

**INFECTION PREVENTION STANDARDS
FOR THE
PRACTICE OF ELECTROLYSIS**
(Rev. MAY 2016)

PREFACE

The American Electrology Association has adopted these Infection Prevention Standards for the Practice of Electrolysis (Standards) as part of our commitment to the protection of both our practitioners and the public. Some Standards are based on well-documented scientific studies and others are based on practical observation. It is our goal to revise these Standards as often as necessary to keep them compliant with the recommendations of the Centers for Disease Control and Prevention (CDC). Standard Precautions, as recommended by the CDC, combine the major features of Universal (Blood and Body Fluid) Precautions and Body Substance Isolation. These precautions are designed to reduce the risk of transmission of blood-borne pathogens and pathogens from moist body substances.

Electrologists and Electrology instructors should consider all clients as potentially infectious and adhere to these Standards to minimize the risk of exposure to blood or body fluids and reduce the risk of transmission of infection and disease from client to client, practitioner to client and client to practitioner. Regulatory organizations and professional associations regulating and promoting the practice of electrolysis are encouraged to adopt these Standards and present continuing education events to provide knowledge for the prevention of infection.

**OBJECTIVES FOR PREVENTION MEASURES AND
STANDARDS OF PRACTICE**

1. Provide a knowledge base of infection prevention and client safety.
2. Provide a practical aseptic approach.
3. Establish criteria for disinfecting and sterilizing to minimize the transmission of microorganisms.
4. Establish criteria for cleaning and sterilizing reusable instruments and disposing of used needles and other sharps.
5. Establish guidelines for providing a high quality of client care.
6. Provide standards for professional judgment and decision-making.

DEFINITION OF TERMS

For the purpose of these Standards, the following definitions are used:

alcohol-based rub

The alcohol-containing preparation designed for application to the hands for reducing the number of viable microorganisms on the hands. In the United States, such preparations usually contain 60% - 95% ethanol or isopropanol. Formulations include foams, gels and liquid rinses. These products do not remove soil, but can be used for hand-antiseptics.

antiseptic

A germicide used on skin or living tissue to inhibit or destroy microorganisms. Antiseptic products are not appropriate in any instance for use in cleaning or disinfecting inanimate objects. The Food and Drug Administration (FDA) regulates antiseptics.

aseptic technique

A set of specific practices used before, during and after a procedure to protect against the spread of pathogenic microorganisms. Examples of aseptic technique are appropriately timed handwashing, decontamination of inanimate surfaces and instruments, appropriate use of personal protective clothing or barriers, proper containment and disposal of waste and consistent instrument handling which minimize cross contamination and reduce the risk of exposure to pathogens.

autoclave (steam sterilizer)

A device used for sterilization by application of pressurized steam and heat. The FDA regulates autoclaves.

biological indicator

A commercially prepared device with a known population of highly resistant bacterial spores used to test the method of sterilization being monitored. The biological indicator (BI) is used to demonstrate that conditions necessary to achieve sterilization were met during the cycle being monitored. The FDA regulates biological indicators.

chemical disinfectant

see disinfectant

chemical indicator

A commercially prepared device used to monitor all or part of the physical conditions of a heat sterilization process by means of a characteristic color change, usually chemically treated paper strips. A chemical indicator does not indicate that sterilization has been achieved and most indicate only that the temperature needed has been attained. Some chemical indicators are capable of “integrating” time at a particular temperature before color change. The FDA regulates chemical indicators.

cleaning

The removal of visible soil (e.g., organic and inorganic material) from objects and surfaces and is accomplished manually or mechanically using water with detergents or enzymatic products. Thorough cleaning is an absolute must prior to disinfection and sterilization procedures.

contamination

The result of being soiled, stained, touched, or otherwise exposed to harmful agents, making an object potentially unsafe for use as intended or without barrier techniques. An example is the entry of infectious or toxic materials into a previously clean or sterile environment.

contraindicate

To advise against or indicate the possible danger of a drug or treatment.

critical items

The instruments or objects that come in direct contact with the bloodstream or other normally sterile areas of the body. Critical items must be pre-sterilized, single use and disposable or subjected to sterilization before use.

decontamination

Use of physical or chemical means to remove, inactivate, or destroy pathogens on a surface or item so that they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use or disposal.

disinfectant

A chemical agent used on hard inanimate surfaces and objects to destroy or irreversibly inactivate infectious fungi and bacteria but not necessarily their spores. Chemical disinfectants are classified as “high-level,” “intermediate-level” and “low-level” according to their comparative levels of potency and intended uses, but are not a final step in the processing of instruments.

see hospital disinfectant

disinfection

A process that eliminates many or all pathogenic microorganisms, except bacterial spores, on inanimate objects.

high-level disinfection

The disinfection process that inactivates some, but not necessarily all, bacterial spores. High-level disinfection is the minimum treatment recommended by the CDC in guidelines for the processing of semi-critical instruments. There are commercially available germicides that have been cleared by the FDA as sterilants/disinfectants or simply as “high-level disinfectants.” Examples of high-level disinfectants include glutaraldehyde, hydrogen peroxide/peracetic acid-based formula and orthophth-aldehyde.

intermediate-level disinfection

A disinfection process capable of killing *Mycobacterium tuberculosis* var.bovis (TB), broad spectrum of bacteria, viruses, fungi, including Herpes, Staphylococcus, Salmonella, HIV, HBV and inactive AIDs viruses. The EPA regulates intermediate-level disinfectants. Examples of intermediate-level disinfectants include alcohols (70-90%), quaternary ammonium compounds and phenolics.

low-level disinfection

A process capable of inactivating most bacteria, some viruses and fungi but not bacterial spores or *Mycobacterium tuberculosis* var.bovis (TB). Like intermediate-level products, low-level disinfectants are regulated by the EPA and are appropriate for disinfecting environmental or medical equipment (non-instrument) surfaces. Examples of low-level disinfectants are quaternary ammonium compounds and certain iodophors or phenolics.

dry heat sterilizer

An oven-type device specifically designed to sterilize items by exposure to high temperatures for a designated period of time. The FDA regulates dry heat sterilizers.

electro-epilation

see electrolysis

electrologist

A person who removes hair by means of an electric current applied with a solid wire filament or electrode.

Electrology

The study of electrolysis.

electrolysis

Destruction of living tissue in the hair follicle by means of electric current applied with a solid wire filament or electrode. The procedure of electrolysis is also known as electro-epilation.

environmental surfaces

Surfaces that may contribute to cross-contamination. These surfaces should be properly maintained to minimize their potential role in disease transmission. A low-level disinfectant is used to clean environmental surfaces.

enzyme detergent

The solution that helps break down organic soils and fats and suspends particles during cleaning. An enzyme detergent is used as a soaking solution for critical, semi-critical and non-critical instruments and as the detergent used in the ultrasonic device. Temperature and dilution affect the efficacy of enzyme detergents.

epilator cords

Insulated cords used to complete a circuit between the epilator and needle, phoresis applicator/rollers and the indifferent electrode. Epilator cords are non-critical items. Intermediate level disinfectants can be used to clean the cords.

forceps

A medical tool that is used for grasping or holding things.

gloves

Coverings for the hands made of various materials, which provide a protective barrier against infections and toxic substances. There are three types of gloves that can be used by electrologists:

examination gloves are non-sterile, medical grade, disposable patient examination gloves made of natural rubber latex or synthetic material and are worn during electrolysis treatments and during cleaning procedures to provide a barrier to prevent exposure to potentially infectious materials and other contaminants. The FDA regulates medical grade gloves.

food-handler gloves may be worn as a protective disposable barrier over exam gloves during treatment interruption to prevent contamination from touching objects such as knobs, phones, electronic devices, pens, charts, etc. These gloves are discarded after each use.

cleaning and other non-medical gloves are general purpose, heavy-duty, reusable, puncture resistant utility gloves (e.g., rubber household) that may be used for housekeeping chores such as instrument cleaning and decontamination procedures that involve potential contact with contaminants. These gloves are washed and dried between each use and should be labeled for use by one individual. They should be discarded when showing evidence of deterioration. Utility gloves are not promoted for medical use; therefore, are not regulated by the FDA.

hand hygiene

The general term that applies to the decontamination process for the removal of soil and transient microorganisms from the hands.

hospital disinfectant

A chemical germicide with label claims for effectiveness against *Salmonella choleraesuis*, *Staphylococcus aureus* and *Pseudomonas aeruginosa*. Hospital disinfectants may be classified as either intermediate-level or low-level in their spectrum of activity as indicated by label claims. These classes of germicides are regulated by the EPA and are appropriate for environmental or medical surfaces but not as a final step in processing electrolysis instruments.

see disinfectant

indifferent electrode

The stainless steel bar held by the client during electrolysis treatments to complete electric current circuit with galvanic/electrolysis modality or with the use of a timer delay switch in automatic delivery epilators. Indifferent electrodes are non-critical items.

instruments

Tools designed to perform a specific function such as grasping, holding or extracting.

intact skin

Healthy skin in which the natural protective barrier has no breaks, scrapes, cuts, abnormal openings, infection or signs of trauma that allow pathogens to enter.

lancet

A sharp pointed instrument used for making small openings in the skin. Lancets are single-use and pre-sterilized and must be properly disposed of in a compliant sharps container.

latex allergy

A systemic or local allergic response to various latex proteins.

mechanical/visible indicators

Monitoring devices built into a sterilizer such as indicating thermometers, recording thermometers, pressure gauges and automatic controls, which are used to assist in identifying and preventing malfunctions and operational errors in a sterilizer cycle.

needle

The solid wire filament or electrode inserted into the hair follicle for application of electric current during electrolysis procedures. Needles used in electrolysis may come in contact with blood, serum or other material; therefore they should be purchased as pre-sterilized and disposable for one-time use only. Needles should be treated as critical items and properly disposed of in a compliant sharps container.

needle holder cap

The plastic cap holding the shaft of the needle in place on the needle cord. Needle holder caps are considered semi-critical items and may come in contact with blood, serum or other material; therefore the first steps of processing include soaking and cleaning. Heat sensitive caps are white and after initial cleaning are exposed to a high-level disinfectant before reuse. Heat stable caps are black and after initial cleaning should be packaged prior to sterilization.

non-critical items

Instruments or environmental surfaces that will come in contact only with intact skin. If properly cleaned and maintained, these surfaces carry relatively little risk of transmitting infection directly or indirectly to clients.

non-intact skin

Areas of the skin that have been opened by cuts, abrasions, dermatitis, acne or other causes which would allow bloodborne pathogens to enter the body.

packaging

Materials used to contain instruments for sterilization, such as woven or non-woven wraps, paper or film pouches or rigid container systems.

pathogen

A microorganism or substance capable of producing a disease.

phoresis applicators/rollers

Made of stainless steel, these items are used to apply current to skin before or after an electrolysis treatment. These items are considered semi-critical and should be sterilized or exposed to a high-level disinfectant.

plain soap

A detergent-based cleanser without antimicrobial additives used for the primary purpose of physical removal of dirt, soil and transient microorganisms. Soap is used in handwashing to suspend microorganisms for the purpose of rinsing them off.

processing

The activity of cleaning, disinfecting or sterilizing contaminated items to render them safe for their intended use.

protective disposable barrier

A disposable, moisture-resistant covering which reduces the potential for contaminating environmental or medical device surfaces that may be difficult or inconvenient to clean and disinfect routinely, e.g., tables and pillows or hard-to-clean surfaces such as light handles and epilator surfaces.

semi-critical items

Items that may come in contact with mucous membranes and non-intact skin but do not ordinarily penetrate body surfaces. Semi-critical items require sterilization or exposure to high-level disinfection.

sharps container

A specially manufactured and labeled, leak-proof, rigid, puncture resistant, durable plastic container into which needles and lancets are placed after use and designed to be disposed of as an item of regulated medical waste.

spore

A small usually single-celled reproductive body that is resistant to adverse environmental conditions including heat, drying and chemicals.

sterility assurance file

The record containing the sterilizer maintenance and use log and culture report from each biological indicator.

sterilization

The process of destroying all forms of microbial life. The recommended methods of sterilization of instruments and items used in the practice of electrolysis are the dry heat sterilizer or the autoclave. These methods are standardized and should be routinely monitored for effectiveness.

thermolysis

Destruction of living tissue in the hair follicle by means of alternating current applied with a solid wire filament or electrode.

treatment room

The private room where electrolysis treatments are performed.

tweezers

The instrument used during electrolysis treatments to remove the hair from the follicle. Tweezers used in electrolysis may come in contact with blood, serum or other material and should be sterilized before each use. They should be treated as critical items.

ultrasonic cleaner

The processing unit using ultrasonic waves transmitted through the cleaning solution in a mechanical process known as cavitation. The sound waves produce tiny air bubbles on instrument surfaces, which scrub tightly adhering or embedded particles from solid surfaces. Ultrasonic cleaning is particularly effective in removing soil deposits from hard-to-reach areas.

OVERVIEW OF STANDARDS

Electrolysis, for the purpose of permanent hair removal, is the insertion of a sterile needle into a hair follicle to deliver enough electric current to eliminate hair regrowth. Although not routine, there are occasions when electrolysis procedures cause contamination of the needle, needle holder caps, tweezers and other tools such as phoresis applicators/rollers with blood, serum or other material. These standards are for the prevention of infection and the protection of both client and practitioner. They encompass the American Electrology Association standard that all needles used should be single-use, pre-sterilized and disposable along with detailed instructions for hand hygiene, the use of gloves, decontamination and sterilization of reusable instruments, prevention measures for environmental control and housekeeping and client consideration. In addition, there are prevention measures for pre and post-treatment along with information on vaccinations and risk prevention for healthcare workers recommended by the Centers for Disease Control and Prevention (CDC). These standards are a compilation of recommendations for the specific procedure of electrolysis along with standards established for the allied health professions.

PREVENTION MEASURES AND STANDARDS OF PRACTICE

Section 1: Hand Hygiene

Section 2: Gloves

Section 3: Needles

Section 4: Decontaminating Electrolysis Instruments and Other Items

Section 5: Sterilization

Section 6: Environmental Control and Housekeeping

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Section 1

Hand Hygiene

Prevention Measures for Hand Hygiene

Hand Hygiene is considered one of the most important procedures for preventing the transmission of infection. Hand transfer can be a significant mode of transmission of bacteria and viruses from person to person, from person to surface or vice versa. Handwashing uses plain or non-antimicrobial soaps, which are detergent-based cleansers that have no bactericidal activity. Washing with plain soap will accomplish a physical removal of soil and microorganisms by mechanical action. The cleaning activity of plain (non-antimicrobial) soap can be attributed to its detergent properties, which result in the removal of dirt, soil, and various organic substances from the hands. Handwashing with plain soap can remove loosely adherent transient flora. Wash hands with warm water, not hot water, because repeated exposure to hot water may increase the risk of dermatitis. Residual moisture on hands after handwashing has been found to play an important role in the transfer of bacteria and viruses, so a longer duration of hand drying will result in fewer bacteria transferring to other surfaces. Handwashing products can become contaminated and support the growth of microorganisms. Adding soap to a partially empty soap dispenser can lead to bacterial contamination of soap; therefore, liquid products are to be stored in closed containers and dispensed from either disposable containers or containers that are washed and dried thoroughly before refilling. Hand antisepsis uses antimicrobial soaps or alcohol-based hand rubs, containing ingredients, which will kill or inhibit microorganisms on the skin.

According to the *CDC Guideline for Hand Hygiene in Health-Care Settings*, alcohol-based products are more effective for standard hand hygiene by health-care-workers (HCW) than soaps. The antimicrobial activity of alcohols can be attributed to their ability to denature proteins. Alcohol solutions containing 60% to 95% alcohol are most effective and higher concentrations are less potent. The ideal volume of product to apply to the hands is not known and may vary for different formulations. However, if hands feel dry after rubbing hands together for 10-15 seconds an insufficient volume of product likely was applied. Alcohols are not appropriate for use when hands are visibly dirty or contaminated with body fluids or visible blood products. After 5 to 10 uses of alcohol-based products, handwashing with soap and water is needed to remove a build-up of emollients. Since alcohols are flammable, it is important to rub hands together after application of alcohol-based products until all the alcohol has evaporated. Use containers that will minimize evaporation.

When selecting products for hand hygiene, solicit information from manufacturers regarding any known interactions between products used to clean hands and the types of gloves used. In addition, follow the manufacturer's recommendations regarding the volume of product to use for both hand soaps and alcohol-based hand rubs.

Standards of Practice for Hand Hygiene

I. Hand Hygiene

- A. Hands are cleansed by washing with liquid soap and warm water or by hand antisepsis with alcohol-based hand rubs (if hands are not visibly soiled):
 - 1) Before and after treatment of each client;
 - 2) Before donning gloves and immediately after gloves are removed.
- B. Hands are washed thoroughly with liquid soap and warm water:
 - 1) When visibly soiled;
 - 2) Immediately if bare-handed contact with blood, body fluids, secretions, excretions, non-intact skin, mucous membranes or contaminated equipment occurs.
- C. Handwashing technique with liquid soap and warm water includes:
 - 1) Wetting hands with warm running water and applying liquid soap in the amount recommended by the manufacturer;
 - 2) Vigorously rubbing hands together for 15 to 30 seconds, covering all surfaces of hands, especially between fingers and fingernail areas;

- 3) Rinsing hands thoroughly under a stream of warm water;
 - 4) Drying hands thoroughly with a clean disposable paper towel;
 - 5) Turning faucets off with the paper towel;
 - 6) Disposing of the paper towel in the appropriate covered receptacle.
- D. Hand antisepsis achieved by using alcohol-based antiseptic hand rubs includes:
- 1) Applying the recommended amount of alcohol gel or rinse to the palm of one hand;
 - 2) Vigorously rubbing hands together, covering all surfaces of hands, especially between fingers and fingernail areas;
 - 3) Continue rubbing hands together for 15 to 25 seconds until the alcohol dries.

Section 2

Gloves

Prevention Measures for Use of Gloves

Electrolysis is the destruction of living tissue in the hair follicle by means of electric current applied with a solid wire filament or electrode. The risk of exposure requires that the electrologist wear a fresh pair of medical grade disposable examination gloves during each client encounter. The CDC has recommended that Health Care Workers wear gloves to reduce the risk of personnel acquiring infections from clients, prevent Health Care Worker flora from being transmitted to clients and reduce transient contamination of the hands of personnel by flora that can be transmitted from one client to another. The Occupational Safety and Health Administration (OSHA) mandate that gloves be worn during all client-care activities that may involve exposure to blood or body fluids.

Gloves are worn in addition to and not as a substitute for hand hygiene practices. When gloves are worn, hand hygiene practices are also recommended because gloves do not provide complete protection against hand contamination. The consistent wearing of gloves will decrease the risk of potential exposure. OSHA prohibits washing or decontaminating disposable (single use) exam gloves for reuse. In addition, the use of petroleum-based hand lotions or creams may adversely affect the integrity of latex gloves. The consistent wearing of gloves will decrease the risk of potential exposure. Wearing gloves will also protect the client from potential exposure to the microbial flora of the electrologist, including blood-borne organisms should there be cuts, scrapes, or micro-lesions on the hands of the electrologist. Torn or perforated gloves should be removed immediately and hands washed after gloves are removed because pathogens can gain access to the hands of the electrologist via small

defects in gloves or by contamination of the hands during glove removal. Determine electrologist and client allergies before wearing latex gloves. Several factors have been linked with latex sensitization, including the presence of allergic conditions (e.g., asthma, eczema, hay fever), allergy to cosmetic powders or foods and frequency or duration of glove use/exposure. The FDA has approved several powdered and powder-free latex gloves with reduced protein contents, as well as synthetic gloves that can be made available for those electrologists and clients who are latex-sensitive.

Standards of Practice for Use of Gloves

I. Use of gloves

- A. Gloves are worn during hand-contaminating activities:
 - 1) A fresh pair of non-sterile, medical grade, latex, nitrile or vinyl disposable examination gloves are worn during the treatment of each client or when contact with blood or other potentially infectious materials, mucous membranes, and non-intact skin could occur.
 - 2) Exam or utility gloves are worn during the procedures of soaking, cleaning, rinsing, drying and packaging of tweezers and other contaminated instruments.
- B. Decontaminate hands in accordance with the above Hand Hygiene Standards before putting on gloves and immediately after gloves are removed.
- C. When a treatment session is interrupted:
 - 1) Use a protective disposable barrier; or
 - 2) Remove and discard gloves; and
 - a) Decontaminate hands before touching items or surfaces i.e.; knobs, phones, electronic devices, pens, charts, etc.; and
 - b) Decontaminate hands before re-gloving with a fresh pair of gloves before resuming treatment.
- D. Torn or perforated gloves are removed immediately; hands are decontaminated then regloved with fresh gloves.
- E. After each treatment gloves are removed and disposed of in the appropriate receptacle located in the treatment room and hands are immediately decontaminated.

Section 3

Needles

Prevention Measures for Use and Disposal of Needles

Needles and other sharps must be disposed of in a CDC compliant sharps container. Do not overfill the sharps container. When the sharps container is $\frac{3}{4}$ full, seal it securely and follow state and local health regulations for disposal.

Standards of Practice for Needles

I. Needles

A. Needles are:

- 1) Single-use, pre-sterilized and disposable.
- 2) Stored in a manner that will maintain sterile condition of contents, away from wetness or humidity extremes.
- 3) Not recapped, bent or otherwise manipulated by hand prior to disposal to avoid accidental puncture injury.
- 4) Placed in a puncture-resistant sharps container:
 - a) Immediately after use.
 - b) When opened and found damaged.
 - c) When contaminated before use.
 - d) When not used before pre-printed expiration date.

Section 4

Decontaminating Electrolysis Instruments and Other Items

Prevention Measures for Cleaning

Cleaning is the basic first step for all decontamination because it physically removes debris and reduces the number of microorganisms present. Cleaning is the removal of organic material or soil from objects and is normally done by using detergent and water. Generally, cleaning is designed to remove rather than kill microorganisms. Immediate decontamination of instruments after use is an important step in providing protection and prevention of the transmission of pathogens.

Technology has provided cleaning products and devices that are especially appropriate for the cleaning of instruments used in electrolysis. Ultrasonic cleaning units, used with enzyme detergents, are examples of appropriate devices used to clean electrolysis instruments and items. A meticulous physical cleaning is always done before disinfection or sterilization.

Prevention Measures for Disinfecting

Chemical disinfectants are regulated either by the Food and Drug Administration (FDA) for medical instrument uses or the Environmental Protection Agency (EPA) for environmental surface uses. Intended uses and directions for use are found both on the labels of the products and/or in package inserts. Material Safety and Data Sheets (MSDS) for each product are available from the manufacturer.

Disinfectant products are divided into two major types: hospital and general use. Hospital type disinfectants are the most critical to infection prevention

and are used on medical and dental instruments, floors, walls, bed linens, toilet seats, and other surfaces. General disinfectants are the major source of products used in households, swimming pools, and water purifiers.

Non-critical equipment and environmental surfaces are cleaned and then treated with either intermediate-level, or low-level disinfectants. Intermediate-level kills mycobacteria, most viruses, and bacteria with a chemical germicide registered as a “tuberculocide” by the EPA. Low-level disinfection kills some viruses and bacteria with a chemical germicide registered as a hospital disinfectant by the EPA.

Standards of Practice for Decontaminating Electrolysis Instruments and Other Items

Coordinate necessary sterilized instruments and supplies needed for each treatment in a manner whereby adherence to aseptic technique is maintained with minimal modes and sources of contamination. Wear gloves when handling soiled instruments. Caution should be taken to avoid puncture injuries from instruments.

I. Electrolysis Instruments

- A. Indifferent electrodes, cords for epilator and eye shields are:
 - 1) Cleaned, dried and subjected to intermediate-level disinfection before initial use and after each treatment;
 - 2) Replaced when showing signs of wear and tear.
- B. Tweezers, phoresis applicators/rollers and caps are processed:
 - 1) Before initial use and after use on the client.
 - 2) After a 24-hour period when packaging is opened even if instruments are unused;
 - 3) When contaminated before use, (e.g.; dropped or placed on surface not protected by a barrier).

II. Processing protocols for tweezers, phoresis applicators/rollers and needle holder caps.

- A. These instruments and items are:
 - 1) Accumulated in a covered holding container by submersion in a solution of a protein-dissolving enzyme detergent and water (following manufacturer’s instructions for dilution), rinsed and drained;
 - 2) Placed in the basket of a covered ultrasonic cleaning unit containing a fresh solution of a protein-dissolving enzyme detergent (following manufacturer’s instructions for dilution and ultrasonic running times). Basket is removed from ultrasonic unit, rinsed and drained.

- 3) Air-dried on a clean, disposable, absorbent, non-shedding cloth in an area protected from exposure to contaminants;
- 4) Packaged individually or in small multiples as required for one client encounter. Packaging for the sterilization process includes woven or non-woven wraps, paper or film pouches, or rigid container systems;
- 5) Placed in an autoclave or dry heat sterilizer with chemical/biological indicators, loading and running the sterilizer according to manufacturer's instructions. If dry heat sterilizers are used, heat-sensitive needle holder caps are subjected to a high-level disinfectant, rinsed and dried;
- 6) Stored, after processing, in a clean, dry, covered container, drawer or closed cabinet, which prevents the contents from coming into contact with dust, moisture, unnecessary touching and soil.

III. Other Items

- A. Ultrasonic cleaning units, forceps and all containers including their removable parts used during soaking and cleaning procedures are:
 - 1) Cleaned and dried daily.
 - 2) Used and maintained according to manufacturer's instructions.
- B. Environmental surfaces directly related to treatment are cleaned and subjected to intermediate-level or low-level disinfection daily and whenever visibly contaminated.

Section 5 Sterilization

Prevention Measures for Sterilization

Instruments that can penetrate soft tissue during electrolysis procedures are the needle and tweezers. To assure the highest level of client safety, needles should be pre-sterilized, disposable, and single-use only. Tweezers should be thoroughly cleaned and sterilized before initial use and after use on each client to reduce the risk of transmission of infection and disease. Needle holder caps are considered semi-critical items. For this reason, they should be processed in the same manner as tweezers. All caps tolerate autoclave sterilization; if dry heat sterilization is used, electrologists are encouraged to use heat-stable caps.

Do Not Use:

The glass bead sterilizer should **not** be used in the practice of electrolysis since it is no longer cleared to market by the FDA. The FDA Panel has stated that the glass bead sterilizer presents "a potential unreasonable risk of illness or injury to the patient because the device may fail to sterilize dental instruments adequately."

Some high-level disinfectants, including glutaraldehyde-based germicides, are **not** recommended as an applicable method of sterilization of instruments and items, based on their toxicity level, instability, and impracticality. Sterilization with liquid chemical germicides is not capable of being biologically monitored. If an electrolysis instrument/item is heat-stable, the proper method of processing is by using a heat-based method such as a steam autoclave or dry heat oven.

Carbon rollers for phoresis are porous and cannot be sterilized or disinfected; therefore, they should **not** be used.

Household bleach is **not** labeled for disinfecting instruments.

Standards of Practice for Sterilization

I. Sterilization

A. Methods of sterilization:

- 1) Dry heat. The following time-temperature relationships are recommended:
 - a) One hour at 340° F (170° C).
 - b) Two hours at 320° F (160° C).
- 2) Autoclave (steam under pressure). The following time-temperature-pressure relationship is recommended:
 - a) 15-20 minutes at 121° C (250° F) and 15 psi (pounds per square inch) for packaged instruments and items.
- 3) Follow the sterilizer manufacturer's instructions for the unit you have if times and temperatures differ from those given.

B. Use of sterilizers:

- 1) The temperature and exposure time for using dry heat sterilizers and autoclaves relates only to the time of exposure after attainment of the specific temperature and does not include a penetration or heat-up lag time. Exposure time does not include drying and cool-down time.
- 2) Sterilizers should have visible physical indicators (e.g., thermometers, timers). Visually check sterilizer gauges during the cycle.
- 3) Sterilizers should be loaded, operated and maintained according to manufacturer's instructions. The interior of these devices should be cleaned according to the manufacturer's instructions.
- 4) Use sterilizers that are regulated by the FDA.
- 5) Chemical (i.e., color change) indicators should be used on each package, and optionally, placed inside packages containing multiple instruments. Chemical indicators should be visible on the

outside of each package sterilized and indicates that instruments/items have been exposed to a sterilization process, but it does not guarantee sterility.

- 6) Biological indicators should be used no less than once a month (per sterilizer) according to manufacturer's instructions to ensure proper mechanical function of the sterilizer. Lab reports should be filed in a permanent Sterility Assurance file.

C. Packaging for sterilization:

- 1) When choosing package material, consider size, shape and number of instruments to be sterilized.
- 2) The package material should be able to withstand the physical conditions of the selected sterilization process.
- 3) There should be enough space between items in packaging for sterilization of all surfaces to occur.
- 4) Follow manufacturer's recommendations for spacing of packaged items in the sterilizer.
- 5) After sterilization, the package material should:
 - a) Provide a barrier to microorganisms;
 - b) Repel all liquids;
 - c) Protect sterilized item during normal handling;
 - d) Provide for aseptic removal of contents.

Section 6

Environmental Control and Housekeeping

Prevention Measures for Environmental Control and Housekeeping

Hospital-grade disinfectants registered with the EPA should be used for environmental surface cleaning. Product labels give the EPA registration number and should give adequate safety and precautionary information. Manufacturer's instructions on the use of the product should be followed. Information on specific manufacturer label claims and the classification of disinfectants can be obtained by writing the Anti-Microbial Division of the Environmental Protection Agency (EPA), <http://www.epa.gov/>. Environmental surfaces are "non-critical" and may be divided into at least two major subdivisions according to decreasing risk of disease transmission: (1) medical equipment surfaces such as frequently touched epilator surfaces, magnifying lamps, epilator carts, and (2) housekeeping surfaces such as floors, walls, door knobs, tabletops, and window sills. Adequate levels of safety for surfaces of electrolysis equipment (non-critical surfaces) may be achieved by simple washing or scrubbing with detergent and warm water or, depending on the equipment surface and the nature and degree of contamination, cleaning followed by an application of an intermediate to low-level chemical disinfectant. Follow manufactur-

er's instructions for application and exposure times of disinfectant products. Cleaning schedules and methods vary according to the type of surface to be cleaned and the amount and type of soil present. Countertops should be of smooth, non-porous material and should be cleaned daily, taking special care in the areas where the procedures of cleaning and sterilizing instruments and items takes place. Items on countertops should be maintained in a sanitary manner. Sinks and toilet facilities should be cleaned daily. Non-critical equipment, environmental surfaces, doorknobs, telephones, and treatment tables in the treatment room should be cleaned and disinfected on a regular basis. Floors and carpets should be vacuumed and cleaned regularly. Walls, blinds and curtains should be cleaned when visibly soiled.

Standards of Practice for Environmental Control and Housekeeping

A proper hygienic environment should be the goal of the electrologist and electrology instructor. A variety of microorganisms are normal contaminants of environmental surfaces; therefore, routine cleaning and removal of soil are recommended. Most microorganisms found on environmental surfaces are non-pathogenic, but conscientious disinfection techniques control cross-infection.

I. Environmental Control

A. Each treatment room:

- 1) Is kept clean, well lighted, and well ventilated.
- 2) Has an available sink with hot and cold running water, liquid soap and disposable paper towels.
- 3) Contains a covered trash receptacle.
- 4) Contains covered storage for supplies.
- 5) Contains a puncture resistant sharps container labeled biohazard.
- 6) Has available toilet facilities with a sink, liquid hand soap, disposable paper towels and a covered trash receptacle.

B. Treatment table surfaces are:

- 1) Made of materials that can be washed with detergents and treated with disinfectants.
- 2) Covered with fresh disposable paper drapes or barrier before each client treatment in the following manner:
 - a) Headrests are covered with fresh disposable paper drapes or barrier before each client treatment.
 - b) When body areas are treated and bare skin may come in contact with the treatment table surface, the surface must be covered with an appropriate-sized fresh disposable paper drape or barrier.

- C. Containers for dispensing products, such as liquid soap, alcohol hand-rubs, and treatment supplies are disposable or if reusable they are cleaned and dried before being filled with fresh product.
- D. When using creams, lotions, ointments and antiseptics during treatment:
 - 1) Follow aseptic technique for dispensing products.
 - 2) Follow manufacturer's recommendations for use.
 - 3) Dispose of product and container when contaminated or expiration date is reached.
- E. Environmental surfaces that are touched during treatment such as epilator cords, epilator cart, magnification lamps, lighting devices and epilator controls are:
 - 1) Covered with a fresh protective disposable barrier before each treatment of a client; or
 - 2) Decontaminated after each treatment of a client, following manufacturer's instructions for use of product.
- F. Disposable items such as cotton, paper drapes and protective barriers are:
 - 1) Stored in covered containers, closed cabinets or drawers before use; and
 - 2) Discarded into a covered trash container lined with a plastic bag, securely fastened when ready for disposal, and disposed daily into the regular trash, unless otherwise specified by state and local health regulations.
- G. Reusable items such as sheets, pillowcases and towels, used to cover treatment table or as a client drape are:
 - 1) Stored in covered containers, closed cabinets or drawers before use.
 - 2) Placed in a covered container, labeled as "soiled laundry" after use, and
 - a) Laundered with detergent and water temperatures that will ensure adequate cleaning and thermal disinfection, and
 - b) Dried completely in a gas or electric clothes dryer, at high temperatures.

II. Housekeeping

- A. An intermediate-level or low-level hospital-grade disinfectant registered with the Environmental Protection Agency (EPA) is used for cleaning non-critical environmental surfaces.
- B. All other environmental surfaces in the treatment room are kept in a state of visible cleanliness by:
 - 1) Cleaning with water and detergent; and
 - 2) Using a hospital-grade disinfectant/detergent designed for general housekeeping purposes as indicated on the product label.

Section 7

Client Considerations

Prevention Measures for Client Considerations

The general health status of the client may be a predisposing factor in susceptibility to infection and normal healing. Professional interpretations require careful observation and good judgment.

The client's skin should be examined for signs of infection or rashes prior to each treatment. Treatment should be delayed if actual or potential signs or symptoms of infection are present. The practitioner should refer the client to an appropriate physician when evaluation of health history or skin examination indicates.

Cleansing the skin with soap and water prior to treatment serves to physically remove dirt, soil and contaminating microorganisms. Wiping with an antiseptic will help to inhibit or destroy microorganisms. An FDA regulated antiseptic should be chosen that does not cause irritation to the skin surface.

Standards of Practice for Client Considerations

I. Client Considerations

- A. Standard Precautions should be consistently used for all clients.
- B. During the initial consultation:
 - 1) An appropriate health history should be obtained from each client.
 - 2) Each client should be informed of the:
 - a. possible causes of hair growth;
 - b. physical and medical conditions, which may influence the outcome of electrolysis treatments;
 - c. possible side effects of treatments;
 - d. recommended post-treatment care.
- C. The client's health status and any contraindications to treatment should be evaluated upon each client visit. Contraindication to treatments may include any of the following:
 - 1) Signs of skin infection or trauma.
 - 2) Hair growth in moles.
 - 3) Pregnancy.
 - 4) Diabetes.
 - 5) Immunosuppression disorders.
 - 6) Medical implants such as pacemakers, defibrillators, or artificial joints.

- D. Electrolysis treatment should be postponed when the electrologist or client suspects any contraindication is present. Referring the client to a physician is appropriate when suspected contraindications are observed.

Section 8

Pre and Post-Treatment

Prevention Measures for Pre and Post-Treatment

Skin cleansing products are used to remove make-up and other debris from the skin prior to an electrolysis treatment. Soap and water or an alternative skin-cleansing product is appropriate for pre-treatment skin cleansing.

Antiseptics are antimicrobial products, regulated by the FDA, and applied to the skin to reduce the possibility of infection. They slow or stop the growth of germs and help prevent infections in minor cuts, scrapes and burns. Antiseptics can irritate the skin; therefore they should be used sparingly. Some commonly used antiseptics are isopropyl alcohol (60-70%), benzalkonium chloride and witch hazel with 14% alcohol. While astringents are not effective antiseptics, they are appropriate to use in post treatment.

Skin protectant products are over-the-counter products regulated by the FDA that temporarily protect injured skin or mucous membrane surfaces from harmful or annoying stimuli and may help provide relief to such surfaces. Many skin protectant products provide a cooling relief to the irritated skin site.

Standards of Practice for Pre and Post-Treatment

I. Pre and Post-Treatment

- A. Before treatment, the skin site should be cleansed with a skin-cleansing product followed by an antiseptic skin preparation. Skin should be dry before proceeding with an electrolysis treatment.
- B. After treatment, the skin site should be wiped with an antiseptic product or an astringent followed by a skin protectant product.
- C. Clients should be instructed on appropriate post-treatment care to promote healing of the treated skin site.

Section 9

Hepatitis B Vaccination and Hepatitis C Information

Prevention Measures for Hepatitis B (HBV)

The CDC states that health care workers may be at risk for Hepatitis B virus (HBV) exposure, a major infectious occupational hazard, if their tasks involve contact with blood or blood-contaminated body fluids; therefore, such workers should be vaccinated. The risk of acquiring HBV infection from oc-

cupational exposures is dependent on the frequency of a needle through the skin and mucosa exposures to blood or blood products. Risks among health care professionals vary during the training and working career, but are often highest during the professional training period. For this reason, the student's vaccination for HBV should be completed before electrolysis training begins.

In 1986 the FDA approved a new recombinant Hepatitis B vaccine. It consists of highly purified Hepatitis B surface antigen (part of the virus) that is produced by cells of bakers' yeast. The vaccine is a result of a genetic recombinant technique and contains no human source materials; therefore, there is no risk of acquiring a disease from the vaccine.

Practitioners and electrology students should contact their personal physician for appropriate immunization against Hepatitis B.

Hepatitis C Information

The exposure method for Hepatitis C is the same as Hepatitis B, however there is no vaccination for HCV. Hepatitis C is a liver disease. For some people, Hepatitis C is a short-term illness but for 70%-85% of people who become infected with Hepatitis C, it becomes a long-term, chronic infection. Chronic Hepatitis C is a serious disease that can result in long-term health problems, even death. The majority of infected persons might not be aware of their infection because they are not clinically ill. The best way to prevent Hepatitis C is by avoiding behaviors that can spread the disease.

Section 10

Procedures for Potential Exposures to Hepatitis, HIV and Other Blood-borne Pathogens

Prevention Measures for Potential Exposures to Hepatitis, HIV and Other Blood-borne Pathogens

Careful clinical skills should be practiced and Standard Precautions followed to prevent puncture injury or mucous membrane exposure to blood. Proper management of exposures is necessary including first-aid measures, medical follow-up including collection and testing of blood of source person and exposed person, necessary prophylaxis and written documentation.

Standards of Practice for Potential Exposures to Hepatitis, HIV and Other Blood-borne Pathogens

Health care workers who have needle punctures through the skin or mucous membrane exposure to blood and other body fluids are at risk for infection, including HBV, HCV and HIV infection. The CDC concludes in a continu-

ing study that, while HIV infection is a real risk to health care workers, the risk is low and can be minimized by taking appropriate precautions. Identified risk factors for HIV and HCV transmission are almost identical to those for HBV transmission. Despite the similarities in modes of transmission, the risk of HBV infection in health care settings far exceeds that for HIV or HCV infection.

The following steps should be taken when a puncture injury has occurred:

- A. Remove and discard gloves;
- B. Wash exposed surface with running water and soap. If wound is bleeding, allow to bleed. After thoroughly cleaning the wound, apply an antiseptic product;
- C. Immediately contact practitioner's personal physician for appropriate consultation and for post-exposure strategies;
- D. Document the exposure including:
 - 1) Date and time of exposure;
 - 2) Details of the procedure being performed, including where and how the exposure occurred;
 - 3) Details of the exposure, including the type and amount of fluid or material and the severity of the exposure (e.g.; for a needle puncture through the skin; the depth of injury; for a skin or mucous membrane exposure, the estimated volume of material and the condition of the skin);
 - 4) Details of the exposure source (e.g.; whether the source material contained HBV, HCV or HIV);
 - 5) Details about the exposed person (e.g.; Hepatitis B vaccination and vaccine-response status);
 - 6) Details about counseling, post-exposure management and follow-up date, route of exposure, circumstance under which exposure occurred, name of source client, HIV and/or hepatitis status of source client, status of practitioner's testing, follow-up testing and any necessary post-exposure prophylaxis.

Section 11

Standard Precautions as Recommended by the Centers for Disease Control and Prevention (CDC)

Prevention Measures for Standard Precautions

These precautions should be performed universally for all clients. Standard Precautions are intended to prevent mucous membrane and non-intact skin exposures of healthcare workers to blood-borne pathogens. In addition, im-

munization with HBV vaccine is recommended as an important adjunct to Standard Precautions for health-care workers who have accidental exposures to blood.

Standards of Practice for Precautions During Electrolysis Procedures
The following Standard Precautions are appropriate for the care of all clients during electrolysis treatments:

- A. Wash hands or use hand antiseptics BEFORE and AFTER each client contact.
- B. Wear gloves when touching blood, body fluids, secretions, excretions, contaminated items, mucous membranes and non-intact skin.
- C. Take care to prevent puncture injuries when using instruments during and after procedures, when cleaning instruments and when disposing of used needles.
- D. Use adequate procedures for routine care, cleaning, and disinfection of environmental surfaces, and other frequently touched surfaces.
- E. Follow appropriate sterile procedures with instruments used in the treatment of electrolysis.
- F. Clean skin pre and post-treatment with appropriate products to prevent infection.

Electrolysis procedures do not typically generate splashes or sprays of blood and body fluids; however, electrologists may choose to utilize the following:

- A. Wearing mask and eye protection or a face shield to protect mucous membranes of the eyes, nose and mouth during procedures and client care that may result in splashes or sprays of blood and body fluids.
- B. Wearing gown to protect skin and prevent soiling of clothing during procedures that may result in splashes or sprays of blood and body fluids. Remove soiled gown as promptly as possible and wash hands.

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