# GUIDELINES FOR PERSONAL SERVICE ESTABLISHMENTS

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**HEALTH PROTECTION BRANCH**
**MINISTRY OF HEALTH**

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## PREFACE

If you are an operator who provides a service to or on the body of another person of the general public, these guidelines should be of interest to you.

The purpose of these guidelines is to clarify the expectations of operators of personal service establishments and give guidance on prevention of health hazards.

The guidelines were produced by a working group consisting of representatives from the Ministry of Health, the five health authorities and the National Collaborating Centre for Environmental Health. Consultation was undertaken with industry and relevant associations.

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## 1. INTRODUCTION

A personal service establishment (PSE) in British Columbia is a business in which a person (e.g., an esthetician or tattoo artist) provides a personal service to or on the body of another person. The use and diversity of personal services have increased, creating a need for guidance to promote a healthy means for conducting these services.

The *Guidelines for Personal Service Establishment*s set standards to help PSE operators prevent health hazards that may endanger or transmit infection to their clients or themselves. The guidelines provide policy support to the *Public Health Act* and the Regulated Activities Regulation (the regulation covering PSEs) for PSE operators.

The types of health risks of personal service procedures depend on the how invasive the procedure is – e.g., surface treatments vs. procedures that break the skin. Many procedures have the potential to cause serious infections: they can transmit a viral infection such as hepatitis B, hepatitis C, human immunodeficiency virus (HIV) and herpes simplex virus, as well as bacterial skin infections such as streptococcus and staphylococcus.

Operators are responsible for ensuring they are in compliance with municipal bylaws and other regulatory requirements, and for obtaining business licences and/or approval to operate from the appropriate licensing authorities. The *Guidelines for Personal Service Establishments* apply to all PSEs as defined in the Regulated Activities Regulation and include, but are not limited to, the services listed in Table 1.

**Note:** Operators performing personal services to or on the body of another person in a health authority facility must comply with the provincial *Best Practice Guidelines for Cleaning, Disinfection and Sterilization of Critical and Semi-critical Medical Devices*: http://www.health.gov.bc.ca/library/publications/year/2011/Best-practice-guidelines-cleaning.pdf.

### TABLE 1: EXAMPLES OF PERSONAL SERVICES

| Hair, Skin, Nails and Personal Wellness | | Body Modification |
|---|---|---|
| Aromatherapy | Manicure | Body piercing |
| Beauty parlour services | Massage (excluding RMTs*) | Ear piercing |
| Cosmetic laser services | Microdermal abrasion | Micropigmentation |
| Face painting | Mud/steam bath | Tattooing |
| Floatation tanks | Pedicure | Tattoo removal |
| Electrolysis | Shaving | |
| Esthetics (skin and body therapy) | Tanning (indoor) | |
| Hair/barber services | Teeth whitening (excluding dentist) | |
| Health spa, skin clinic | Water therapy ** | |
| Makeup | Waxing, lash and brow tinting | |
| **The inclusion of any personal service in Table 1 does not imply that the Ministry of Health or health authorities endorse these services as safe or useful – regardless of whether or not these PSE guidelines are followed.** | | |

* Registered Massage Therapists (RMTs) are regulated under the Medical Practitioners Regulation.
** The Pool Regulation applies to hydrotherapy pools and therapeutic baths.

### TABLE 2: EXAMPLES OF PERSONAL SERVICES NOT AUTHORIZED IN B.C.

| Type of Personal Service | |
|---|---|
| Ear candling | Fish pedicure |

Services covered by these guidelines do not include services reserved for members of a college or professional association. The *Health Professions Act* makes it an offence for a nonmember to perform a restricted activity or reserved act in the course of providing a service or doing work described by the definition of "health profession." A more detailed description of restricted activities is available at the Ministry of Health's Professional Regulation website: http://www.health.gov.bc.ca/professional-regulation/.

### TABLE 3: EXAMPLES OF PERSONAL SERVICES UNDER THE *HEALTH PROFESSIONS ACT*

| Type of Personal Service | | |
|---|---|---|
| Acupuncture | Cosmetic surgery | Physician/ surgical services |
| Chiropractic | Dental | Physiotherapy |
| Laser eye surgery | Registered massage therapy (RMT) | |

Existing guidelines applying to specific services or premises (e.g., Guidelines for *Laser Hair Removal*) and other guidelines developed in the future by the Ministry of Health, are intended to be used in conjunction with the *Guidelines for Personal Service Establishments*.

## 2. INFORMING CLIENTS

It is recommended that operators offering invasive or permanent procedures (e.g., piercing, tattoo, laser and electrolysis) undertake the following to ensure properly documented consent by clients:

1. Explain to the client and be satisfied that the client:
   i. Understands the nature, possible consequences and health risks of the procedure.
   ii. Is undertaking the procedure of his/her own free will.
   iii. Is not under the influence of alcohol or other judgement-altering drugs.
2. Obtain a consent form signed by each client, that includes:
   i. Declaration of health risks (e.g., short- and long-term risks, consequences of services).
   ii. Agreement to be responsible for aftercare.
   iii. For minors, an in-person signature from a parent or guardian verifying that the parent/guardian is aware that the minor will be undergoing the procedure.

It is strongly recommended not to pierce the genitalia or nipples of people under 18 years old.

# 3. FACILITIES

All PSEs should comply with the following criteria and be maintained in a clean, sanitary, pest-free condition, and in good repair.

## 3.1 SITE AND PLAN REVIEWS

If you are planning to open a PSE, or modify or update an existing PSE, you should prepare a site plan and have it reviewed by the local public health authority. Before you start offering services, the health authority should be notified that the establishment is ready for inspection.

Site plans for PSEs should be designed specifically for the service(s) being provided and include:

- A scale layout (floor plan) of all areas of the proposed facility, identifying each area, activity or procedure.
- A list of construction materials used for finishes on floors, walls, ceilings and work surfaces.
- Lighting, ventilation (suitable for use of required chemicals), and plumbing details (including hand-washing sinks and instrument/equipment wash sinks).
- Procedures describing cleaning, disinfecting and sterilizing practices.

Avoid costly changes and delays. Contact your local health authority before building or modifying your facility.

## 3.2 FACILITY DESIGN CRITERIA

Facility design is a crucial component of health hazard prevention. All PSEs, new and existing, should adhere to the following facility design criteria:

- Design, organize and construct the facility for the specific service(s) offered.
- Keep client areas separate from any portion of the premises used as a residence (e.g., for food preparation, dining and sleeping, and pets).
- Keep client procedure areas separate from any part of the PSE used as traffic flow areas or for retail purposes.
- Keep client areas separate from cleaning/disinfection/sterilization areas.
- Construct floors and walls with impervious, easily cleanable materials.
- Provide the counter space needed to ensure hygienic, safe, and efficient procedures.
- Construct contact surfaces (e.g., counters, tables, trays, lamps and magnifiers) with smooth, nonabsorbent finishes (e.g., stainless steel).
- Design private client-area doors that can be unlocked from the outside during an emergency.
- Install enough lighting in work areas to facilitate cleaning and injury prevention (Section 4.65 and Table 4-1 of the Occupational Health and Safety Regulation).
- Provide secure and cleanable space for storing instruments/equipment and supplies.
- Install and maintain ventilation systems in accordance with the local building bylaw and National Building Code.
- Provide local exhaust ventilation if using chemical disinfectants or sterilants, or acrylic nail application.
- Provide a potable water supply (drinking water).

- Install backflow prevention device (e.g., one-way valve) anywhere contaminated water could enter the drinking water system.
- Provide a washroom facility for staff and for clients.
- Install the following sinks (please contact the health authority if you would like to discuss alternative sink arrangements):

- Hand-washing sink(s) within easy access of all client procedure areas (separate from the washroom facilities).
- Instrument/equipment cleaning sink(s) separate from client areas.
- Janitorial sink (or written procedures for sanitation if using instrument/equipment sink).

## 3.3 HAND-WASHING STATIONS

The best way to prevent the spread of infection is to wash hands well. A hand-washing sink should be easily accessible from every work station.

Hand-washing sink(s) should be:

- Separate from the hand sinks in the washroom facilities.
- Accessible without touching door handles or curtains.
- Exclusive to the PSE (not used by more than one facility).
- Accessible for use while personal service procedures are being performed (e.g., free of any clutter).
- Continuously supplied with:

- Potable hot and cold running water.
- Paper towels in a dispenser or an air dryer.
- Dispensable liquid soap.
- A trash bin accessible without using hands.

## 3.4 INSTRUMENT/EQUIPMENT CLEANING STATIONS

One or more sinks should be designated for cleaning instruments/equipment. If the personal services provided are lower risk where only noncritical items are used, a separate sink for cleaning instruments/equipment may not be required. Please contact the health authority if you would like to discuss alternative sink arrangements.

The cleaning sink(s) should be:

- Separate from the hand sinks in the washroom facilities and from the hand-washing stations discussed above.
- Continuously supplied with potable hot and cold running water.
- Large enough to accommodate the largest instrument/equipment to be cleaned.
- Located with suitable and adequate counter space on both sides for soiled and cleaned instruments/equipment.
- Clean, organized and free from clutter.

# 4. OPERATIONS

## 4.1 INSTRUMENT/EQUIPMENT REQUIREMENTS

The following sections cover procedures that should be implemented in facilities during use of instruments/equipment.

### 4.1.1 GENERAL INSTRUMENT/EQUIPMENT USE

- Use only durable instruments/equipment maintained in good repair. Discard cracked, chipped, rusted or otherwise damaged instruments/equipment.
- Only use instruments designed for or suitable to the application.
- Clean and then disinfect reusable instruments/equipment and work-contact surfaces (e.g., chairs, and equipment trays or tables) after each use.
- Consider as single-use and disposable any instruments/equipment that cannot be covered, or cleaned and disinfected or sterilized between each use.
- Discard single-use (disposable) items (e.g., plastic surface covers, elastic *bands*, gloves, needles and nail files) immediately after use.
- Clean and then disinfect or sterilize any instruments/equipment touched or handled during a procedure (even if not used during the procedure) before using again.
- Dispense products such as wax, pigment, creams, lotions or cotton balls in a way that prevents contaminating the remaining portion.
- For pencil-style makeup applicators, clean the tip with disposable wet-wipe and sharpen between uses. Clean and disinfect the sharpener daily. Use only on intact skin.
- Clean and disinfect applicator brushes between use or use single-use, disposable applicators if disinfection is not possible.
- Apply powder or liquid styptic products with a disposable applicator. Styptic pencils are not acceptable even if sharpened due to cross contamination from the sharpener.
- Place disinfected/sterilized instruments/equipment in clean bags, packages or containers and store in a clean, dry environment.
- Maintain a designated space separate from client supplies for storing personal items belonging to operators (e.g., food, medication, clothing and cosmetic/personal grooming items).

### 4.1.2 INVASIVE PROCEDURE EQUIPMENT

- Cover/bag nonclient contact instruments/equipment and work-contact surfaces that cannot be cleaned and disinfected or sterilized between each use (e.g., tattoo or pigmentation machines, electrolysis control panels, pigment or spray bottles) and discard after each use.
- Disinfect motors and frames of all equipment that might become contaminated at least daily, and after obvious contamination.
- Do not use sterile instruments/equipment (e.g., needles, piercing jewellery and forceps) if they become contaminated before use.

### 4.1.3 TANNING AND LASER EQUIPMENT

- Ultraviolet (UV) lamps (including UV tanning equipment) must comply with the regulations specified under the *Radiation Emitting Devices Act*: http://laws-lois.justice.gc.ca/eng/acts/R-1/index.html
- Laser devices for cosmetic treatments must comply with Health Canada requirements under the *Radiation Emitting Devices Act* and the Medical Devices Regulations.
- The *Radiation Emitting Devices Act* and the Medical Devices Regulations ensure that laser systems sold in Canada are safe and effective when they are used for their licensed purposes by trained operators, and according to the manufacturers' directions.

### 4.1.4 SHARPS USE

- Use only sterile, single-use, disposable items to penetrate the skin and/or mucous membranes (e.g., needles and lancets).
- Never reuse a single-use item, even on the same client.
- Before use, inspect needles visually for sharpness or defects (e.g., damaged or blunt points). Never test on the client or operator's skin.
- Clean and sterilize needles requiring modification or attachment to other items before use (e.g., tattoo needles to the needle bar).
- Do not bend, take apart, recap or otherwise manipulate needles/needle bars and other sharps (e.g., lancets, razor blades) after use (unless otherwise instructed by manufacturer).

### 4.1.5 SHARPS DISPOSAL

- Approved sharps containers are required for the safe disposal of used, disposable sharps (e.g., razor blades, needles and lancets).
- Discard used sharps into an appropriate sharps container immediately after use on a single client.
- Use a magnet or tongs for retrieving broken or dropped sharps (surgical-grade metals are not magnetic).
- Securely close and dispose of full (3/4 of capacity) sharps containers according to local municipal requirements for waste segregation and handling.
- For best results, private services will provide containers and disposal.

### 4.1.6 WASTE DISPOSAL

- Locate waste disposal bins within easy access from all work areas.
- Put waste contaminated with blood or body fluids in a sealed, leak-proof bag before disposal in the regular garbage.

### 4.1.7 LAUNDRY CLEANING AND STORAGE

- Put soiled laundry (towels, pillow coverings and other washable items) in a laundry bag or container with a lid.
- Handle soiled laundry as little as possible and with gloved hands. Do not rinse before laundering to reduce cross contamination.
- Wash soiled laundry daily in a washing machine. Dry in a clothes dryer set at the highest temperature setting.
- Store clean laundry in a clean and protected environment.

## 4.2 INFECTION PREVENTION AND CONTROL PRACTICES

The goal of infection prevention and control is to prevent the spread of infection or illness to clients and operators. Each PSE should develop and maintain safe operating procedures to ensure client and operator safety. These infection prevention and control practices should be tailored to the services provided.

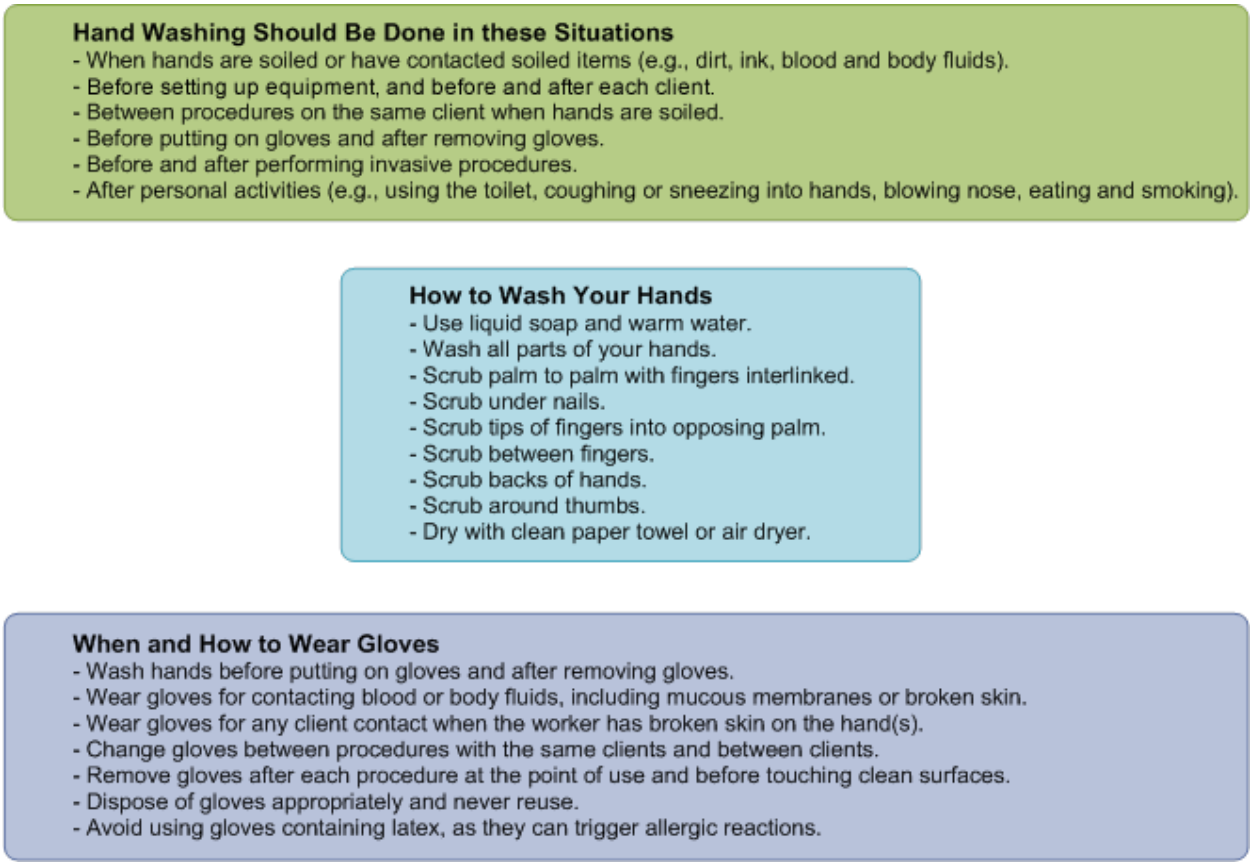
### 4.2.1 PERSONAL SERVICE OPERATOR

Infection prevention and control practices should be used during all service delivery. The personal service operator is responsible for reducing the risk of spreading infections and should do the following:

- Avoid work if you have a potentially transmissible illness (e.g., cough and fever).
- Ensure all immunizations (including hepatitis B) are up to date.
- Refrain from eating, smoking or drinking while providing a service or while in the service areas.
- Protect eyes, nose, mouth and uncovered skin from blood and body fluids by wearing protective coverings during procedures where body fluid contact is a possibility.
- Diligently adhere to hand hygiene. Hand hygiene is the process of keeping your hands free of harmful micro-organisms to reduce the risk of spreading micro-organisms from person to person or from one part of the body to another.
- As shown in Figure 1: Hand Hygiene Process, below, hand hygiene includes proper and timely hand washing and the use of gloves.

Tailor infection prevention and control practices to the services provided.

### FIGURE 1: HAND HYGIENE PROCESS




## 4.2.2 CLIENT

Before carrying out a procedure, the operator should make sure the client is protected by taking these precautions:

1. Inspect the treatment area for cuts, wounds, rash, fungus or visible skin disease.
2. If any of the above are present, advise the client to seek a health assessment from a health care provider before proceeding with the procedure.
3. Clean the treatment area. For invasive procedures use an approved skin antiseptic (e.g., povindone-iodine solution, 70% isopropyl alcohol). Ensure the skin antiseptic is given the required contact time with the skin.
4. Provide the client with appropriate protective equipment and garments, such as eye protection or coverings for clothing.

## 4.3 TRAINING

Personal service operators should have adequate training to recognize, prevent and respond to health hazards that may arise during a procedure. The PSE owner is responsible for ensuring all operators are adequately trained.

> "**Duties of Operators:** An operator who is an employer must ensure that employees are adequately trained and sufficiently equipped to recognize, prevent and respond to health hazards that may arise when engaging in a regulated activity." *Public Health Act*, Sec. 18 (2)

## 4.4 BLOOD AND BODY FLUID EXPOSURE-RESPONSE PROCEDURES

Blood and body fluids may contain pathogens such as hepatitis B virus, hepatitis C virus and HIV. The person exposed is at risk of infection.

### 4.4.1 CAUSES OF EXPOSURE

The following could result in exposure to blood and body fluids:

- Needle stick or cut from a contaminated sharp.
- Splashing or transfer onto broken skin (e.g., open cut, wound or dermatitis).
- Splashing or transfer onto a mucous membrane (e.g., eyes, mouth or nose).

### 4.4.2 PROCEDURE FOR BLOOD AND BODY FLUID EXPOSURE

If an accidental puncture wound or abrasion occurs to an operator or client from any contaminated object, these steps should be followed:

1. Wear single-use gloves before handling the wound.
2. If the area is bleeding, allow it to bleed freely for a short time to reduce the amount of contamination that may enter the body.
3. Wash the wound area with water and soap.
4. Apply a skin antiseptic and cover with a clean dressing or bandage.
5. If a mucous membrane has been splashed, flush the area thoroughly with water for 15 minutes.
6. Contact a physician for assessment of the need for blood tests or to receive post-exposure treatment.
7. Document accidental exposures to blood or body fluids to the client or operator.
8. A record of the incident should include:
    i. The full name of the person exposed (first and last name), complete mailing address and phone number.
    ii. The full name of the operator (first and last name) involved in the incident.
    iii. The date of the injury.
    iv. The site of the injury.
    v. The circumstances surrounding the injury.
    vi. The action taken.

## 4.5 RECORD KEEPING

Documenting safety procedures and maintaining client records are essential for PSE operators to show due diligence in maintaining their operation.

Client records should be kept onsite if invasive procedures such as body piercing, tattooing, body modification, micropigmentation and electrolysis are offered. Include, in English, the following:

- The operator's full name (first and last name).
- The client's full name (first and last name), complete mailing address and phone number.
- The date and details of the procedure.
- The details of any incident.

Records of the following procedures should be available on site for potential follow-up and inspection purposes:

- Details of instruments purchased as prepackaged and sterile (e.g., manufacturer name, certification designation, sterilization method, lot number and expiry date).
- Daily disinfection test results (e.g., test strips) to ensure the concentration is within acceptable limits or documentation that the solution is changed and monitored according to the manufacturer's instructions.
- Monitoring records of the sterilizer mechanical parameters (e.g., temperature, duration, pressure, print-out (if available).
- Chemical monitoring records for each sterilizer load.
- Sterilizer biological monitoring testing and results.
- Documents related to the client's or operators accidental exposure to blood or body fluids.
- Updated material safety data sheets (MSDS) provided by suppliers for all hazardous products kept on site.

The PSE operator should keep records at the place of business for a minimum of one year, and on file for a minimum of five years (the records can be stored on file anywhere, but should be available upon request). Collect and store information according to local and provincial privacy legislation.

# 5. CLASSIFICATION OF INSTRUMENTS/EQUIPMENT

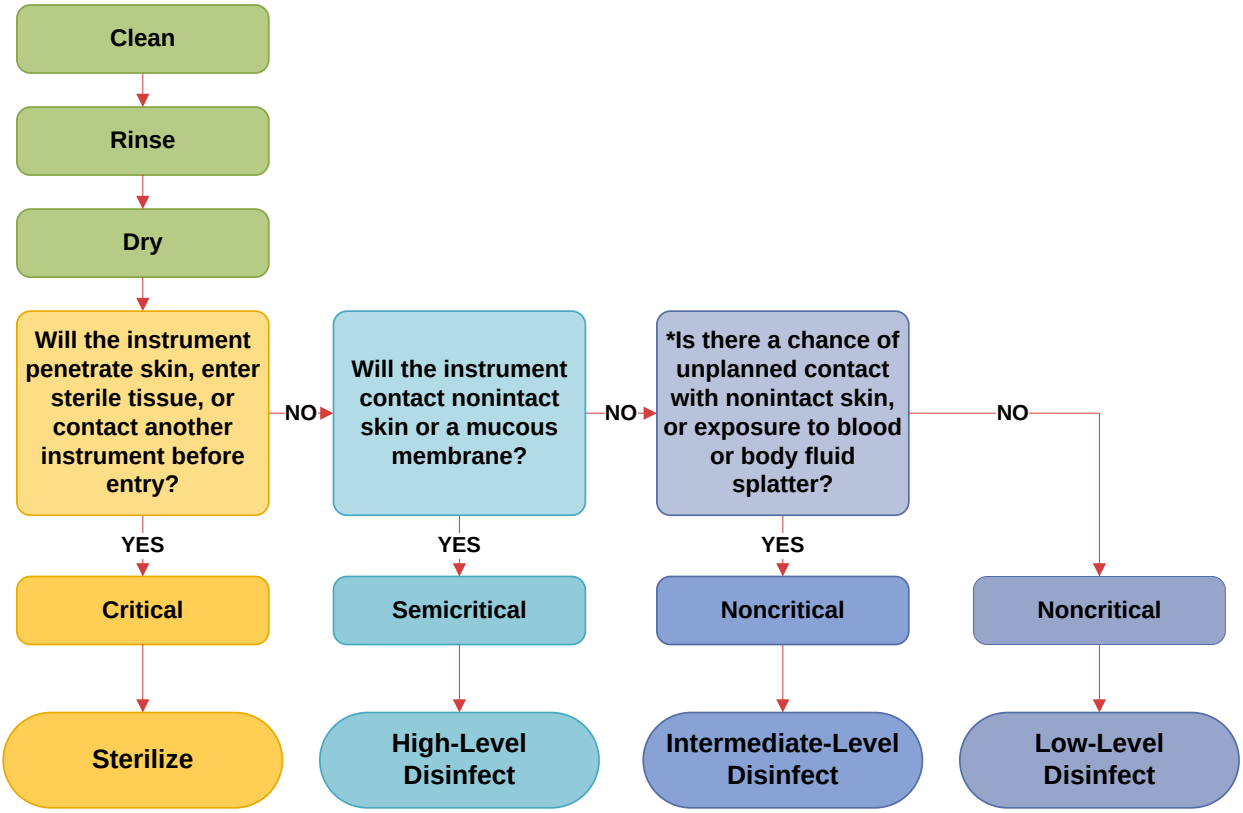
The rationale for cleaning and disinfecting or cleaning and sterilizing instruments/equipment is based on intended use. Instruments/equipment used in PSEs can be divided into three general classifications, shown in Table 4.

### TABLE 4: INSTRUMENT/EQUIPMENT CLASSIFICATION

| Classification | Level of Sterilization or Disinfection | Instrument/Equipment |
|---|---|---|
| **Critical** | Sterilization | Any instrument/equipment intended to puncture the skin, or contact the puncture site or a sterile instrument before puncturing. |
| **Semicritical** | High-Level Disinfection (HLD) | Any instrument/equipment intended to contact nonintact skin or a mucous membrane, but not penetrate it. |
| **Noncritical** | Intermediate-Level Disinfection (ILD) | Any instrument/equipment intended to contact intact skin, but may accidentally contact nonintact skin or receive blood or body fluid splatter. |
| | Low-Level Disinfection (LLD) | Any instrument/equipment that does not directly touch the client, or contacts only intact skin. |

Figure 2 is designed to help operators determine the disinfection or sterilization level required before and after the instrument/equipment is used.

## FIGURE 2: DECISION CHART: LEVEL OF INSTRUMENT DISINFECTION/STERILIZATION REQUIRED




***Never treat a semicritical instrument with Intermediate-level disinfection. This is reserved for noncritical instruments/equipment that pose a higher risk if used improperly.

Examples:

- A needle (e.g., tattoo, piercing, and electrolysis) is used to puncture the skin. The skin is penetrated, making the instrument **critical**. The instrument must be **sterilized**. It is recommended these items be purchased as presterilized single use.
- Cuticle scissors are used to cut skin above the nail. As a result of cutting, contact with nonintact skin is created, making the instrument **semicritical**. The instrument requires **cleaning** followed by **high-level disinfection**.
- A foot basin is used for soaking the feet in warm water. Contact is intended for only intact skin, making the item **noncritical**. However, there is a chance nonintact skin may be present on the foot or leg (e.g., small cuts from shaving, cracks in calluses). The equipment therefore requires **cleaning** followed by **intermediate-level disinfection**.
- Hair-cutting scissors are used to cut hair. Contact is mainly with hair and sometimes with intact skin making the instrument **noncritical**. The instrument requires **cleaning** followed by **low-level disinfection**. Although the instrument is noncritical, if the scissors cut a client, the instrument becomes **semicritical** requiring **cleaning** followed by **high-level disinfection**.

# 6. CLEANING, DISINFECTION AND STERILIZATION

## 6.1 CLEANING

Cleaning is the first step before disinfection or sterilization. If an instrument/equipment or surface is not clean, it cannot be adequately disinfected or sterilized. Cleaning with detergent and water physically removes foreign material (e.g., dust and soil) and organic material (e.g., blood, secretions and excretions). However, it does not kill micro-organisms). The following processes should be followed to ensure safe and effective cleaning.

### 6.1.2 CLEANING PROCESS FOR INSTRUMENTS/EQUIPMENT

1. Wear personal protective equipment (e.g., face protection, disposable gown and household rubber gloves).
2. Clean contaminated instruments/equipment immediately after use, or soak in clean water.
3. Take instruments/equipment apart to allow effective cleaning. See the instrument manufacturer's cleaning instructions.
4. Fill wash basin with warm soapy water to completely cover the largest item to be cleaned.
5. Add instrument detergent or enzymatic product as directed by the manufacturer.
6. Scrub instruments/equipment below the water surface to prevent splashing.
7. After removing gross soil (tissue, body fat, blood and other body substances), as an optional step an ultrasonic cleaning device with an appropriate detergent or enzymatic cleaner may be used. Refer to manufacturer's directions as some products may interfere with the disinfection or sterilization process. Operate ultrasonic cleaners with the lid on to prevent splashing and exposure to aerosols.
8. Following cleaning, rinse instruments/equipment with water to remove loosened soil and residual detergent. This will prevent neutralization of the disinfectant or sterilant.
9. Air dry instruments/equipment, or hand dry with a clean, lint-free towel or paper towel, to prevent microbial growth and avoid dilution of the disinfectant with water left on the surface.

### 6.1.3 CLEANING PROCESS FOR WORK SURFACES

1. Clean client chairs, washrooms, counters and floors at the end of each day and when visibly soiled. Combination low-level disinfectant products (also known as germicidal detergents) can be used to clean items that do not require further disinfection.
2. Clean contact surfaces of client chairs and work surfaces (e.g., manicure/pedicure tables, tattooing/piercing equipment trays, magnifying lamps, clip cords and electrolysis units) between each client. Use water and a detergent appropriate to the task, followed by low-level disinfection or,
3. Cover surfaces with a single-use cover and discard after each client. If a cover is used, surfaces should still be cleaned and disinfected when visibly soiled, and at the end of each day.
4. Clean surfaces contaminated with blood or other body fluids immediately. Wear gloves and clean surfaces with a disposable cloth or paper towel, then high-level disinfect the surfaces, ensuring sufficient contact time in accordance with the manufacturer's instructions for use.

### 6.1.4 AFTER CLEANING

1. Clean and low-level disinfect materials used for cleaning (e.g., rubber household gloves, and brushes) after each cleaning session. When not in use, store dry.
2. Clean and low-level disinfect sinks, countertops and containers after each use.
3. If used, clean and low-level disinfect ultrasonic cleaners when visibly dirty, and at least daily and store dry.
4. Wash hands after removing personal protective equipment.

## 6.2 DISINFECTION

Disinfection is a process that kills most disease-producing micro-organisms, but not necessarily bacterial endospores. Meticulous cleaning is required before disinfection. Disinfection is undertaken on all semicritical and noncritical instruments/equipment and surfaces. (See Table 4: Instrument/Equipment Classification, above, for information on critical, semicritical and noncritical instruments/equipment.)

Disinfectants come in varying levels and are applied according to the type of surface or instrument in question. Purchasing the right disinfectants can be confusing. The information in Table 5 will help you determine what level of disinfection product to use and how to identify it. Additional information about disinfectant products approved for use in Canada can be found on the Health Canada Drug Products Database, at: http://www.hc-sc.gc.ca/dhp-mps/prodpharma/databasdon/index-eng.php. The disinfection product manufacturer will also be able to provide information on a product's use and level of disinfection.

### TABLE 5: LEVELS OF DISINFECTION

| Level of Disinfection | Definition | Determining Product Level of Disinfection |
|---|---|---|
| **High-Level Disinfection (HLD)** | A process capable of killing vegetative bacteria, mycobacteria (including *Mycobacterium tuberculosis)*, fungi, and enveloped (lipid) and non-enveloped (nonlipid) viruses – as well as some, but not necessarily high numbers, of bacterial endospores. | When choosing a high-level disinfectant, make sure the manufacturer's label has a:<br>• DIN<br>• Disinfectant claim<br>• "TB" claim and specifically states "high-level disinfectant" or "chemical sterilant" or "sporicidal".<br>If it does not state this, then it is not acceptable unless it meets all requirements in Table 14: Infectious Agents Killed by Disinfection, below. |
| **Intermediate-Level Disinfection (ILD)** | A process capable of killing vegetative bacteria, mycobacteria (including *Mycobacterium tuberculosis*), most fungi, enveloped (lipid) viruses and most non-enveloped (nonlipid) viruses. | When choosing an intermediate-level disinfectant, make sure the manufacturer's label has a:<br>• DIN<br>• Disinfectant claim<br>• "TB", "tuberculodical" or "mycobacterium" claim.<br>These disinfectants are equipped for higher-risk surfaces and equipment such as those that may come into contact with nonintact skin. They are harder to find in retail stores, but readily available from cosmetic, dental or medical supply companies. |
| **Low-Level Disinfection (LLD)** | A process capable of killing most vegetative bacteria, some fungi, enveloped (lipid) viruses and some non-enveloped (nonlipid) viruses. | When choosing a low-level disinfectant, make sure the manufacturer's label has a:<br>• DIN<br>• General disinfectant claim<br>Low-level disinfectants are suitable for surfaces and equipment that would only, at most, come into contact with the client's intact skin. This level of disinfectant is easy to find in retail stores. |

### 6.2.1 DISINFECTION PRODUCTS

Appendix A outlines some examples of products available for disinfection and provides more information about the suitability for use. All disinfectants should have a Drug Identification Number (DIN) and the appropriate disinfection level. Table 5: Levels of Disinfection does not constitute instructions, so please follow the manufacturer's instructions for use for each product chosen.

**Note:** Some products are not acceptable for disinfection. Ultraviolet (UV) "sterilizers" do not achieve disinfection and the boiling is unreliable for disinfection.

### 6.2.2 DISINFECTION PROCESS FOR INSTRUMENTS/EQUIPMENT


1. Determine the level of disinfection required based on the intended use of the instrument/equipment (see Table 4 and Figure 2, above).
2. Choose a disinfectant and concentration that meets the appropriate level of disinfection (verify this on the product label).
3. Verify that the disinfection product contains an eight-digit DIN. EPA or FDA numbers issued in the United States are not recognized in Canada.
4. Follow the disinfectant manufacturer's instructions for product dilution, contact time and reuse.
5. Prepare, maintain and dispose of disinfectant solutions according to the manufacturer's instructions.
6. Wear personal protective equipment (e.g., household rubber gloves).
7. When soaking, fully cover instruments/equipment in the disinfectant solution for the required contact time stated on the manufacturer's label. To reduce damage, avoid prolonged soaking.
8. Use appropriately disinfected tongs to remove instruments/equipment from the disinfectant solution.
9. Rinse thoroughly with filtered water or drinking water (where rinsing is indicated by the manufacturer).
10. Allow disinfected instruments/equipment to air dry.
11. Store disinfected/sterilized instruments/equipment in a manner to protect them from contamination (e.g., clean bags, packages or containers and store in a clean, dry environment.

### 6.2.3 DISINFECTION PROCESS FOR WORK SURFACES AND EQUIPMENT THAT CANNOT BE SOAKED

1. Clean first, unless using a Health Canada-approved combination cleaner and disinfectant.
2. Apply the disinfectant with a single-use cloth or paper towel ensuring complete coverage for the required contact time (according to the manufacturer's label).
3. Rinse with clean potable water and dry with clean paper towel or allow to air dry.

### 6.2.4 AFTER DISINFECTION

1. Dispose of submersion disinfectant solutions daily, or test daily according to manufacturer's instructions (e.g., test strips) to ensure the concentration is within acceptable limits. Keep records of the testing results for inspection purposes.
2. Clean and then low-level disinfect materials used for disinfection. Store dry when not in use.
3. Clean and then disinfect sinks, countertops and containers used for soaking after each use.
4. Wash hands after removing personal protective equipment to avoid contamination.

## 6.3 STERILIZATION

Sterilization is the complete destruction of all microbial life, including bacteria, bacterial endospores, viruses and fungi. Sterilization is carried out on all critical instruments after meticulous cleaning. Operators need to ensure adequate sterilization methods are being applied – or that only single-use, prepackaged sterile instruments/equipment are used. Health authorities may require tests and/or records that show the efficacy of any method used for sterilization before it is approved for use.

### 6.3.1 STERILIZER TYPES

The following sterilizer type is best suited for use in PSEs:

- **Steam sterilizer (e.g., autoclave):** This process uses saturated steam under pressure. There are two types of table-top sterilizers, gravity displacement and dynamic air removal. Dynamic air removal is the preferred method for sterilizing packaged and hollow instruments.

The steam autoclave is the preferred method of achieving sterilization in a PSE.

**The following sterilization types are not well suited for use in PSEs due to the following disadvantages:**

- **Liquid chemical (low-temperature) sterilization:** This process uses a liquid chemical sterilizing agent at room temperature to soak instruments/equipment to achieve sterilization. It can only be conducted using products with a DIN and a statement that the product is capable of meeting the sterilization requirements. This process should not be used: it achieves only temporary sterilization because the item is not packaged to maintain sterility and frequent handling of devices provides opportunities for their \ contamination. Additionally, the process cannot be adequately monitored.
- **Dry-heat sterilizer:** This process uses high heat for a prolonged period of time to achieve sterilization. Dry-heat sterilizers are not recommended for use in PSEs due to potential uneven heating of instruments, long exposure times, as well as incompatibility with certain types of packaging and some instruments. Appropriate packaging and internal chemical indicators may not be available.

### 6.3.2 STERILIZER PROCESS FOR INSTRUMENTS/EQUIPMENT

The following steps should be taken during the sterilization process to ensure consistent results:

- Choose a sterilizer suitable for your needs. All sterilizers must meet Canadian Standards Association (CSA) specifications for use in healthcare or allied health facilities. Keep instruction manuals on site and readily accessible.
- Test and service sterilizers regularly, according to the manufacturer's instructions for installation, operation, testing and maintenance, to ensure sterilizers are functioning according to specification.
- Conduct biological monitoring (spore testing) of each operating sterilizer every two to four weeks and new, repaired or back-up sterilizers before use. Keep the results on file for inspection purposes and send them to the health authority if requested.
- Qualification testing must be conducted on a new or loaner sterilizer, following repairs, or after a sterilizer has been moved.
- Wear personal protective equipment (e.g., household rubber gloves, face protection and disposable gown).
- Enclose instruments with a temperature-sensitive indicator in a package designed and manufactured for use with the sterilizer chosen. Unless daily spore testing is conducted, also include a Class 5 chemical indicator in every load to ensure steam contact for sufficient time.

These methods are not permitted for attempting sterilization:

- ultraviolet (UV) radiation)
- glass-bead "sterilizers"
- pressure cookers
- ultrasonic cleaners
- microwave ovens
- boiling

- Load the sterilizing chamber correctly and do not overload (see the manufacturer's instructions). Items must be individually wrapped and sterilized in their packaging. Class N, non-vacuum autoclaves are designed to sterilize unwrapped items and should not be used in a PSE (e.g. Prestige 2100).
- Ensure the sterilizer is approved for hollow-tube instruments, if applicable.
- As per CSA guidelines, a drying cycle is required for all sterilization cycles for wrapped or packaged goods.
- It is recommended that the sterilizer be equipped with a print-out providing details of the mechanical parameters reached during each cycle. As older units are replaced, new units should be appropriately equipped.
- Sterilized packages must be dry upon completion of the cycle. Sterilized packages must not be handled until cool to the touch.
- Label sterilized and packaged instruments with the date sterilized, load number, and sterilizer used (if more than one is located on the site). Then store the instruments properly for protection from contamination, ensuring they are:
  - In a clean, dry, dust-free area (closed shelves) at least 15 cm (6 in) off the floor.
  - At least one metre (three feet) away from debris, drains and moisture.
  - In moisture-resistant, cleanable containers (not cardboard).
  - In a secure area not subject to tampering.
  - In an order so that most recently sterilized items will be used last.

### 6.3.3 AFTER STERILIZATION

- Dispose of any chemical products according to the manufacturer's instructions.
- Clean and the low-level disinfect materials used for sterilization. When not in use, store dry.
- Clean and then low-level disinfect sinks, countertops and containers used for sterilization after each use.
- Perform hand hygiene after removing personal protective equipment to avoid contamination.

### 6.3.4 USE OF SINGLE-USE PREPACKAGED STERILE INSTRUMENTS

Often single-use, disposable instruments come prepackaged and sterile.

Single-use, disposable instruments are used to reduce the risk of transmitting diseases via critical instruments/equipment that cannot be adequately disinfected or sterilized between uses. The prepackaged, sterile instruments are also used when/where the operator does not have the time or infrastructure to properly sterilize (e.g., disposable tattoo/piercing items, electrolysis filaments and razors).


The following should be done to reduce risk associated with single-use instruments:

- Obtain proof of sterility from manufacturer. Keep a record of sterilization certificates from each manufacturer on file.
- Keep a record of all information required for tracking purposes (e.g., manufacturer name, sterilization method, lot and item number, and expiry date).
- For hypodermic piercing needles, record if the manufacturer is ISO 7864 certified. For other needles, record if the manufacturer is ISO 9001or 9002 and/or ISO 13485 or 13488 certified. These certifications are not mandatory, but help ensure the credibility of the manufacturer.
- Before using packaged sterilized instruments, check the integrity of the packaging. Use only if the package is undamaged.
- If the integrity of the package is compromised (e.g., open, wet or dirty) discard it.
- Adhere to expiration date if printed on the package. Once the instrument is expired, discard it.

- Check for defective, discoloured or soiled instruments/equipment and discard if found.
- Ensure operators are educated about opening sterile instruments. This includes inspection and use of and re-assembly of instruments/equipment.
- Open instruments only at the point of use, with gloved hands, and where possible, in full view of the client.
- Discard all sharp instruments in an approved sharps container immediately after use.

### 6.3.5 STERILIZATION MONITORING REQUIREMENTS AND SPORE TESTING

Table 6, below, outlines three types of monitoring requirements to ensure sterilization is achieved. Each requirement should be included in a regular maintenance schedule, to be documented and followed for each sterilizer. Conduct all three types of monitoring on the same sterilizer (this may be done on the same day). The sterilizer should not be used until spore testing results are available.

**TABLE 6: STERILIZER MONITORING REQUIREMENTS**

| Monitoring Type | Monitoring Requirements |
|---|---|
| **Physical (Mechanical)** | Keep monitoring records of temperature, duration, pressure, date and user's name for each load.<br>Sign and date the print-out (if available) of the mechanical parameters reached during each cycle and keep in the log book. |
| **Chemical (Process)** | During each sterilization cycle, ensure every instrument package contains a temperature-sensitive indicator, (e.g., Class 3 chemical indicator) designed to change colour during the sterilization process. Use a chemical indicator that is compatible with the type of sterilizer being used.<br>For each, include a packaged Class 5 chemical indicator (integrator) to verify that the contents were present for the correct exposure to the sterilant. Class 5 indicators monitor not only the presence of saturated steam and temperature, but also do not change colour until enough time has passed. |
| **Biological** | Chemical monitoring alone does not guarantee sterilization, as proper time and pressure are contributing factors. A commercially available preparation of heat-resistant spores is used to verify the sterilizer is working properly. A passing test is one that a testing lab determines is negative for spore colony growth. |

### 6.3.6 BIOLOGICAL MONITORING

- Package the spore strips in the same manner as instruments/equipment prior to insertion in the sterilizer.
- After completing the sterilization cycle, send the spore strips to a laboratory for testing. Incubate spores as directed by the manufacturer.
- Ensure test results confirm sterilization before use of a new, repaired or back-up sterilizer. A passed test will show no spore growth indicating the sterilizer is operating properly. A failed test will show spore growth meaning the sterilizer is not operating effectively.
- In the event of a failed spore test, the following should be done:
- Repeat the test. Do not release any items sterilized since the last passed spore test.
- If this repeat test passes, and there is no indication of a system malfunction, re-sterilize the items from the failed test batch.
- If it has been determined the sterilizer malfunctioned:
- Stop invasive services using instruments from the defective sterilizer.
- Provide alternate means of sterilization, or use only single-use disposable instruments.

- Contact the local health authority.
- Notify all clients who may have been treated with inadequately sterilized instruments/equipment.
- Have the sterilizer repaired and then biologically tested until a passed result is obtained (see procedure for testing a repaired sterilizer above).
- Re-sterilize all items sterilized after the last passed test (as there is no way to know when the sterilized stopped being effective).
- A back-up plan should be in place in the case of sterilizer malfunction.
- Have an adequate supply of packaged, sterilized instruments/equipment.
- Have a functioning and tested back-up sterilizer.
- Or have a prearranged loan agreement with the sterilizer manufacturer.
- Keep records on file of each biological monitoring, including date of the sterilizer run, operator, date sent to lab, date results were received and the results of the test. See Appendix D for a sample sterilization log sheet.

## APPENDIX A: STERILIZER AND DISINFECTANT EXAMPLES

### TABLE 7: STERILIZER TYPES

| Process Option | Advantages | Disadvantages |
|---|---|---|
| **Steam**<br>Prevacuum sterilizers<br>Gravity displacement sterilizers<br>Small table-top sterilizers | Inexpensive<br>Fast<br>Effective, with a wide margin of safety<br>Nontoxic<br>Readily available<br>Sterilizers are available in many sizes for many applications | Unsuitable for anhydrous materials (e.g., oils and powders), wood, and heat- and moisture-sensitive materials.<br>Some tabletop sterilizers lack a drying cycle and/or printers (for physical monitoring of each cycle).<br>Safe use of steam sterilizers requires a sound knowledge of their requirements. Not all facilities have this expertise. |
| **The following options are not recommended for use in PSEs. They are listed to show the disadvantages.** | | |
| **Glutaraldehyde (GTA) (2.4%-3.5%)** | No notable advantages<br>The use of glutaraldehyde as a sterilant is strongly discouraged. | In-use life may be limited (e.g., 14 days, 28 days).<br>Biological and chemical indicators not available.<br>Devices must be used immediately because sterility cannot be maintained during storage.<br>Handling provides opportunities for contamination.<br>Toxic, sensitizing irritant.<br>Needs proper ventilation and closed containers.<br>Lengthy process (6-12 hours).<br>Disposal may require special handling. |
| **Hydrogen Peroxide, Accelerated (7% and 2 %)** | No notable advantages.<br>The use of liquid chemicals as a sterilant is strongly discouraged. | In-use life is limited to 21 days or failure of the minimum effective concentration (MEC) test, whichever comes first.<br>Strong oxidizer. Depending on the concentration, it can be corrosive to some materials e.g., copper, brass, carbon-tipped devices and aluminum.<br>May cause irritation and chemical burns to eyes or to mouth and throat if swallowed.<br>May cause slight irritation to skin.<br>Requires copious rinsing with sterile water to maintain sterility.<br>Must be stored in cool place, protected from light.<br>Biological and chemical indicators not available.<br>Devices must be used immediately because sterility cannot be maintained during storage. Frequent handling of devices provides opportunities for contamination.<br>Lengthy process (e.g., 6 hours) |
| **Dry Heat**<br>Gravity convection<br>Mechanical convection<br>Ref: ISO 20857 | Noncorrosive<br>Reaches internal parts that cannot be disassembled for direct sterilant contact (via heat conduction).<br>Inexpensive | Lengthy cycle due to slow heat-conduction process.<br>Temperature can be variable especially in gravity convection ovens.<br>High temperatures can damage some materials. |

| Process Option | Advantages | Disadvantages |
|---|---|---|
| **Ethylene Oxide (EtO) Gas**<br>Not likely found in a PSE; however, often used to sterilize items purchased prepackaged and sterile. | Noncorrosive<br>Some ability to penetrate some synthetic materials. | Toxic /carcinogenic to humans.<br>Lengthy cycle due to aeration requirements.<br>Requires monitoring of the work areas.<br>Requires control and monitoring of discharge into the environment.<br>Flammable and explosive.<br>Reactive with other chemicals.<br>Expensive compared to steam.<br>Incompatible with some materials, e.g., silicone. |

## TABLE 8: HIGH-LEVEL DISINFECTION CHART*

| Active Ingredients*** | Advantages | Disadvantages |
|---|---|---|
| **7.5% hydrogen peroxide****<br>(Lower concentration acceptable if manufacturer's instructions are applicable to its use and the product has a DIN.) | Rapid action<br>Safe for the environment<br>Breaks down into water and oxygen. | Strong oxidant can be corrosive to some materials, e.g., copper, brass, carbon-tipped devices and aluminum.<br>Requires copious rinsing.<br>Must be stored in cool place, protected from light. |
| **7% accelerated hydrogen peroxide**** | Rapid action.<br>Safe for the environment<br>Breaks down into water and oxygen. | Strong oxidant can be corrosive to some materials e.g., copper, brass, carbon-tipped devices and aluminum.<br>May cause irritation and chemical burns to eyes or to mouth and throat if swallowed.<br>May cause slight irritation to skin.<br>Requires copious rinsing.<br>Must be stored in cool dark place. |
| **2% accelerated hydrogen peroxide with 2.5% furoic acid**** | Rapid action.<br>Safe for the environment.<br>Breaks down into water and oxygen. | Strong oxidant can be corrosive to some materials e.g., copper alloys, iron and other heavy metals.<br>Mild irritant to eyes, slight irritant to skin.<br>Requires copious rinsing.<br>Must be stored in cool dark place. |
| **0.55% ortho-phthalaldehyde (OPA)**** | Noncorrosive<br>Less toxic, sensitizing, and irritating than glutaraldehyde.<br>Does not require activation.<br>Stains protein, which may indicate inadequate cleaning/residual protein. | Requires copious rinsing.<br>During reuse, the concentration drops as dilution of the product occurs. In-use life shortens when solution is diluted. |

| Active Ingredients*** | Advantages | Disadvantages |
|---|---|---|
| **Hypochlorite (5000 ppm)**<br>**Must have a valid DIN for HLD** | Rapid action | Corrodes metal; do not use on nonstainless steel, aluminum, silver or chipped enamel.<br>May destroy adhesives with prolonged soaking.<br>Requires copious rinsing.<br>Solution must be made fresh daily.<br>Corrosive to eyes. Severely irritating or corrosive to skin, nose, lungs, throat, and gastrointestinal tract. |

*Contact times are not listed in this table due to product variations. Consult and follow the manufacturer's instructions and recommendations for contact time.
**Check Minimum Effective Concentration (MEC) each day the product is used. Reusable solutions have a limited "in-use life" (often 14-21 days). Dispose of product before expiry of the manufacturer's stated in-use life, according to the manufacturer's recommendations and local regulations.
***Gluteraldehyde is not recommended due to inhalation risks requiring specialized ventilation.

## TABLE 9: INTERMEDIATE-LEVEL DISINFECTION CHART*

| Active Ingredients | Advantages | Disadvantages |
|---|---|---|
| **Isopropyl or ethyl alcohol**<br>**70-95%**<br>(or lower if blended, and claims ILD on label) | Fast acting<br>No residue<br>Nonstaining | Volatile<br>Evaporation may diminish concentration.<br>Difficult to use as an intermediate-level disinfectant because of the need for repeat applications to maintain contact time.<br>Inactivated by organic material.<br>May harden rubber or cause deterioration of glues. |
| **0.5-3% accelerated hydrogen peroxide with TB claim**<br>(concentration depends on LLD claim on label) | Rapid action<br>Safe for the environment<br>Breaks down into water and oxygen | Strong oxidant can be corrosive to some materials, e.g., copper, brass, carbon-tipped devices and aluminum.<br>Requires copious rinsing.<br>Must be stored in cool dark place. |
| **Hypochlorite (1000 ppm)** | Rapid action<br>Readily available | Corrodes metal; do not use on nonstainless steel, aluminum, silver or chipped enamel.<br>May destroy adhesives with prolonged soaking.<br>Requires copious rinsing.<br>Solution must be made fresh daily.<br>Corrosive to eyes. Severely irritating or corrosive to skin, nose, lungs, throat, and gastrointestinal tract. |

* Contact times are not listed in this table due to product variations. Consult and follow the manufacturer's instructions and recommendations for contact time.

## TABLE 10: LOW-LEVEL DISINFECTION CHART*

| Active Ingredients | Advantages | Disadvantages |
|---|---|---|
| **Quaternary ammonium (QUATS)** | Generally nonirritating to hands.<br>Usually has detergent properties.<br>Noncorrosive | Limited use as disinfectant because of narrow microbicidal spectrum. |
| **Hypochlorite**<br>(concentration on label that claims LLD; approximately 100 ppm) | Rapid action<br>Readily available | Corrodes metal; do not use on nonstainless steel, aluminum, silver or chipped enamel.<br>May destroy adhesives with prolonged soaking.<br>Solution must be made fresh daily.<br>Corrosive to eyes.<br>Severely irritating or corrosive to skin, nose, lungs, throat, and gastrointestinal tract. |
| **Isopropyl or ethyl alcohol**<br>(concentration depends on blend, must claim LLD) | Fast acting<br>No residue<br>Nonstaining | Volatile<br>Evaporation may diminish concentration.<br>Inactivated by organic material.<br>May harden rubber or cause deterioration of glues. |
| **0.5-3% hydrogen peroxide**<br>(concentration depends on claim of LLD) | Rapid action<br>Safe for the environment<br>Breaks down into water and oxygen | Strong oxidant can be corrosive to some materials e.g., copper, brass, carbon-tipped devices and aluminum.<br>Requires copious rinsing.<br>Must be stored in cool dark place. |

***** Contact times are not listed in this table due to product variations. Consult and follow the manufacturer's instructions and recommendations for contact time.

## APPENDIX B: COMMON PSE INSTRUMENTS/EQUIPMENT AND DISINFECTION/STERILIZATION LEVEL

### TABLE 11: INSTRUMENT/EQUIPMENT EXAMPLES

| PSE Service Type | Single-Use Disposable Items* | Instruments/ Equipment: Critical Item(s) | Instruments/ Equipment: Semicritical Item(s) | Instruments/ Equipment: Noncritical Item(s) | Instruments/ Equipment: Noncritical Item(s) |
|---|---|---|---|---|---|
| | Discard after Use | Sterilization | High-Level Disinfection | Intermediate-Level Disinfection | Low-Level Disinfection |
| **Hair Services** | • disposable razors<br>• blades used for shaving (e.g., straight razor)<br>• neck strips<br>• needles used for hair extensions and weaves | • straight razors (single-use disposable is recommended) | • hair clipper blades and crochet hooks (if they have nicked the skin) | • shaving razor handles and cradles | • combs<br>• brushes<br>• scissors<br>• hair razors<br>• clipper blades<br>• rollers, clips and caps<br>• service trays<br>• crochet hooks |
| **Nail Services** (manicures and pedicures) | • emery boards (paper or foam)<br>• nail/foot files<br>• foam sandals<br>• toe separators<br>• pedicure blades<br>• disposable applicators for styptic products<br>• paraffin wax<br>• manicure drills<br>• sanding bands<br>• manicure, pedicure burs<br>• disposable cuticle pushers | | • nail clippers<br>• nail nippers<br>• cuticle scissors<br>• cuticle pushers<br>• drill bits<br>• rasp<br>• callus removers (nonporous)<br>• metal foot files | • manicure and pedicure bowls<br>• pedicure footbaths (for recirculating types, the filter and bowl must be removed and disinfected) | • treatment beds<br>• client chairs/benches<br>• neck and arm rests<br>• work counters and table tops<br>• manicure trays<br>• manicure UV-light cabinets |

| PSE Service Type | Single-Use Disposable Items* | Instruments/ Equipment: Critical Item(s) | Instruments/ Equipment: Semicritical Item(s) | Instruments/ Equipment: Noncritical Item(s) | Instruments/ Equipment: Noncritical Item(s) |
|---|---|---|---|---|---|
| | Discard after Use | Sterilization | High-Level Disinfection | Intermediate-Level Disinfection | Low-Level Disinfection |
| **Esthetics** | • facial lancets/ needles<br>• disposable extractor loops<br>• waxing applicators and strips<br>• makeup applicators<br>• dermal rollers<br>• **Note:** eye and lip pencils can be reused if sharpened before each client use. | • lancets<br>• tweezers (if used to break the skin, e.g. remove ingrown hairs)<br>• extractor needle and loop (single-use disposable recommended) | • drill bits<br>• tweezers<br>• glass and metal suction cups<br>• comedone extractor | • water basins for facial vaporizer | • treatment beds<br>• client chairs/benches<br>• neck and arm rests<br>• work counters and table tops<br>• brushes<br>• electrodes<br>• glass ventouses |
| **Piercing** | • gloves<br>• razors<br>• presterilized piercing needles<br>• elastic bands<br>• corks<br>• toothpicks and marking ink<br>• swabs/gauze for cleaning and aftercare | • piercing needles<br>• piercing jewelry<br>• implants<br>• needle receiving tubes (if diameter is sufficient to allow proper cleaning)<br>• insertion needles / tapers<br>• needle pushers<br>• connectors<br>• tongs<br>• clamps<br>• forceps<br>• ring- opening pliers<br>• body-piercing calipers | | • ear-piercing devices (e.g., guns designed to hold a prepackaged sterile stud) | • treatment beds<br>• client chairs/benches<br>• work counters and table tops<br>• neck and arm rests<br>• equipment trays and surfaces<br>• light and drawer handles<br>• buttons / knobs<br>• metal containers |

| PSE Service Type | Single-Use Disposable Items* | Instruments/ Equipment: Critical Item(s) | Instruments/ Equipment: Semicritical Item(s) | Instruments/ Equipment: Noncritical Item(s) | Instruments/ Equipment: Noncritical Item(s) |
|---|---|---|---|---|---|
| | Discard after Use | Sterilization | High-Level Disinfection | Intermediate-Level Disinfection | Low-Level Disinfection |
| **Tattooing / Body Modification** | • single-use needles<br>• metal tubes<br>• needle bars and grips<br>• disposable ink caps and leftover ink<br>• liquid and cups for rinsing between colors<br>• stencils | • reusable ink caps<br>• pigment containers<br>• reusable needle bars and grips<br>• needle bars with new needles soldered on (if reusing)<br>• metal tubes | • ink trays<br>• chucks/clamps | • tattoo machines | • treatment beds<br>• client chairs/benches<br>• work counters and table tops<br>• neck and arm rests<br>• tattoo motor frames<br>• buttons/knobs<br>• cords<br>• lamp handles<br>• equipment trays and surfaces<br>• dirty-instrument containers<br>• spray bottles |
| **Laser Services** | | • tips exposed to blood (e.g., laser tattoo removal) | • eye goggles | • laser wands | • treatment beds<br>• client chairs/benches<br>• work counters and table tops<br>• neck and arm rests |
| **Tanning** | • single-use eye protection | | • eye goggles | | • tanning bed surfaces |
| **Waxing** | • waxing applicators<br>• spatulas<br>• strips<br>• wax/ containers for “double dipping” | • lancets<br>• tweezers (if used to break skin and remove ingrown hairs) | • tweezers | | |

| PSE Service Type | Single-Use Disposable Items* | Instruments/ Equipment: Critical Item(s) | Instruments/ Equipment: Semicritical Item(s) | Instruments/ Equipment: Noncritical Item(s) | Instruments/ Equipment: Noncritical Item(s) |
|---|---|---|---|---|---|
| | Discard after Use | Sterilization | High-Level Disinfection | Intermediate-Level Disinfection | Low-Level Disinfection |
| **Electrolysis** | • gloves<br>• razors<br>• presterilized needles / filaments<br>• cream applicators<br>• machine cord covers<br>• single-use towels<br>• single-use conductive-gel pads<br>• dental lip rolls<br>• swabs used to apply skin antiseptic<br>• cotton balls<br>• gauze<br>• cotton applicators<br>• electrolysis needles or needle and cap units<br>• hypodermic needles and lancets<br>• single-use wooden tongue depressors | • forceps<br>• tweezers (if used to break skin and remove ingrown hairs)<br>• lancets | • needle holders, metal pin devices and plastic needle-holder tips<br>• scissors<br>• eye goggles<br>• tweezers | | • epilators<br>• buttons<br>• knobs<br>• trays<br>• magnifying lamps and arms (or cover with single-use plastic and change after each client)<br>• instrument containers<br>• scissors |

***** Items that absorb moisture cannot be adequately cleaned and disinfected and should be discarded after use on client.

## APPENDIX C: SAMPLE STERILIZATION LOG SHEET FOR PERSONAL SERVICE ESTABLISHMENTS

### TABLE 12: SAMPLE STERILIZATION LOG SHEET

| Personal Service Establishment Name and Address: | Month/Year |
|---|---|
| Equipment Name and Model Number: | Serial Number: |

| Date (dd/mm/yy) | Time | | | Temp. ◦F or ◦C | Pressure | Temp. Sensitive Indicator: Colour Change Observed: Y/N | Operator's Initials | Comments |
|---|---|---|---|---|---|---|---|---|
| | Start | End | Cycle Length | | | | | |
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| | | | | | | | | |

| ☐ Monthly spore strip tests submitted | Date (dd/mm/yy) _____ | ☐ Results | Date (dd/mm/yy) _____ | ☐ Results | Date (dd/mm/yy) _____ |
|---|---|---|---|---|---|

Indicate any corrective action taken on reverse. Use one operation log per sterilizer within the personal service establishment. This record should be kept for five years.

## APPENDIX D: PREPARING HOUSEHOLD BLEACH AS A DISINFECTANT

### TABLE 13: BLEACH MIXTURES

| Disinfection Level Required | When to Use | *How to Mix Bleach Solution |
|---|---|---|
| **High-Level Disinfection**<br><br>1:10 dilution of bleach**<br>(1 part bleach: 9 parts water)<br>≥ 5000 ppm<br><br>**Note: Must have DIN and indicate "HLD" on label**. | **Semicritical**<br>Instrument/equipment that comes into contact with nonintact skin or mucous membrane but ordinarily does not penetrate it.<br>**Note:** Also used to clean surfaces following contact with blood or body fluids, or where sterilization is not possible. | 100 ml bleach with 900 ml water; makes one litre of solution<br><br>Or<br><br>½ cup bleach with 4 cups water |
| **Intermediate-Level Disinfection**<br><br>1:50 dilution of bleach**<br>(1 part bleach: 49 parts water)<br>≥ 1000 ppm | **Some Noncritical**<br>Instrument/equipment that, during routine use, only contacts intact skin, but may accidentally contact nonintact skin or receive blood or bodily fluid splatter. | 20 ml bleach with 980 ml water makes one litre of solution<br><br>Or<br><br>4 tsp. bleach with 4 cups water |
| **Low-Level Disinfection**<br><br>1:500 dilution of bleach**<br>(1 part bleach: 499 parts water)<br>≥ 100 ppm | **Noncritical**<br>Instrument/equipment that does not directly contact the client or only contacts intact skin during routine use.<br><br>**Note:** These items do not contact blood or body fluids. May be used for routine housekeeping. | 5 ml bleach with 2 ½ litres water<br><br>Or<br><br>1 tsp. bleach with 10 cups water |

***** The solution should be made fresh daily to preserve strength.

****** Regular household bleach solution is often 5.25% sodium hypochlorite solution (50, 000 ppm available chlorine). Extra-strength brands such as Clorox Ultra are up to 6.15% sodium hypochlorite solution (60,000 ppm available chlorine).

## APPENDIX E: GLOSSARY

**Approved sharps container:** A dedicated, puncture-resistant, tamper-resistant, leak-proof container, which is impenetrable by sharps. It should have a tight-fitting lid and a clearly identifiable biological-hazard label.

**Antiseptic:** A chemical agent that destroys micro-organisms on human skin or mucosa.

**Applicator:** A device for applying a substance, such as a single-use disposable spatula.

**Bacterial endospore:** A form assumed by some bacteria that are resistant to heat, drying and chemicals. Under the right environmental conditions, the bacterial endospore may revert to the actively multiplying form of the bacteria.

**Blood-borne infections:** Infections spread through infected blood or body fluids, e.g., human immunodeficiency virus (HIV), hepatitis B virus (HBV) and hepatitis C virus (HCV).

**Body fluids:** Fluids produced by the human body, including semen, vaginal secretions, tears, saliva, sputum. People who come in contact with human body fluids may be exposed to health risks (e.g., HIV, HBV and HCV,).

**Body modification:** A deliberate altering of one's body for nonmedical purposes (e.g., piercing, tattooing, permanent hair removal, scarification and branding).

**Classification of Devices:** This includes the following:

> **Critical instrument/equipment:** An instrument/equipment that punctures the skin or enters sterile tissue – including the vascular system – or contacts the puncture site or a sterile instrument before puncturing (e.g. needles, lancets and Pennington clamps). Critical instrument/equipment presents a high risk of infection if contaminated with any micro-organism, including bacterial endospores. Before use, clean meticulously and then sterilize. (The vascular system includes all the veins and arteries.)
>
> **Semicritical instrument/equipment:** An instrument/equipment that comes in contact with nonintact skin or mucous membrane but ordinarily does not penetrate it (e.g., tweezers used to pull hair missed during waxing). Before use, clean meticulously and then high-level disinfect.
>
> **Noncritical instrument/equipment**: An instrument/equipment that does not directly contact the client (e.g., work surface) or contacts only intact skin (but not mucous membranes) during routine use (e.g., hair combs and client beds). Before use, clean and then low- or intermediate-level disinfect.

**Cleaning:** The physical removal of foreign material (e.g., dust and soil) and organic material (e.g., blood, secretions, excretions and micro-organisms). Cleaning removes rather than kills micro-organisms. It is accomplished with water, detergents and mechanical action. Thorough cleaning is required before disinfection and/or sterilization.

**Contamination:** The presence of an undesired material or infectious agent on a surface, clothes, instruments/equipment, dressings, inanimate articles, or substances including water.

**Cross-contamination:** The transfer of contamination from a contaminated source to a previously noncontaminated site.

**Disinfectant:** A chemical agent that kills most disease-producing micro-organisms, but not necessarily bacterial endospores. Disinfectants are applied only to inanimate objects. Some products combine a cleaner with a disinfectant.

**Disinfection:** A process that kills most disease-producing micro-organisms. Disinfection does not destroy all bacterial endospores. Instruments/equipment must be cleaned thoroughly before effective disinfection can take place.

**Disinfection levels:** This includes the following:

**High-level disinfection (HLD):** A process capable of killing vegetative bacteria, mycobacteria (including *Mycobacterium tuberculosis)*, fungi, enveloped (lipid) viruses, non-enveloped (nonlipid) viruses – and some, but not necessarily high numbers of, bacterial endospores. This disinfection level is required when processing semicritical instruments/equipment.

**Intermediate-level disinfection (ILD):** A process capable of killing vegetative bacteria, mycobacteria (including *Mycobacterium tuberculosis*), most fungi, enveloped (lipid) viruses and most non-enveloped (nonlipid) viruses. This disinfection level is required when processing instruments/equipment that during routine use only contact intact skin – but may accidentally contact nonintact skin or receive blood or body fluid splatter (e.g., pedicure foot basins and laser wands).

**Low-level disinfection (LLD):** A process capable of killing most vegetative bacteria, some fungi, enveloped (lipid) viruses and some non-enveloped (nonlipid) viruses. Low-level disinfectants cannot be relied on to kill mycobacteria or bacterial endospores. This disinfection level is required when processing noncritical instruments/equipment or some environmental surfaces.

### TABLE 14: INFECTIOUS AGENTS KILLED BY DISINFECTION

| Disinfection Level Required | Vegetative Bacteria | Mycobacteria | Fungi | Enveloped Viruses | Non-enveloped Viruses | Bacterial Endospores |
|---|---|---|---|---|---|---|
| **High-Level Disinfection (HLD)** | All | All (6 log kill) | All | All | All | Some |
| **Intermediate-Level Disinfection ILD)** | All | All (4 log kill) | Most | All | Most | — |
| **Low-Level Disinfection (LLD)** | Most | — | Some | All | Some | — |

**Drug Identification Number (DIN):** A number provided only by Health Canada that ensures labeling and supporting data have been provided and the product has undergone and passed a review of its formulation, labeling and instructions for use. All disinfectant chemicals used in a PSE need to have a DIN on the label.

**Electrolysis:** The removal of hair from the body by inserting a solid needle into the hair follicle where the hair shaft emerges. An electric current is passed through the needle to destroy the hair follicle and the hair is removed with tweezers.

**Equipment:** Any implement, item, instrument, device, object, or tool used when carrying out personal services.

**EPA:** (U.S.) Environmental Protection Agency

**FDA:** (U.S.) Food and Drug Administration

**Guardian:** The guardian of a child (a person under 19 years old) within the meaning of the *Family Relations Act*.

**Infection:** Entry into and multiplication of infectious micro-organisms in the body.

**Infection prevention and control:** Evidence-based practices and procedures that, when applied consistently, can prevent or reduce the risk of transmission of micro-organisms to operators and clients.

**Instrument:** A hand-held implement, item, instrument, device, object or tool used when carrying out personal services.

**Invasive procedure:** Any procedure intended to break the skin (e.g., tattooing, micropigmentation and piercing) or pass through a mucous membrane.

**Microbiocide**: Any agent detrimental to, or destructive of, the life of microbes or bacterial organisms.

**Micropigmentation:** The permanent or semipermanent imprinting of cosmetic shading (also known as "permanent makeup" or "cosmetic tattooing") using inks or pigments. Micropigmentation may be done using a traditional tattoo machine or an implanter.

**Minor (Child):** A person under the age of 19 (*Age of Majority Act*, Section 1).

**Mucous membrane (mucosa):** Moist tissue that lines some organs and body cavities (such as the eyes, ears, nose and mouth) and secretes mucous (a thick fluid).

**Personal service:** A service to or on the body of another person. This does not include service identified as "restricted activities" under the *Health Professionals Act* and Health Professionals Regulation.

**Personal service establishment (PSE):** An establishment in which a person provides a personal service to or on the body of another person.

**Piercing:** Penetrating the tissue of a client's body to attach or insert jewelry or similar items. Piercing may be done with a piercing needle, piercing gun (earlobe only) or dermal (biopsy) punch.

**Potable water:** Water that is safe to drink and fit for domestic purposes without further treatment.

**Puncture:** Accidental or intentional penetration (break) through the skin or other body tissue.

**Sharps:** Items that may penetrate the skin (e.g., needles, blades, lancets and razors).

**Single-use (disposable) items:** Instruments designated by the manufacturer for single-use only. Single-use items should be discarded appropriately after use.

**Sterilant:** A physical or chemical entity or combination of entities that has sufficient microbiocidal activity to achieve sterility under defined conditions.

**Sterilization:** The complete destruction of all microbial life, including bacteria, bacterial endospores, viruses and fungi. This is required when processing critical instruments/equipment. Before sterilization, instruments/equipment should be meticulously cleaned.

**Styptic product:** A medicated stick, powder or liquid used to stop minor bleeding. The product should be single use or applied with a disposable applicator.

**Tattooing:** The permanent or indelible imprinting of a decorative design into the skin. Tattoo needles on the end of a reciprocating needle bar are used to puncture the skin or mucosa and introduce different coloured inks or pigments.

## APPENDIX F: REFERENCES

*Best Practice Guidelines for Cleaning, Disinfection and Sterilization of Critical and Semicritical Medical Devices in B.C. Health Authorities*. B.C. Ministry of Health, December 2011

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