks down the body's immune system.
1. Passed through blood and body fluids	
a. Unprotected sexual contact	
b. Sharing of IV needles with infected drug users	
c. Accidents with needles in health-care facilities	
d. Through cuts and sores	Such as those caused by sharp implements in the salon (never known to have occurred, however)
2. Activities that are NOT methods for transmitting the disease:	
a. Hand holding	
b. Hugging	
c. Kissing	
d. Sharing food/ household items	Like telephones or toilet seats. There are no documented cases of the virus being transmitted by food handlers, insects, or casual contact.
3. Can be infected for many years without symptoms	A person may be infected and transmitting the disease without even knowing he or she has the disease.
L. FUNGI	Microscopic plant parasites that include molds, mildews, and yeasts. They can produce contagious diseases such as ringworm.
1. Tinea barbae	Also known as barber's itch, this is a superficial fungal infection that commonly affects the skin. It is primarily limited to the bearded areas of the face, neck, or around the scalp.
2. Tinea capitis	A fungal infection of the scalp characterized by red papules, or spots, at the opening of hair follicles
3. Tinea pedis	A ringworm fungus of the foot
M. PARASITES	Organisms that grow, feed, and shelter on or in other living organisms. Humans can acquire internal parasites by eating fish or meat that has not been properly cooked. External parasites that affect

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	humans on or in the skin include ticks, fleas, mites, and head lice.
1. Pediculosis capitis	Technical term for head lice
2. Scabies	Caused by the itch mite which burrows under the skin. REMINDER: Contagious diseases caused by parasites are never treated in a cosmetology school or salon. They should be referred to a physician.
N. HOW PATHOGENS ENTER THE BODY	
1. Break in the skin	Such as a cut, pimple, or scratch
2. Mouth	By breathing or swallowing air, water, or food
3. Nose	Air
4. Eyes or ears	Dirt
5. Unprotected sex	
O. HOW BODY FIGHTS INFECTION	
1. Through unbroken skin	
2. Body secretions such as perspiration and digestive juices	
3. White blood cells	
4. Antitoxins	REMEMBER: Infections can be prevented and controlled through personal hygiene and public safety. Refer to Table 5–2 for general terms and definitions that are important for an understanding of disease in general.
P. IMMUNITY	The ability of the body to fight off or resist infections and disease and to destroy bacteria that have entered the body
1. Natural immunity	An inborn ability to resist certain diseases. It is partly inherited and partly developed through hygienic living and such factors as frequent exercise and a wholesome diet.
2. Acquired immunity	Developed after the body has overcome a disease or through inoculation. The disease or inoculation causes the blood cells to produce antibodies which are proteins that fight disease germs. Acquired immunity may be only temporary or permanent.
III. PRINCIPLES OF PREVENTION	Proper decontamination can prevent the spread of disease caused by exposure to potentially infectious materials on a surface. It will also prevent exposure to blood and visible debris or residue such as dust, hair, and skin.
A. CONTAMINATION	Definition: the presence (or anticipated presence) of blood or other potentially infectious materials on

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	an item's surface or visible debris or residues such as dust, hair, and skin
1. Contaminate	Definition: to make impure by contact; to taint or pollute
2. Contaminant	Definition: any substance that causes contamination. **ACTIVITY:** Have students look around the classroom and identify all the surfaces, tools, door knobs, fixtures, etc. that constitute routine sources of contamination and discuss preventive measures the student can take to reduce it. Ask for a volunteer to act as scribe and record the list on the board or flip chart. (Remember to reward your volunteer.)
B. DECONTAMINATION	Definition: the removal of blood or other potentially infectious materials on an item's surface and the removal of visible debris or residue such as dust, hair, and skin. There are two methods of decontamination.
C. DISINFECTION	Controls microorganisms on nonporous surfaces such as instruments or implements. It is a higher level of decontamination than cleaning. It is second only to sterilization. It does not kill bacterial spores and is NOT for use on human skin, hair, or nails.
1. Decontamination Method 1	Cleaning and then disinfecting with an appropriate EPA-registered disinfectant
2. Decontamination Method 2	Cleaning and then sterilizing
D. Decontamination METHOD 1	Has two steps: cleaning and then disinfecting. A surface must be properly cleaned before it can be properly disinfected. There are three ways to clean your tools or implements.
1. Cleaning methods a. Washing with soap and water b. Using an ultrasonic unit c. Using a cleaning solvent	
2. Disinfection methods	Use only disinfectants that carry an EPA-registration number. Avoid skin contact and always follow mixing and application instructions.
E. Decontamination METHOD 2	Cleaning and then sterilizing. Sterilization is the process that completely destroys all microbial life, including spores.
1. High-pressure steam autoclaves	Implements must be cleaned first. CDC requires that autoclaves be tested weekly to ensure proper sterilization.
2. Dry heat	Not recommended for use in the salon

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SUBJECT OUTLINE	IN-DEPTH NOTES *(Information to share during presentation)*
F. BENEFITS OF STERILIZING	
1. Most reliable means of infection control	
2. Client confidence increased	
G. CHOOSING A DISINFECTANT	All EPA-registered disinfectants, even those sprayed on large surfaces, will specify a contact time in their directions for use. Contact time is the amount of time the surface must stay moist with disinfectant in order for the disinfectant to be effective.
1. Correct efficacy	*Efficacy* means effectiveness to be used against bacteria, fungi, and viruses. Labels must list the germs the product is proven to kill.
2. Ideal disinfectant qualities	
a. Bioburden Effectiveness	*Bioburden* is the number of viable organisms in or on the object or surface or organic material on a surface or object prior to decontamination or sterilization.
b. Longer renewal time	At least one week or more rather than daily
c. Inexpensive	
d. Nontoxic and nonirritating	
e. Use effectiveness strips	
f. Readily available	From multiple manufacturers
g. EPA approved	
h. Environmentally friendly	
i. Have no odor	
j. Noncorrosive	
H. HOSPITAL LEVEL DISINFECTANT	When salon implements accidentally contact blood, body fluids, or unhealthy conditions, they should be properly cleaned and then completely immersed in an EPA-registered hospital disinfectant solution that shows effectiveness against HIV, hepatitis, and tuberculosis. Always wear gloves and follow the proper Universal Precautions protocol for cleaning up after an exposure incident.
I. PROPER USE OF DISINFECTANTS	Clean before immersing. See Figure 5–10 in the *Milady Standard Cosmetology* textbook.
1. Use on pre-cleaned, nonporous surfaces	
2. Dilute according to directions	
3. Contact time per directions	
4. Spray on contact time per directions	
5. Spray cannot be used if complete immersion is called for.	

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6. Use only as directed.	Any other use is a violation of federal law.
7. EPA-registered disinfectant in pedicure spa	Solution must be circulated for the time required by the label. Absorbent nail files must be disposed of if they accidentally break the client's skin or contact unhealthy skin or nails.
IV. TYPES OF DISINFECTANTS	NOTE: Have various disinfectants on display.
A. QUATS	Quaternary Ammonium Compounds are very effective for salon use. The most advanced formulations are *multiple quats*.
1. May contain anti-rust ingredients	
2. Most disinfect in 10 minutes.	
3. Long-term exposure may damage fine steel.	
B. PHENOLICS	Phenolic disinfectants are powerful tuberculocidal disinfectants.
1. Can be harmful to environment	Do not pour down a drain.
2. Can damage rubber and plastic	
3. Can cause metals to rust	
4. Avoid skin contact.	Have high pH and can cause skin irritation; concentrated phenols can seriously burn skin and eyes. They are known carcinogens. They should never be used on pedicure tubs or equipment.
C. ACCELERATED HYDROGEN PEROXIDE	AHP is based on stabilized hydrogen peroxide. AHP disinfectant only needs to be changed every 14 days and is nontoxic to the skin and environment. There is an AHP formula that is available for disinfecting pedicure tubs.
D. BLEACH	5.25% Sodium Hypochlorite (household bleach)—effective as a disinfectant in the salon. Effective as a laundering additive. Too much bleach can damage some metals and plastics. Always mix according to the instructions.
E. FUMIGANTS	
1. Formalin tablets	Years ago, formalin tablets, or paraformaldehyde, were used as fumigants (a gaseous substance capable of destroying pathogenic bacteria) in dry-cabinet sanitizers. This was before EPA-registered disinfectants came on the market and before it was known that paraformaldehyde slowly releases low concentrations of formaldehyde gas. The release of this gas can cause eye, nose, and lung irritation or allergic inhalation sensitivity in individuals who repeatedly breathe these gases. Fumigants are no longer used in the salon.
2. Glutaraldehyde	A dangerous chemical used to sterilize surgical instruments in hospitals. It is not safe for salon use.

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F. DISINFECTANT SAFETY	Disinfectants are pesticides and can cause serious skin and eye damage.
1. Keep MSDS on hand.	
2. Wear gloves and safety glasses.	
3. Avoid skin and eye contact.	
4. Add disinfectant to water.	Never add water to the disinfectant.
5. Use tongs or gloves and a draining basket.	When removing implements from disinfectants
6. Keep away from children.	
7. Carefully weigh and measure products.	
8. Follow mixing and use instructions.	
9. Follow replacement instructions.	
10. Never pour over skin.	If skin is exposed, wash with soap and water, rinse and dry thoroughly.
11. Never place in unmarked containers.	
G. DISINFECT OR DISPOSE	
1. Multiuse	Reusable and can be cleaned, disinfected, and used on more than one person. They include nippers, shears, combs, pushers, some files and buffers.
2. Single-use	These are disposable items that cannot be used more than once (either because they cannot be properly cleaned and disinfected or cleaning and disinfecting damages them). Examples are orangewood sticks, cotton balls, gauze, tissues, paper towels, and some nail files and buffers.
3. Porous	Items made or constructed of an absorbent material. Some can be cleaned and disinfected. Examples are towels, chamois, some nail files and buffers. NOTE: If a porous item contacts broken skin, blood, body fluid, or any unhealthy conditions, it must be discarded immediately. (When in doubt, toss it out!)
H. KEEP A LOGBOOK	It is advisable to keep a logbook of all usage, cleaning, disinfecting, testing, and maintenance for salon personnel and to show clients for peace of mind.
V. DISINFECTION PROCEDURES	
A. TOOLS AND EQUIPMENT	Tools and equipment must be cleaned and disinfected after each use and before they are used on another client. Be certain to dilute and mix

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	disinfectants according to the label on the product. Mix disinfectants according to the manufacturer's directions, always adding the disinfectant to the water. NOTE: Handout LP 5.0, H-1: Disinfecting Nonelectrical Tools and Implements and have students follow along as you review the procedure.
1. Towels, linens, capes	Launder according to the directions, thoroughly dry, and store in covered or closed containers. Use disposable items when possible.
2. Electrical tools and equipment	Hair clippers, electrotherapy tools, nail drills, and other types of electrical equipment have contact points that cannot be immersed in liquid. These items should be cleaned and disinfected using an EPA-registered disinfectant designed for use on these devices. Follow the disinfectant manufacturer's instructions for preparing the solution and follow the item's manufacturer directions for cleaning and disinfecting the device.
3. Work surfaces	Before beginning every client service, all work surfaces must be cleaned and disinfected. Clean and disinfect tables, styling stations, shampoo sinks, chairs, arm rests and any other surface whenever a customer's skin touches them. Clean and then disinfect doorknobs and handles daily to reduce transferring germs to your hands.
4. Foot spas and pedicure equipment	All equipment that contains water for pedicures (including whirlpool spas, pipe-less units, foot baths, basins, tubs, sinks, and bowls) must be cleaned and disinfected after every pedicure, and the information must be entered into a logbook. Inspectors may issue fines if there is no logbook. Some state regulatory agencies allow single-use tub liners in pedicure equipment. NOTE: Instructor should know what is allowed in your state. Handout LP 5.0, H-2: Procedure for Disinfecting Foot Spas or Basins and have students follow along as you review the procedure.
5. Detergents and soaps	Chelating soaps, also known as chelating detergents, work to break down stubborn films and are very important for removing the residue of pedicure products such as scrubs, salts, and masks. The chelating agents in these soaps work in all types of water, are low-sudsing, and are specially formulated to work in areas with hard tap water.

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SUBJECT OUTLINE	IN-DEPTH NOTES *(Information to share during presentation)*
6. Additives, powders, tables	These cannot be used to replace EPA-registered disinfectant solutions. Be wary of Chloramine-T as it is not recognized as effective in the United States.
7. Dispensary	The dispensary must be kept clean and orderly, with the contents of all containers clearly marked. Always store products according to the manufacturer's instructions and away from heat and out of direct sunlight. Keep the MSDSs for all products used in the salon in a convenient, central location for the employees.
8. Single-use supplies	Wooden sticks, cotton, gauze, wipes, porous nail files and buffers, and paper towels should be thrown away after one use. Anything exposed to blood, including skin care treatment debris, must be double-bagged and marked with a biohazard sticker, separated from other waste, and disposed of according to OSHA standards.
B. WASHING HANDS	Hand washing removes germs from the folds and grooves of the skin and from under the free edge of the nail plate by lifting and rinsing germs and contaminants from the surface. You should wash your hands thoroughly before and after each service. It is recommended that you minimize the use of antimicrobial and antibacterial soaps. Use a moisturizing hand lotion after washing. NOTE: Hand out LP 5.0, H-3: Procedure for Proper Hand Washing and have students follow along while you review.
C. WATERLESS HAND SANITIZERS	Antiseptics are agents formulated for use on skin. Can ultimately be drying on skin. They should only be used after properly cleaning hands.
D. UNIVERSAL PRECAUTIONS	Guidelines published by OSHA that require the employer and employee to assume that all human blood and body fluids are infectious for bloodborne pathogens. Because it may not be possible to identify clients with infectious diseases, strict infection control practices should be used with all clients. In most instances, clients who are infected with the hepatitis B virus or other bloodborne pathogens are asymptomatic, which means that they show no symptoms or signs of infection. Bloodborne pathogens are more difficult to kill than germs that live outside the body.

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SUBJECT OUTLINE	IN-DEPTH NOTES *(Information to share during presentation)*
E. AN EXPOSURE INCIDENT	Procedure protects both the client and the professional
1. Stop service and clean the injured area.	
2. Apply gloves.	For self-protection
3. Stop the bleeding.	Apply pressure.
4. Apply antiseptic and/or liquid or spray styptic.	Do not contaminate container.
5. Bandage the cut.	Use an adhesive bandage.
6. Clean and then disinfect the workstation as needed.	
7. Discard contaminated objects.	Dispose of all disposable contaminated objects such as wipes or cotton balls by double bagging. Use a biohazard sticker. Deposit sharp disposables in a box.
8. Clean and then disinfect all tools contaminated with blood or body fluids.	By complete immersion in an EPA-registered disinfectant that kills HIV-1 and Hepatitis B or in a tuberculocidal disinfectant
9. Remove gloves and wash your hands.	With soap, warm water, and a nail brush CAUTION: Hand washing is the single most effective measure for reducing the spread of infectious disease. Be aware that antibacterial soap may NOT kill more germs than regular soap and water and can be harmful in that they leave the skin vulnerable to skin problems such as eczema.
10. Refer to physician	If any signs of redness, swelling, pain, or irritation develop, suggest that the client see a doctor.
VI. THE PROFESSIONAL SALON IMAGE	
A. SALON GUIDELINES	
1. Keep floors clean.	Sweep hair after every client. Mop floors and vacuum carpets every day.
2. Control dust, hair, and debris.	
3. Keep trash contained.	
4. Clean fans, ventilation systems, and humidifiers at least weekly.	
5. Keep all work areas well lit.	
6. Keep restrooms clean.	Including door handles
7. Supply restrooms.	Provide toilet tissue, paper towels, and liquid soap, and clean, soft bristle nail brushes in the restroom.
8. No cooking or sleeping.	Do not allow the salon to be used for cooking or living quarters.
9. Store food separate from products.	Never place food in refrigerators used to store salon products.

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SUBJECT OUTLINE	IN-DEPTH NOTES *(Information to share during presentation)*
10. Prohibit eating, drinking, and smoking.	In areas where services are performed or where product mixing occurs (the back bar area)
11. Empty waste receptacles.	Regularly throughout the day. A metal waste receptacle with a self-closing lid works best.
12. Mark containers.	Make sure all containers are properly marked and properly stored.
13. Place tools properly.	Never place any tools or implements in your mouth or pockets.
14. Disinfect tools.	Properly clean and disinfect all tools after each use.
15. Properly store tools.	Store clean and disinfected tools in a clean container or protected manner. Clean drawers may be used for storage if only clean items are stored in it.
16. Don't touch face and mouth.	Avoid touching your face, mouth, or eye areas during services.
17. Clean and then disinfect work surfaces.	Clean and disinfect after every client. This includes manicure tables, esthetic chairs and tables, workstations, and shampoo bowls.
18. Use clean, disposable paper towels.	
19. Wash hands before/after each service.	
20. Use clean linens on clients.	Use disposable towels and linens Keep soiled linens separate from clean linens. Use neck strips or towels to avoid skin contact with shampoo capes and cutting or chemical protection gowns.
21. Use exhaust systems.	Replacing the air in the salon with fresh air at least four times every hour is recommended. This will ensure proper air quality in the salon.
B. PROFESSIONAL RESPONSIBILITY	You have many responsibilities as a salon professional, but none is more important than protecting your clients' health and safety. Never take shortcuts for cleaning and disinfecting. You cannot afford to skip steps or save money when it comes to safety.
1. Follow state/federal laws.	
2. Keep licenses current.	
3. Monitor state rule changes.	

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SUMMARY AND REVIEW

The regulatory agency and local health board require that businesses serving the public follow certain infection control precautions. As we have learned, contagious diseases, skin infections, and blood poisoning are caused either by infectious bacteria being transmitted from one individual to another or by the use of contaminated implements. The more you know and understand about bacteria, how they grow and reproduce and how they are destroyed, the more success you will attain in the salon in protecting both yourself and your clients from unnecessary infections or disease. It is essential to practice universal precautions which include using gloves, safety glasses, disinfectants, and salon/school cleanliness. Don't take shortcuts when it comes to cleaning and disinfection. Following proper procedures will earn your clients' trust and will work to improve the public's perception of cosmetology as a career.

LET'S REVIEW:

1. What is the primary purpose of regulatory agencies?
   Answer: Federal agencies regulate the practice of cosmetology by setting guidelines for the manufacturing, sale, and use of equipment and chemical ingredients, and for safety in the workplace. State agencies regulate licensing and enforcement; protect the health, safety, and welfare of the consumer; and guide your conduct when working in a salon.
2. What is an MSDS? Where can you get these?
   Answer: An MSDS or Material Safety Data Sheet is required by law for all products sold. MSDS sheets include safety information about products compiled by the manufacturer, including hazardous ingredients, safe use and handling procedures, proper disposal guidelines, precautions to reduce the risk of accidental harm or overexposure, and so on. Federal law requires nail salons to obtain MSDSs from the product manufacturer or distributor, or to download them from the manufacturer's or distributor's Web site.
3. List the four types of microorganisms that are pertinent to cosmetology.
   Answer: The four types of microorganisms important to the nail tech are: (1) bacteria, (2) viruses, (3) fungi, and (4) parasites.
4. What is a contagious disease?
   Answer: A contagious disease is a disease that is transmittable by contact.
5. Is HIV a risk in the salon? Why or why not?
   Answer: HIV can be a risk in the salon if you accidentally cut a client who is HIV-positive and you continue to use the implement without cleaning and then disinfecting it. You risk puncturing your own skin or cutting another client with a contaminated tool.
6. What is the difference between cleaning, disinfecting, and sterilizing?
   Answer: Cleaning is the mechanical (scrubbing) process of removing all visible dirt and debris by washing with soap and water or detergent and water. Disinfecting is the chemical process that uses specific productsto destroy harmful organisms (except bacterial spores) on environmental surfaces. Sterilizing is the process that completely destroys all microbial life, including spores.
7. What is complete immersion?
   Answer: Complete immersion means there is enough liquid to cover all surfaces of the item being disinfected, including the handles, for at least 10 minutes.
8. List at least six safety tips to follow when using disinfectants.
   Answer:
   - Always wear gloves and safety glasses.
   - Always add disinfectant to water. Never add water to disinfectant.
   - Always use tongs or gloves, and a draining basket when removing implements from disinfectants.
   - Always keep disinfectants out of the reach of children.
   - Never pour quats, phenolics, formalin, or any other disinfectant on your skin. If you get disinfectants on your skin, wash your hands with soap and warm water and dry thoroughly.

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- Always carefully weigh and measure all disinfectant products according to label instructions.
- Never place any disinfectant or other product in an unmarked container.
- Always follow manufacturer's instructions for mixing, using, and disposing of disinfectants.
- Always change disinfectants every day or more often if the solution becomes soiled or contaminated.

9. How do you know if an item can be disinfected?
   Answer: An item that can be disinfected is one that is called multi-use or reusable and can be cleaned, then disinfected, and used on more than one person. These items must have a hard, nonporous surface. Examples are nippers, shears, pushers, and some nail files, bits, and buffers.
10. Can porous items be disinfected?
    Answer: *Porous* means made or constructed of an absorbent material. Some porous items can be cleaned and disinfected, and used on more than one client. Examples of these are towels, chamois, and some nail files and buffers. If a porous item contacts broken skin, blood, body fluids, or unhealthy conditions, it must be discarded immediately.
11. What are Universal Precautions?
    Answer: Universal Precautions are guidelines published by OSHA that require the employer and the employee to assume that all human blood and body fluids carry infections for bloodborne pathogens. Precautions include hand washing, wearing gloves, and proper handling and disposal of sharp instruments and items that have been contaminated by blood or other body fluids. It is important that specific procedures are followed if blood or body fluid is present.
12. What is an exposure incident?
    Answer: An exposure incident (previously called blood spill) is contact with non intact skin, blood, body fluid, or other potentially infectious materials that results from the performance of an employee's duties.
13. Describe the procedure for handling an exposure incident in the salon.
    Answer:
    The steps for taking care of an exposure incident are:
    - Stop the service.
    - Wear gloves to protect yourself against contact with the blood.
    - Clean the injured area with an antiseptic.
    - Bandage the cut with an adhesive bandage.
    - Clean and then disinfect your workstation, using an EPA-registered disinfectant designed for blood spills.
    - Discard all disposable contaminated objects by double-bagging, place a biohazard sticker (red or orange) on the bag, and dispose of it in the regular trash can or in a container specifically designated for contaminated waste.
    - Before removing your gloves, make sure that all tools and implements that have come into contact with blood or other body fluids are thoroughly cleaned and completely immersed in an EPA-registered, tuberculocidal disinfectant solution for 10 minutes.
    - Remove your disposable gloves and seal them in the double bag along with the other potentially contaminated items. Thoroughly wash your hands with soap and warm water before returning to the service.
    - Recommend that the client see a physician if any signs of redness, swelling, pain, or irritation develop.
14. List the steps for cleaning and disinfecting whirlpool foot spas and air-jet basins after each client.
    Answer:
    - Drain all water from the basin.
    - Scrub all visible residue from the inside walls of the basin with a cleaned and disinfected brush and liquid soap and water.
    - Rinse the basin with clean water.
    - Refill the basin with clean water and circulate the correct amount of the EPA-registered hospital disinfectant through the basin for ten minutes.
    - Drain, rinse, and wipe dry with a clean paper towel.

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LEARNING REINFORCEMENT IDEAS AND ACTIVITIES

1. Have students complete Chapter 5 of *Milady Standard Cosmetology Theory Workbook, Practical Workbook,* and *Study Guide: The Essential Companion.*
2. Have students complete review and final testing with *Milady Standard Cosmetology Online Licensing Preparation.*
3. Following the ***Pictionary***® activity, have the class divide into two teams. Create seven to ten cards containing terminology (with corresponding page number and definition) from bacteriology such as *cocci, bacilli, spirilla, diplococci, streptococci, staphylococci, flagella, cilia, contagious, immune, virus, parasite, spherical spores,* etc. Have the artist from the first team select a card and depict the term on the card by drawing on the chalkboard or a flip chart. The artist cannot use signs, words, or gestures while drawing. Allow two minutes for the artist's team to guess the correct term. Allow the opposing team an option to answer and score if the artist's team is unable to offer the correct answer within the two-minute timeframe. After the term has been identified, offer extra points to the winning team if they can provide the correct definition. If they cannot, allow the opposing team the opportunity to provide the correct definition. (Set up point scale prior to the activity.) Remind students that a picture paints a thousand words. If they can remember or associate the picture with what the term means, it will be much easier to remember the name and definition.
4. If a microscope is available, have students view various items such as bread mold, souring milk, and damp towels through the microscope and discuss the forms of bacteria and changes that result from growth.
5. Invite a medical professional or science teacher as a guest speaker on the subject of bacteriology.
6. Offer extra credit for written essays on the history and study of bacteria.
7. Have students research the various disinfectants available in the school. They should make a chart of them and indicate if they are quat, phenol, or bleach. They should also describe how each is used and how they should be mixed. Have them list any safety precautions to be followed when using the product.
8. The *Bump* activity. Divide the class into groups of five students. Provide a sheet of flip chart paper or large piece of butcher paper to each group. Instruct each group that they have three minutes to write as many household antiseptics and disinfectants as possible. They can work individually within their group, but items will be compared as a group. The objective is for the group to list as many products as possible that are not listed by another group. After three minutes, ask each group (one at a time) to read aloud all the products they have listed on their sheet. If another group has the same product listed, they will yell out, "Bump!" The group listing the product and all groups having that particular product must draw a line through it. When all groups have read their list, ask each group to count all products that do not have a line through or have not been "bumped." The highest point scoring group wins! Small prizes such as combs or candy can be awarded to the winning team.
9. Have students make a list of procedures practiced at home to prevent the spread of disease such as washing hands thoroughly before cooking. Have them also make a list of procedures observed at home that could cause the spread of bacteria or disease, such as not washing one's hands after using the restroom. Have them report the good and bad practices to the class and state how they compare with infection control in the school or salon.
10. Have students build a display or create an educational bulletin board using samples, pictures, or labels of disinfectants and antiseptics and a statement of how they are used.
11. Have students obtain MSDSs for each of the household disinfectants used in their homes and report any hazards or special safety precautions to be used with the product to the class. This could be done in a written essay type of report as well.
12. On the lines below, write any activities, assignments, or ideas that have been used effectively with this lesson in order to aid other instructors who may use this lesson plan in the future:

_____

_____

_____

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DISINFECTING NONELECTRICAL TOOLS AND IMPLEMENTS: P5-1

Nonelectrical tools and equipment include combs, brushes, clips, hairpins, metal pushers, makeup brushes, tweezers, and nail clippers.

1. **Wear gloves.** It is important to wear gloves and safety glasses while disinfecting nonelectrical tools and implements to prevent possible contamination of the implements by your hands and to protect your hands from the powerful chemicals in the disinfectant solution.
2. **Rinse implements.** Rinse all implements with warm running water, and then thoroughly clean them with soap, a nail brush, and warm water. Brush grooved items, if necessary, and open hinged implements to scrub the revealed area.
3. **Rinse and dry implements.** Rinse away all traces of soap with warm running water. The presence of soap in most disinfectants can cause them to become inactive. Soap is most easily rinsed off in warm, not hot, water. Hotter water is not more effective. Dry implements thoroughly with a clean or disposable towel, or allow them to air dry on a clean towel. Your implements are now properly cleaned and ready to be disinfected.
4. **Immerse clean implements in disinfectant.** It is extremely important that your implements be completely clean before you place them in the disinfectant solution. If implements are not clean, your disinfectant may become contaminated and ineffective. Immerse cleaned implements in an appropriate disinfection container holding an EPA-registered disinfectant for the required time (at least ten minutes or according to the manufacturer's instructions). Remember to open hinged implements before immersing them in the disinfectant. If the disinfection solution is visibly dirty, or if the solution has been contaminated, it must be replaced.
5. **Remove implements.** After the required disinfection time has passed, remove tools and implements from the disinfection solution with tongs or gloves, rinse the tools and implements well, and pat the tools and implements dry.
6. **Store disinfected implements** in a clean, covered container until needed.
7. **Wash hands.** Remove gloves and thoroughly wash your hands with liquid soap. Rinse and dry hands with a clean fabric or disposable towel.

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DISINFECTION OF WHIRLPOOL FOOT SPAS AND AIR-JET BASINS: P5–2

After every client:

1. **Apply gloves and drain**. Drain all water from the basin.
2. **Scrub visible residue**. Clean the inside walls of the basin with a brush and liquid soap and water. Use a clean, disinfected brush with a handle. Brushes must be cleaned and disinfected after each use.
3. **Rinse the basin with clean water and drain.**
4. **Clean and flush system.** Circulate enough clean water to cover the jets and circulate the correct amount (read the product label for mixing instructions) of the EPA-registered hospital disinfectant specified by the manufacturer through the basin for ten minutes or for the time recommended by the manufacturer.
5. **Drain, rinse with clean water, and wipe the basin dry with a clean paper towel.**

At the end of every day:

1. **Apply gloves and remove screen.** Remove any other removable parts. (You may need a screwdriver.)
2. **Clean screen.** Clean the screen and other removable parts and the areas behind them with a clean, disinfected brush and liquid soap and water to remove all visible residue. Replace properly cleaned screen and other removable parts.
3. **Clean and flush system.** Fill the basin with clean warm water and chelating detergent (cleansers designed for use in hard water) and circulate the chelating detergent through the system for ten minutes or for the time recommended by the manufacturer. If excessive foaming occurs, discontinue circulation, and let the basin soak for the remainder of the time, as instructed.
4. **Drain the soapy solution and rinse the basin with clean water.**
5. **Disinfect basin.** Refill the basin with clean water and circulate the correct amount (as indicated in the mixing instructions on the label) of the EPA-registered hospital disinfectant through the basin for ten minutes or for the time recommended by the manufacturer.
6. **Drain, rinse, wipe dry**.
7. **Allow the basin to dry completely**.

At least once each week:

1. **Apply gloves and drain**. Drain all water from the basin.
2. **Remove the screen and any other removable parts.**
3. **Clean screen.** Clean the screen and other removable parts and the areas behind them with a clean, disinfected brush and liquid soap and water to remove all visible residue. Replace properly cleaned screen and other removable parts.
4. **Scrub visible residue.** Clean inside walls of the basin with a brush and liquid soap and water. Use a clean, disinfected brush with a handle. Brushes must be cleaned and disinfected after each use.
5. **Disinfect and flush system.** Circulate clean water and correct amount (as indicated in the mixing instructions on the label) of the EPA-registered hospital disinfectant through the basin for ten minutes or for the time recommended by the manufacturer.

LP 5.0, P5–2 *continues*

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6. **Soak overnight.** Do not drain the disinfectant solution. Instead, turn the unit off and leave the disinfecting solution in the unit overnight.
7. **Drain and rinse.** In the morning, put on gloves, then drain and rinse the basin with clean water.
8. **Flush system.** Refill the basin with clean water and flush the system.
9. **Rinse and dry basin.** Drain, rinse with clean water, and wipe the basin dry with a clean paper towel.

PIPE-LESS FOOT SPAS:

For units with footplates, impellers, impeller assemblies, and propellers.

After every client:

1. **Apply gloves and drain**. Drain all water from the basin.
2. **Remove parts.** Remove impeller, footplate, and any other removable components according to the manufacturer's instructions.
3. **Clean parts.** Thoroughly scrub impeller, footplate, and other components and the areas behind each with a liquid soap and a clean, disinfected brush to remove all visible residue. Reinsert impeller, footplate, and other components.
4. **Disinfect and flush system.** Add water to basin and circulate the correct amount (as indicated in the mixing instructions on the label) of the EPA-registered hospital disinfectant through the basin for ten minutes or for the time recommended by the manufacturer.
5. **Drain, rinse, dry.** Drain, rinse with clean water, and wipe the basin dry with a clean paper towel.

At the end of every day:

1. **Apply gloves and circulate detergent.** Put on gloves. Fill the basin with warm water and chelating detergent, and circulate the chelating detergent through the system for ten minutes or for the time recommended by the manufacturer. If excessive foaming occurs, discontinue circulation and let soak for the remainder of the time, as instructed.
2. **Drain and rinse.** Drain the soapy solution and rinse the basin with clean water.
3. **Disinfect and flush system.** Refill the basin with clean water and circulate the correct amount (as indicated in mixing instructions on the label) of the EPA-registered hospital disinfectant through the basin for ten minutes or for the time recommended by the manufacturer.
4. **Drain, rinse, dry.** Drain, rinse with clean water, and wipe the basin dry with a clean paper towel.

At least once each week:

1. **Apply gloves and drain**. Drain all water from the basin.
2. **Remove parts.** Remove impeller, footplate, and any other removable components according to the manufacturer's instructions.
3. **Clean parts.** Thoroughly scrub impeller, footplate, and other components and the areas behind each with a liquid soap and a clean, disinfected brush to remove all visible residue. Reinsert impeller, footplate and other components.

LP 5.0, P5–2 *continues*

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4. **Disinfect and flush system.** Refill the basin with water and circulate the correct amount (as indicated in mixing instructions on the label) of the EPA-registered hospital disinfectant through the basin for ten minutes or for the time recommended by the manufacturer.
5. **Soak overnight.** Do not drain the disinfectant solution. Instead, turn the unit off and leave the disinfecting solution in the unit overnight.
6. **Drain and rinse.** In the morning, put on gloves, then drain and rinse the basin with clean water.
7. **Rinse and flush system.** Refill the basin with clean water and flush the system.
8. **Drain, rinse, dry.** Drain, rinse with clean water, and wipe the basin dry with a clean paper towel.

NONWHIRLPOOL FOOT BASINS OR TUBS:

This includes basins, tubs, footbaths, sinks, and bowls—all nonelectrical equipment that holds water for a client's feet during a pedicure service.

After every client:

1. **Apply gloves and drain**. Drain all water from the basin.
2. **Scrub visible residue.** Clean all inside surfaces of the foot basin or tub to remove all visible residue with a clean, disinfected brush and liquid soap and water.
3. **Rinse and drain.** Rinse the basin or tub with clean water and drain.
4. **Disinfect and flush.** Refill the basin with clean water and the correct amount (as indicated in mixing instructions on the label) of the EPA-registered hospital disinfectant. Leave this disinfecting solution in the basin for ten minutes or for the time recommended by the manufacturer.
5. **Drain, rinse, dry.** Drain, rinse with clean water, and wipe the basin dry with a clean paper towel.

At the end of every day:

1. **Apply gloves and drain**. Drain all water from the basin.
2. **Scrub visible residue.** Clean all inside surfaces of the foot basin or tub to remove all visible residue with a clean, disinfected brush and liquid soap and water.
3. **Disinfect and flush.** Fill the basin or tub with water and the correct amount (as indicated in mixing instructions on the label) of the EPA-registered hospital disinfectant. Leave this disinfecting solution in the basin for ten minutes or for the time recommended by the manufacturer.
4. **Drain, rinse, dry.** Drain, rinse with clean water, and wipe the basin dry with a clean paper towel.

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PROPER HAND WASHING: P5–3

Hand washing is one of the most important procedures in your infection control efforts and is required in every state before beginning any service.

1. **Wash hands in soap and water.** Turn on the water, wet your hands, and then pump soap from a pump container onto the palm of your hand. Rub your hands together, all over and vigorously, until a lather forms. Continue for a minimum of twenty seconds.
2. **Brush nails horizontally and vertically.** Choose a clean, disinfected nail brush. Wet the nail brush, then pump soap on it and brush your nails horizontally back and forth under the free edges. Change the direction of the brush to vertical and move the brush up and down along the nail folds of the fingernails. The process for brushing both hands should take about sixty seconds to finish. Rinse hands in running water.
3. **Dry hands.** Use a clean cloth or paper towel, according to the salon policies, for drying your hands.
4. **Turn off water.** After drying your hands, turn off the water with the towel and dispose of the towel.

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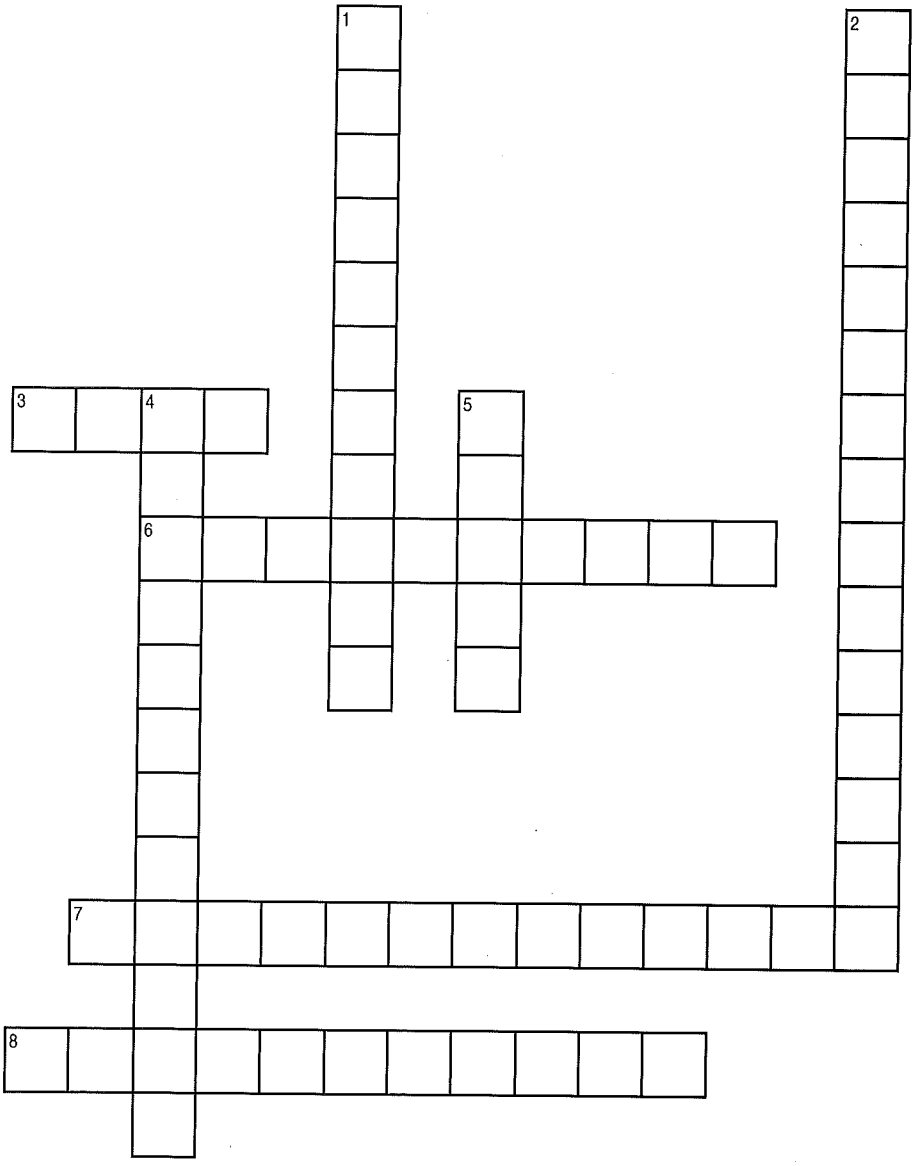
DECONTAMINATION AND INFECTION CONTROL



ACROSS

3 Material Safety Data Sheets

6 To significantly reduce the number of pathogens on a surface

7 Destroying all living organisms on a surface

8 Any substance that causes contamination

DOWN

1 Can kill bacteria or slow their growth but not destroy them

2 Removing pathogens and other substances from surfaces

4 Substances that kill microbes on contaminated surfaces

5 Very safe and fast acting disinfectants

Crossword Puzzle: LP 5.0, TT #1

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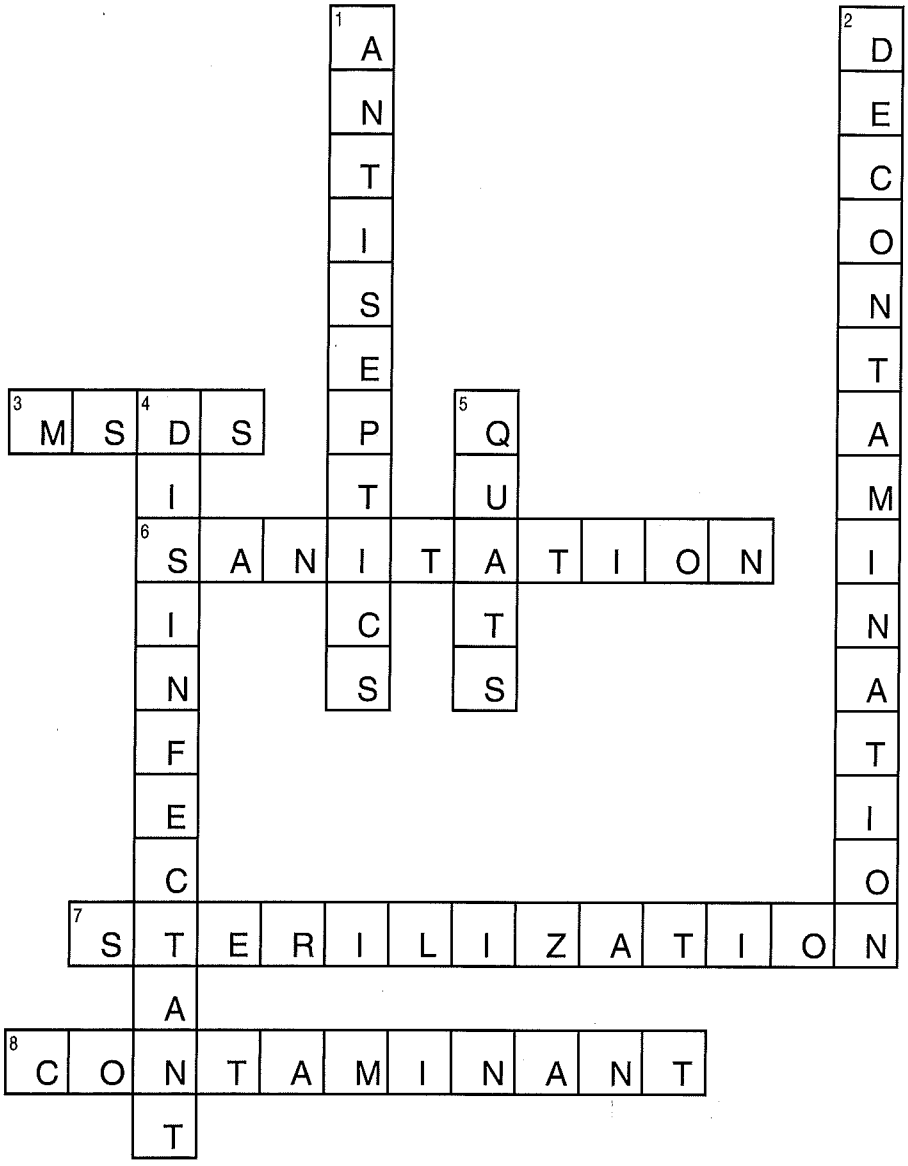
DECONTAMINATION AND INFECTION CONTROL



ACROSS

3 Material Safety Data Sheets

6 To significantly reduce the number of pathogens on a surface

7 Destroying all living organisms on a surface

8 Any substance that causes contamination

DOWN

1 Can kill bacteria or slow their growth but not destroy them

2 Removing pathogens and other substances from surfaces

4 Substances that kill microbes on contaminated surfaces

5 Very safe and fast acting disinfectants

Crossword Puzzle Key: LP 5.0, H–1

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TEST—CHAPTER 5—INFECTION CONTROL: PRINCIPLES AND PRACTICES

1. The Environmental Protection Agency (EPA) registers many different types of:
   a) antiseptics
   b) antibiotics
   c) diseases
   d) disinfectants

2. There are thousands of different kinds of bacteria, but they are classified into the following two primary types:
   a) saprophytes and parasites
   b) decomposing and fertilizing
   c) pathogenic and nonpathogenic
   d) active and inactive

3. Nonpathogenic bacteria may perform useful functions and:
   a) not cause disease
   b) break down food
   c) protect against infection
   d) all of the above

4. Organisms that grow, feed, and shelter on or in another organism are known as:
   a) saprophytes
   b) parasites
   c) cocci
   d) spore forming

5. Bacteria are one-celled microorganisms also known as microbes or:
   a) antiseptics
   b) infections
   c) germs
   d) fungicides

6. The division of a bacterial cell into two new cells is called:
   a) spore growth
   b) decomposing
   c) binary fission
   d) fertilizing

7. The bacteria responsible for food poisoning and toxic shock syndrome are:
   a) staphylococci
   b) streptococci
   c) bacilli
   d) spirilla

8. Submicroscopic particles that infect cells of a biological organism are known as:
   a) infections
   b) viruses
   c) fungus
   d) parasites

9. Pus-forming bacteria that grow in bunches or clusters are:
   a) staphylococci
   b) bacilli
   c) streptococci
   d) diplococci

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10. Nonpathogenic bacteria are:
    a) harmful
    b) harmless
    c) germs
    d) disease-producing

11. An infectious agent smaller than bacteria and capable of replication through taking over the host cell's reproduction machinery is known as:
    a) an infection
    b) a parasite
    c) a virus
    d) a disease

12. Pathogenic bacteria may produce:
    a) health
    b) antitoxins
    c) disease
    d) beneficial effects

13. An example of a local infection is:
    a) blood poisoning
    b) food poisoning
    c) Hepatitis B
    d) an abscess

14. The ability to destroy or resist infections is known as:
    a) community resistance
    b) contagious infection
    c) general infection
    d) immunity

15. The condition which is developed after the body has overcome a disease or has been inoculated for the disease is known as:
    a) natural immunity
    b) acquired immunity
    c) human disease resistor
    d) acquired immune deficiency

16. A contagious skin disease caused by the itch mite is:
    a) scabies
    b) blood poisoning
    c) lesions
    d) HIV/AIDS

17. The Acquired Immune Deficiency Syndrome is caused by:
    a) a filterable virus
    b) the HIV virus
    c) the HBV virus
    d) a filterable bacteria

18. The HIV virus is spread mainly through:
    a) holding hands with an infected person
    b) sharing food with an infected person
    c) sharing bathroom facilities
    d) sharing needles by intravenous drug uses

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19. The process that eliminates most, but not necessarily all, microorganisms on nonliving surfaces is called:
    a) fumigation
    b) disinfection
    c) extermination
    d) sterilization

20. Completely destroying all microbial life including bacterial spores is called:
    a) cleaning
    b) laundering
    c) sterilizing
    d) sanitizing

21. Pus-forming bacteria that grow in curved lines resembling a string of beads are known as:
    a) streptococci
    b) staphylococci
    c) diplococci
    d) bacilli

22. The number of viable organisms in or on the object or surface or organic material on a surface or object prior to decontamination or sterilization is known as _____.
    a) bioburden
    b) biochemicals
    c) biogenesis
    d) bioplasm

23. _____ is a level of decontamination which is second only to sterilization.
    a) Cleaning
    b) Sanitation
    c) Disinfection
    d) Extermination

24. Products used to kill microbes on contaminated tools and other nonliving surfaces are:
    a) disinfectants
    b) antiseptics
    c) styptics
    d) virucides

25. The effectiveness with which a disinfecting solution kills germs when used according to the label is known as:
    a) disinfection
    b) efficacy
    c) sterilization
    d) decontamination

26. OSHA stands for:
    a) Occupational Standards of Health Association
    b) Occupations of Safety and Health Agency
    c) Occupational Safety and Health Administration
    d) Oversight of Safety and Health Administration

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27. The OSHA Act of 1970 established the Hazard Communication Rule which requires that chemical manufacturers_____ and importers assess the hazards associated with their products.
    a) publish MDDS
    b) publish product lists
    c) publish DDMS
    d) publish MSDS

28. To use a disinfectant properly, read and follow the manufacturer's directions and _____ implements for proper disinfection.
    a) partially dry
    b) completely submerge
    c) partially immerse
    d) rinse thoroughly

29. All disinfectants are _____ in the presence of oils, lotions, creams, and dust.
    a) inactivated
    b) activated
    c) increased
    d) strengthened

30. Quats is a short term for the salon disinfectant known as:
    a) quaternary antiseptic compounds
    b) quaternary antiseptic solutions
    c) quaternary ammonium compounds
    d) quaternary ammonium treatments

31. Phenols may _____ certain rubber and plastic materials.
    a) strengthen
    b) damage
    c) activate
    d) inactivate

32. Sodium hypochlorite is also known as:
    a) bathroom cleanser
    b) Lysol disinfectant
    c) household bleach
    c) phenolic disinfectant

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TEST—CHAPTER 5—INFECTION CONTROL: PRINCIPLES AND PRACTICES ANSWER KEY

1. d
2. c
3. d
4. b
5. c
6. c
7. a
8. b
9. a
10. b
11. c
12. c
13. d
14. d
15. b
16. a
17. b
18. d
19. b
20. c
21. a
22. a
23. c
24. a
25. b
26. c
27. d
28. b
29. a
30. c
31. b
32. c

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