INFECTION CONTROL
In Practice

OSAP.org The Safest Dental Visit™

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IN EACH ISSUE

Infection Control in Practice focuses on infection prevention and control basics, strategies, and tools to:

- maintain a safe work environment
- limit the spread of contamination
- promote compliance with infection prevention guidelines in dental facilities.

This will help the Infection Control Coordinator (ICC) communicate the importance of **the safestdentalvisit™**

WHAT'S IN THIS ISSUE

TEAM HUDDLE: Instrument Cleaning and Sterilization Quality Assurance

Instrument sterilization using validated equipment and processes represents the highest level of asepsis achievable in a dental setting. Sterilization requires exact conditions to be present on every instrument for every cycle. However, the reliability of the process depends on workers who may make mistakes that interfere with these conditions. This issue explores possible weak links in reprocessing methods and offers options to meet the physical requirements necessary for instrument sterilization.

LEARNING OBJECTIVES

After reading this publication, the reader should be able to:

1. Discuss the physical requirements of sterilization.
2. Review the importance of cleaning before sterilization.
3. Compare options for preparing instruments for sterilization.
4. Create a written plan for instrument reprocessing.

Infection Control In Practice Team Huddle™ is a resource prepared for clinicians by the Organization for Safety, Asepsis and Prevention (OSAP) with the assistance and expertise of its members. OSAP is a nonprofit, independent organization providing information and education on infection control and prevention and patient and provider safety to dental care settings worldwide. ICIP Team Huddle™ is published six times per year and is a trademark belonging to OSAP. OSAP assumes no liability for actions taken based on information herein.

TEAM HUDDLE: Instrument Cleaning and Sterilization Quality Assurance (cont'd)

State-of-the-art steam sterilizers are highly reliable devices, providing perfect conditions for instrument sterilization if operated correctly and if instructions are followed. However, when mistakes are made there may be isolated areas in a sterilizer chamber where the necessary conditions are not achieved, even if a spore test shows a successful cycle. What are these necessary conditions?

Understanding the physical requirements of sterilization helps avoid mistakes that lead to unreliable instrument safety. Instruments must be cleaned, dried, inspected, packaged, and loaded correctly into monitored sterilizers to ensure that every instrument surface is safe to re-use after sterilization. Are these steps always performed correctly in your clinic? Do you have sterility assurance?

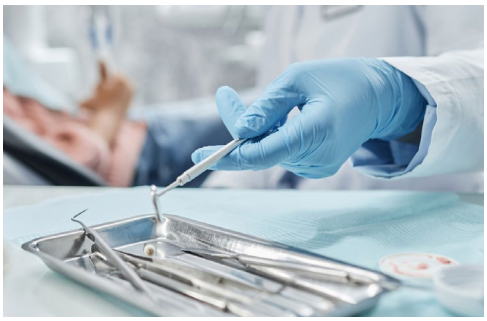
Workplace Scenario: The Situation

Bret, a dental hygienist in a general dental practice, saw "baked on blood-colored debris" on the face of a curette when she opened the sterilized instrument pack. Clearly, this instrument was not properly cleaned before sterilizing. She wondered if the debris and curette were sterile.

Clearly, this instrument was not properly cleaned before sterilizing. She wondered if the debris and curette were sterile. Should she just wipe it off and use it? To be safe, she retrieved another sterilized instrument package, opened it and found the instruments to be clean, and used them to proceed with patient care.

After dismissing the patient, Bret showed the "baked-on debris" instrument to the new reprocessing assistant, noting that several other recently sterilized packs also had instruments with apparent "baked-on" dark matter. The reprocessing assistant said "their spore test results proved that it was sterile".

As they discussed this, Bret watched the assistant reach into the ultrasonic cleaner, remove a bundle of instruments from the metal basket after just a few minutes of the cleaning cycle, and put them directly in a pouch for sterilization. Counter space was tight so the non-sterilized instrument pack was stacked with others on the "clean side" of the counter, next to the sterilizer and the sterilized instrument packs. Bret knew some essential steps were being skipped and the dirty instrument packs must be



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Workplace Scenario: The Situation (cont'd)

isolated from clean items. She asked the assistant to pay more attention to cleaning, rinsing, and drying instruments before sterilization and warned the assistant about reaching into the ultrasonic tub where sharp instruments presented an injury risk. Bret also pointed out that the dirty instruments should be kept on the "dirty side" of the counter away from the sterilized instrument packs.[1,2]

Bret's comments were not welcome. The assistant said it was Bret's job to clean the instruments in her operatory before bringing them to the reprocessing area, and the ultrasonic cleaning was only an extra step, so it could be short. She said she was careful when she reached into the ultrasonic bath. She also explained that drying instruments before wrapping was unnecessary because steam is wet anyway, and that the dirty packs were labeled and "looked new" so they wouldn't get mixed up with the sterile packs.

Scenario: The Situation Assessment

Bret knew the assistant was wrong about where, when, and how to clean and prepare instruments, and the lack of separation of items in the instrument processing area. She also questioned whether a negative spore test proves that a separate instrument, covered in debris, is sterile. But before challenging the assistant again, she looked for documentation.

1

OSHA Regulations

First, Bret reviewed the Occupational Safety and Health Administration (OSHA) Injury and Illness Program[1], which she found in the office's "OSHA Manual." OSHA requires adherence to a written policy to protect workers while reprocessing instruments; protective gloves, gowns and eyewear should be worn while handling contaminated instruments; contaminated instruments must be transported safely; and manufacturers' directions and Centers for Disease Control and Prevention's (CDC) recommendations should be followed.[1,3]

2

CDC Guidelines

Next, looking for guidelines for sterilization assurance, Bret found two CDC documents that addressed instrument reprocessing: Guidelines for Infection Control in Dental Health-Care Settings—2003, and Guideline for Disinfection and Sterilization in Healthcare Facilities (2008).[2,4]

3

Instructions for Use (IFUs)

She also read the manufacturer's instructions for use (IFU) for the sterilizer, which said that instruments must be clean and dry before wrapping. She found the IFU for the ultrasonic cleaning unit, stating that instruments should be at least rinsed before, and must be rinsed and dried after processing and that a cleaning cycle should be at least 10 minutes. The directions for the ultrasonic enzyme solution suggested pre-soaking before ultrasonic cleaning. Bret now felt she had the information she needed to make an action plan.

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Scenario: The Action Plan

Bret made a list of issues to resolve and found some answers to her questions using the references and the resources from CDC, OSHA, the Organization for Safety, Asepsis and Prevention (OSAP), and manufacturers' IFUs. She also thought about how to approach the dental assistant since their previous conversation had been pretty negative.

Bret's goal was to resolve their different opinions, avoid conflict, and ensure they upheld professional and ethical standards. She created a question-and-answer chart to share with the instrument reprocessing assistant.

QUESTIONS Instrument Reprocessing	**ANSWERS** Instrument Reprocessing for Steam Sterilization
Is a visibly soiled instrument considered sterile after being processed in a sterilization cycle?	No. Debris on a surface can interfere with the sterilization of that surface.[2,4,5,6,7]
How does one ensure that every instrument in a load is sterilized?	For steam to reach every instrument surface for the required time, instruments must be clean and dry before processing, the wrap must allow adequate steam penetration, and packs must be loaded to allow steam to circulate effectively. The sterilizer must operate effectively. Follow IFUs to operate, maintain and monitor each sterilizer cycle.[6,7,8]
Should instruments be pre-cleaned (hand scrubbed, wiped, or soaked) and rinsed before entering the ultrasonic cleaner?	Yes. IFUs for ultrasonic cleaners and enzymatic solutions specify pre-cleaning or rinsing instruments before automated cleaning to prevent the drying and adherence of soils to instruments. Removing gross debris reduces contamination and dilution of ultrasonic cleaning solutions.[3,5,6,7,9]
Where should the instruments be pre-cleaned: in the operatory or the reprocessing area?	Debris, soils, and dental materials should be removed from instruments as soon as possible during and after use, to prevent their drying and adherence to instruments. Additional pre-cleaning or treatment may be done before or after transport to the sterilization area.[2]
Is it better to manually clean instruments or use automated cleaners such as ultrasonic cleaners or instrument washers?	CDC states that items must be cleaned using water with detergents or enzymatic cleaners and rinsed and dried before sterilization. Either manual or automated cleaning steps, or both, are acceptable. Some items require manual cleaning, such as suction tips with lumen. Engineered safety devices (automated cleaners) are preferred over manual cleaning for worker safety and efficiency.[1,2,5,6,9]
Must instruments be rinsed and dried after ultrasonic processing?	Yes. Thoroughly rinse off chemicals and bioburden after ultrasonic cleaning, and dry.[6,7,9]
Is it important to physically separate non-sterilized packages from sterilized packages?	Yes. Non-sterilized packs must be isolated from sterilized packs to prevent contamination of sterile packs.[2,5,6,7,9]
How does one find or write Standard Operating Procedures for instrument processing?	Identify (locate) and label physically separate areas for decontamination, packaging, and sterilization. List and describe each step of instrument processing in the correct sequence (instrument flow). Consult OSHA rules, CDC recommendations, and IFUs for instruments, equipment, chemical products, wraps, and sterilizers.[7,9]

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6 Strategies for Reliable Instrument Sterilization

Workers who do not understand the physical requirements of sterilization may fail to prepare instruments and operate equipment incorrectly, compromising the sterility of dental instruments, and putting patients at risk.[2,6,7]

Dental safety standards protect patients by requiring that reusable instruments and items be cleaned and sterilized between uses to prevent the transmission of pathogens between patients (cross-contamination). Successful sterilization of reusable instruments using steam sterilizers requires specific conditions, trained workers, and monitoring. Here are six strategies to implement for reliable instrument sterilization.

Strategy 1: Create a written instrument sterilization protocol, or Standard Operating Procedure (SOP).

To create your SOP, consult OSHA rules for employee personal protection. For patient protection and quality assurance, consult CDC recommendations, OSAP resources, and IFUs for instruments, automated cleaning equipment, instrument cleaning and treatment products, wraps, sterilizers, and monitors. **Include the following steps, adding details, instructions, and locations, in the sequence performed in your practice.**[2,4,5,6,7.]

☑	**Instrument Sterilization Protocol: Sequence of Steps**
	1. Precleaning of gross debris at point of use
	2. Transport and waste management
	3. Holding (presoaking or pretreating) and rinsing
	4. Cleaning (automated process: ultrasonic or instrument washer)
	5. Rinsing/drying after ultrasonic cleaning
	6. Monitoring of cleaning process with soil removal tests
	7. Inspecting, replacing damaged items, reprocessing or manual scrubbing if not clean
	8. Corrosion control, lubricating, and drying
	9. Wrapping and labeling packs
	10. Sterilization
	11. Sterilizer monitoring, recording and policy in case of failures
	12. Storage, transport

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6 Strategies for Reliable Instrument Sterilization

Strategy 2: Organize the instrument reprocessing areas to ensure the instrument flow pathway.[2,4,5,6,7]

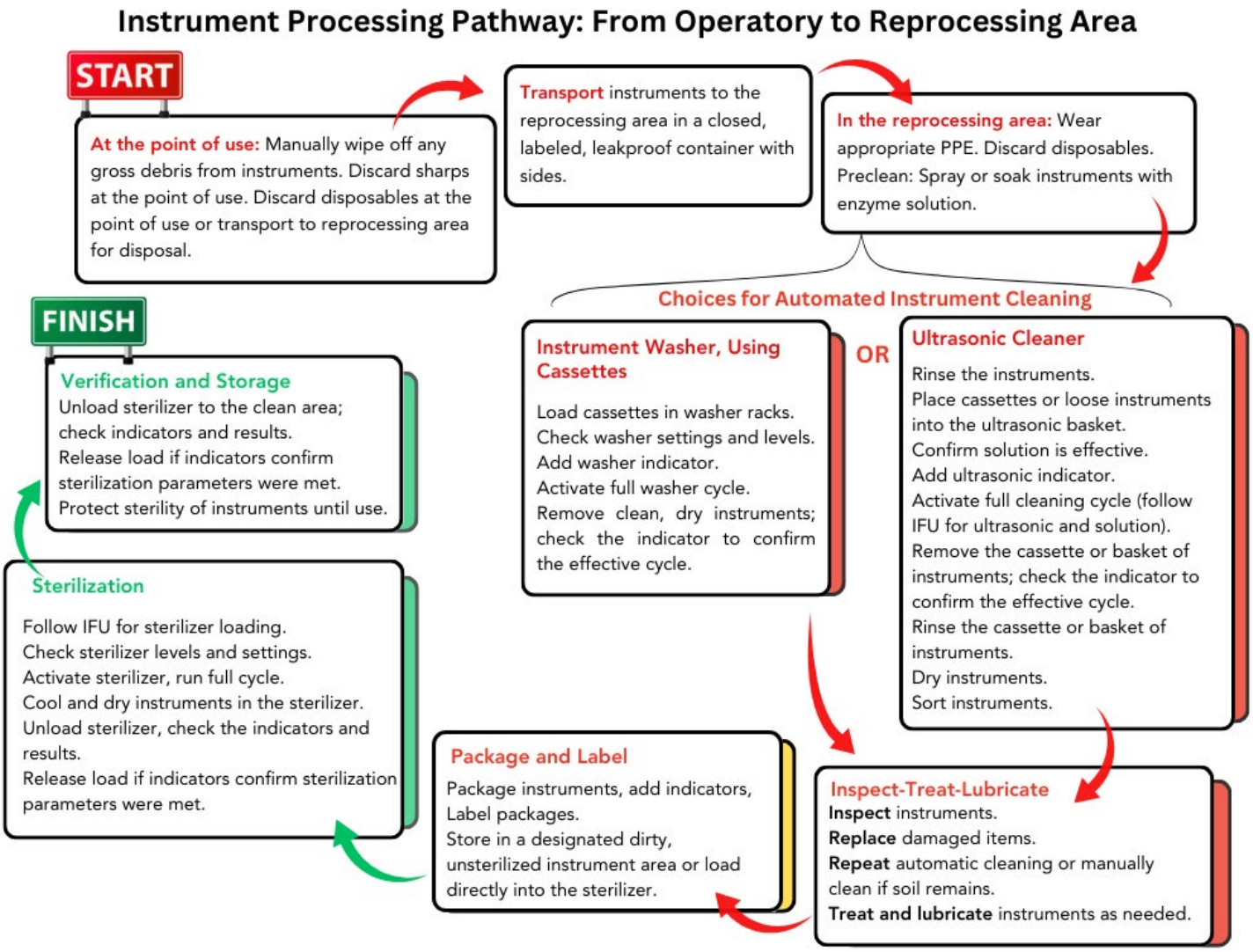
Prevent cross-contamination:

The following graphic separates instrument reprocessing steps by location as they move from the designated "dirty" to "clean" sides of the reprocessing area. Customize the flow of this pathway to suit the physical layout of the reprocessing area in your dental facility.

Include the use of OSHA-required personal protective equipment (PPE). Selecting appropriate automated instrument cleaning devices provides options to decrease instrument handling and helps reduce sharps injury risk.

Identify (locate) and label four physically separate areas:

1. **Dirty Side:** Receiving and cleaning
2. **Dirty Side:** Treatment, lubrication, drying, packaging, labeling, monitoring
3. **Clean Side:** Sterilization
4. **Clean Side:** Storage



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6 Strategies for Reliable Instrument Sterilization

Strategy 3: Clean before sterilization. What are your OPTIONS to achieve this?

Instrument Cleaning Steps: Techniques, Rationale, and Important Reminders

Technique Options	Rationale	Cautions
Manually wipe the instrument at the point of use. May use surfactant, solvent, water, and gauze.	Remove dental materials or debris before they stick, harden, and dry.	Avoid sharps injuries: use a one-handed technique.[1,9]
Scrub/brush before transport to the receiving/cleaning area of reprocessing center.	Clean as soon as possible, prevent drying of debris.	Requires a dedicated sink or container to submerge instruments under the liquid. Avoid contaminating the handwashing sink. Minimize splashing. Wear the required PPE.[1,2,9]
Wet instruments with enzymatic spray or **presoak** (holding) solution **prior to transport** to reprocessing area.	Clean as soon as possible, prevent drying of debris, and begin the cleaning process.	Requires a dedicated sink or protective container to submerge instruments under liquid and contain instruments with the solution during transport. Minimize splashing, avoid spills and contamination of handwashing sink. Wear the required PPE. Follow OSHA rules for safe instrument transport.[1,2,6,9]
Wet instruments with enzymatic spray or submerge in enzymatic **presoak** (holding) solution **in receiving/cleaning area** of reprocessing center.	Clean as soon as possible: loosen and prevent the drying of debris. Holds instruments until the next cleaning step, begins the cleaning process.	Requires sink or protective container to submerge instruments under liquid and contain wet instruments. Minimize splashing, avoid spills and contamination of handwashing sink. Wear the required PPE. Avoid solutions that may interfere with cleaning or harm instruments. Never use glutaraldehyde as a holding solution; it fixes protein to the instruments. Soap and water may corrode instruments. Follow IFUs to select the correct wetting solution.[1,2,6,9]
Rinse instruments after precleaning. If loading into an instrument washer rinsing is not necessary.	Remove enzyme solution and loosen debris prior to loading into the ultrasonic cleaner.	Avoid sharps injuries by using cassettes, cages, baskets, or tongs to handle contaminated instruments. Minimize splashing, avoid spills and contamination of handwashing sink. Wear the required PPE.[1,2,6,9]
Process in an ultrasonic cleaner or instrument washer. **Monitor** cleaning cycles.	Automated cleaners save time and improve safety over manually cleaning instruments. Monitoring for soil removal provides quality assurance for cleaning process.	Avoid cleaning errors and injuries: Follow IFUs for automated cleaning devices. Use recommended cleaning solutions as directed, ensuring that every instrument is submerged and/or has access to the cleaning process. **Do not:** overload cycles, shorten cycles, or reach into the instrument bath with your hands. Use cassettes, cages, or baskets to contain instruments in functional sets, save time, and decrease direct handling and risk of sharps injuries.[6,7]
After ultrasonic cleaning, **rinse and dry** the instruments. This step is not necessary after instrument washer cycles.	Rinse off the enzymatic solution and soil/contamination. Instruments must air dry or be manually dried using a low-linting towel.	Use a non-corrosive rinse. This requires space and time for drying. Manual drying poses a sharps injury risk.[2,7,9]
Inspect instruments after automated and/or manual cleaning.	Inspect for cleanliness and damage, and to organize sets.	Use proper PPE and safe practices to avoid sharps injuries. Unless processed in a disinfector, instruments are not considered disinfected or safe to handle, so the use of PPE is essential. Use magnification and adequate lighting to inspect instruments.[2,7,9]
Reprocess, and/or manually clean any unclean instruments identified upon inspection. Replace damaged, worn instruments. Repeat until instruments pass inspection. **Treat/protect** instruments for corrosion control and lubrication.	Ensure quality control of the cleaning process and instrument integrity. Remove broken or damaged instruments. Protect instruments from damage.	Manually scrubbing instruments may be substituted for automated cleaning but this increases the chances of splash exposure and sharps injury. Best practices recommend manually cleaning instruments only if needed after automated processes are used. If manually brushing or scrubbing instruments, don proper PPE, and submerge instruments in water/cleaner in a dedicated sink or container separate from the handwashing sink. Reduce splashing and avoid sharps injuries.[2,6,7,9]

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6 Strategies for Reliable Instrument Sterilization

Strategy 4: Wrap instrument packs.

Instrument Wrapping Steps: Techniques, Rationale, and Important Reminders

Technique	Rationale	Cautions
Package instruments for sterilization. Wear PPE and use aseptic techniques.	Contain and protect the sterility of instrument sets and protect workers.	Use only Food and Drug Administration (FDA)-cleared wraps, appropriate for the type of sterilizer and fitting the size of the instrument set.
Insert or attach sterilization **monitors**.	Use physical, chemical and biological indicators to monitor sterilization. Use monitors such as Type 5 indicators to record time, temperature, and pressure parameters in every cycle or pack. Insert biological monitors as appropriate.	Follow IFUs for placement of monitors and indicators. Do NOT use instruments if indicators show failure: repackage instruments, and repeat the process, correcting errors. Follow IFUs for failed cycles. Keep records.
Label with date, load, and sterilizer used.	Label packages to identify the package in case of sterility expiration or the need to follow up after a failed spore test.	Follow IFUs for selection, use and labeling of wraps. Hold packages in a designated area on "dirty" side of the sterilization area. [2,5,7,9]

Workflow Tip

Colorful LED light strips can act as visual reminders for dirty side and clean side designated areas in the reprocessing area.

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6 Strategies for Reliable Instrument Sterilization

Strategy 5: Understand what needs to happen inside the sterilizer.

A sterilizer is not a magic box that can make up for poor instrument preparation. Understanding what conditions must be present to sterilize instruments helps workers create those conditions through careful instrument preparation, process management, and equipment operation.

Steam sterilization cycles have **three phases**, and *each one must be effective*.

PHASE 1

Steam Sterilization – Phase 1: Heating/pressurization:

- Air must be removed and water must be converted to steam before sterilization begins.
- Air is removed by gravity displacement or by dynamic air removal (actively moving air by pulses and/or vacuum).
- The machines are calibrated to inject just enough water to create the exact amount of steam needed within the timed cycle.

Extra water droplets on instruments may not convert to steam. Since water can only rise to boiling temperature, this compromises sterility, and may also result in wet packs after the cycle.[7]

PHASE 2

Steam Sterilization – Phase 2: Sterilization cycle:

- Steam sterilization uses saturated steam under pressure for specific times to reach the temperatures required to destroy all life forms.
- Heat kills pathogens, and steam under pressure reaches much higher temperatures than water or air. The high temperatures kill pathogens fast, reducing the time needed to sterilize instruments.
- The presence of debris, water, air, or other instruments or items can prevent hot steam from reaching and sterilizing a surface.
- Preset cycles are calculated to achieve sterilization on all instrument surfaces with a margin of safety if IFUs are followed: instruments must be cleaned, dried, packaged, and loaded correctly and the equipment must be operated correctly.
- Instruments must be sterilized using the correct cycle. Consult IFUs to determine the correct cycles for every item.
- A breach in any of these steps compromises sterility assurance.[2,4,6,7]

Typical preset sterilization cycles[7]

Setting	Range
Temperature	121°C (250°F) for 15 – 30 min. 134°C (273°F) for 3 – 10 min.
Pressure	15 or 30 pounds per square inch (psi)

PHASE 3

Steam Sterilization - Phase 3: Depressurization/cooling:

- Pressure is released (vented) manually or automatically by opening the door, or by pulsing or vacuum processes.[7]

6 Strategies for Reliable Instrument Sterilization

Strategy 6: Operate and monitor the sterilizer.

Operate and Monitor the Sterilizer: Techniques, Rationale, and Important Reminders

Technique	Rationale	Cautions
Load sterilizer according to IFUs of the equipment, allowing space for steam to circulate.	Steam must circulate inside the chamber to reach every pack and penetrate to sterilize every instrument surface within a set time.	Avoid overloading the sterilizer. Separate packs from chamber walls.[2,6,7]
Operate the sterilizer for a complete cycle.	Incomplete (short) cycles breach instrument sterilization protocols, leading to unreliable results.	Operate equipment according to IFUs and observe indicators for errors and failures. Do not use instruments if errors are suspected or known.[2,7,9]
Decompress/vent chamber; allow instruments to cool and dry before handling.	Allow wraps to cool and seal in sterility before handling	Removing or handling hot, wet packs can wick germs into the pack, compromising sterility.[2,7,9]
Monitor sterilizers at least weekly with biological monitors (spore tests) and every cycle with Type 5 indicators.	Validate sterilization, and keep records of validation.	Monitor sterilizers, and keep logs of monitoring to protect the office from liability and confirm that the equipment operates properly.[2,5,6,7]
Release the load only if sterilization parameters were reached. Document the load and parameters on a sterilization log.	Validate that indicators and monitors were used and read, and that instruments are safe to use. While Type 5 indicators are not required, they provide a high level of quality assurance between weekly spore testing.	Do NOT use instruments if all parameters were not met. Follow IFUs and/or contact the manufacturer to determine the error, correct the error and sterilize the instruments. Repair or replace the sterilizer as needed.

Got Questions?

Are you seeking answers and resources to help solve infection control and safety challenges? OSAP maintains a repository of dental infection control and safety **Frequently Asked Questions (FAQs)**.

Check out OSAP's resources webpage **osap.org/resources** and discover an extensive knowledge base to support your IPC programs and trainings. You can also submit dental infection prevention and control and safety questions to our subject matter experts and receive a response within two business days.
ASK OSAP osap.org/ask-osap

"We have all kinds of Regulatory Guidelines floating around."

KEY TAKEAWAYS

1. Steam sterilization requires equipment that generates steam under pressure for the time and at the temperature needed to kill all life forms.
2. Steam must touch every surface of every instrument for the required time.
3. Debris, water, air, and other items or instruments can block steam, preventing sterilization.
4. Sterilization success depends on proper instrument cleaning, preparation, and loading as well as functioning equipment.
5. Plan, manage, monitor, and record each step of instrument processing.
6. Calibrate your safety team based on why each step is important and how to do it.

Glossary of Terms

Sterilization: destruction of all life forms.

Bioburden: the number of bacteria living on a surface that has not been sterilized.

Gravity displacement (passive replacement): before a sterilization cycle, steam enters the sterilizer chamber and rises to the top because steam has lower density than air. Steam eventually replaces the air that is forced out through a drain vent.

Dynamic air removal: a process of actively (forcefully) removing air from a sterilization chamber by pulses and/or vacuum pressure).

Instrument flow pathway: the directional movement of instruments in a specific sequence through the instrument reprocessing process.

Soil removal tests: test strips with synthetic soil that is visibly removed during an effective cleaning cycle of an automated instrument cleaner such as an ultrasonic cleaner or instrument washer.

TEAM HUDDLE DISCUSSION GUIDE

1. Is a visibly soiled instrument considered sterile after being processed in a sterilization cycle?
2. How and why does debris, water, or air on an instrument prevent sterilization?
3. Do all workers understand and agree on the office's instrument cleaning protocol?
4. Who is in charge of instrument processing in your office?

Links to Resources

1. Department of Labor, Occupational Safety and Health Administration. Title 29, CFR Part 1910.1030 **osha.gov/laws-regs/regulations/standardnumber/1910** Accessed July, 2023
2. Centers for Disease Control and Prevention. *Morbidity and Mortality Weekly Report Recommendations and Reports* December 19, 2003 / 52(RR17);1-61, Guidelines for Infection Control in Dental Health-Care Settings—2003 **d.gov/mmwr/preview/mmwrhtml/rr5217a1.htm** Accessed July, 2023
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7. Miller, C H. Instrument Reprocessing. *In Infection Control and Management of Hazardous Materials for the Dental Tea*m. 7th ed, 2023. Elsevier, St. Louis. ISBN: 978-0-323-76404-9
8. Molinari, JA., Harte Jennifer A., Sterilization Procedures and Monitoring. *In Cottone's Practical Infection Control In Dentistry* 3rd ed., 2010. Lippincott Williams and Wilkins. ISBN 978-0-7817-6532-9
9. Organization for Safety, Asepsis and Prevention. From Policy To Practice: OSAP's Guide to the CDC Guidelines. Updated 2022. ISBN-13: 978-0-9752519-4-2
10. American Society of Heating, Refrigerating and Air-Conditioning Engineers. ASHRAE Standard 241-2023, Control of Infectious Aerosols. ISSN 1041-2336B. **ashrae.org/241** Accessed July, 2023

In Case You Missed This:

Dental Infection Control and Awareness Month (DICAM)

If you missed access to OSAP's 2023 Dental Infection Control and Awareness Month (DICAM) campaign, OSAP members can login to **osap.org** and download the DICAM toolkit.

Discover and download the series of helpful checklists on dental instrument cleaning, reprocessing, sterilization, and monitoring and storage ...and many more topics!

Follow this pathway at osap.org **Home** > **Resources** > **Dental Infection Control Awareness Month (DICAM)**.

What's Wrong With This Picture?

Can you identify the breach in occupational safety in this image of packaging contaminated dental instruments prior to sterilization?

Answer: The dental assistant's examination gloves do not provide adequate puncture resistance when handling sharp instruments and present a safety risk. Heavy-duty gloves are to be worn when handling sharp, contaminated instruments during all instrument removal, cleaning, and packaging procedures to reduce the risk of sharps injury.

Take the Silent Video Challenge!

The Scenario: Transporting Contaminated Instruments

In this video scenario following patient treatment, what steps are missing in preparing contaminated instruments for transport to the reprocessing area? **youtu.be/nQgRdmGbvig**

Challenge your knowledge and compare to the lesson below.

The Lesson: During operatory cleanup following patient treatment, the assistant must place the procedure tray of contaminated instruments in a labeled, covered, leakproof container with sides before transporting them to the instrument reprocessing area. The needle should be removed from the used syringe and disposed of in a locked sharps container in the operatory. The dental assistant should use heavy-duty gloves and tongs or cotton pliers to safely handle sharp, contaminated instruments during all instrument removal, cleaning, and packaging procedures to reduce the risk of sharps injury. All disposables should be removed from the cassette.

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Educational Spotlight: 2024 OSAP Boot Camp

The OSAP Dental Infection Control Boot Camp is a comprehensive course grounded in federal standards, evidence-based guidelines, and best practices.

Boot Camp is your key to understanding how to implement CDC guidelines and OSHA standards and how to address infection control and prevention challenges in the practice setting.

WHEN?

- February 4, 2024: **Antibiotic Stewardship Summit**
- February 5–7, 2024: **OSAP Boot Camp**
- February 8, 2024: **Federal Service Session**

WHERE?

Crowne Plaza Atlanta Perimeter at Ravinia, Atlanta, GA

WHY ATTEND?

1. **Refresh or ignite your expertise**. Whether you're a newcomer in this essential field, an experienced professional seeking a refresher, or someone undergoing a career transition, OSAP Boot Camp is a gateway to elevate your dental infection control expertise and recharge your confidence.

2. **Fulfill CE toward certification**. Completion of the course fulfills one of the educational requirements to be eligible to take the Certified in Dental Infection Prevention and Control® (CDIPC®) and/or Dental Industry Specialist in Infection Prevention and Control®(DISIPC®) certification exams, the only infection prevention and control certifications in the U.S. developed explicitly for dentistry.

3. **Build Connections.** The in-person course is also an opportunity to connect with speakers, exhibitors, and sponsors. The sessions will be recorded, and all registered participants will get access to the on-demand recordings for flexible learning.

REGISTRATION **Register** before December 4 for early bird savings!

View In-person and On-demand Format and Features Here:
site.pheedloop.com/event/osapbootcamp/registration/format-features

GET YOUR CE CREDIT ONLINE

Follow the instructions below to receive 1 hour of CE credit FREE to OSAP members. OSAP is an ADA CERP Recognized Provider.*

Step 1: Go to **osap.mclms.net/en/package/12357/view** to register or purchase the course.

Step 2: Log in to your OSAP member account or create a new user account.

Step 3: Complete the registration form. OSAP members FREE! Non-members $20.

Step 4: Complete the online course. You must pass with 7 out of 10 correct answers. When completed, you will receive an email with your CE certificate. The CE certificate will also be available in your new OSAP Infection Prevention & Safety CE Center account under MY ACCOUNT > MY CERTIFICATES.

QUESTIONS TO ONLINE QUIZ:
Select the most correct answer

1. Steam sterilization requires three physical conditions (parameters). Identify the answer below that is NOT one of the required conditions.
   a. Time
   b. Air
   c. Temperature
   d. Pressure (steam)

2. The presence of "baked on" debris on an instrument after being autoclaved indicates:
   a. inadequate cleaning before sterilization.
   b. short sterilization cycle.
   c. long sterilization cycle.
   d. over-processing in the ultrasonic cleaner.

3. Where should one place labeled instrument packs that are ready to load into the sterilizer?
   a. Near the sterilizer on the clean side.
   b. Near the sterilizer on the dirty side.
   c. Anywhere, since they are packaged and ready to process.
   d. It is illegal to put them anywhere except inside the sterilizer.

4. Identify the best resource for recommended guidance on instrument sterilization quality assurance.
   a. IFU for instrument washers
   b. OSHA Bloodborne Pathogens Standard
   c. EPA's Rule on Instrument Sterilization
   d. CDC recommendations for cleaning and sterilizing equipment and products

5. Identify the one factor that does NOT interfere with steam sterilization.
   a. Debris on an instrument surface.
   b. Overloading an instrument pack.
   c. Space for steam to circulate.
   d. Air in the chamber.

6. Identify the correct statement below regarding instrument cleaning.
   a. OSHA recommends hand scrubbing instead of automated instrument cleaning.
   b. CDC prefers hand scrubbing over automated instrument cleaning.
   c. CDC recommends automated instrument cleaning.
   d. CDC does not allow hand scrubbing instruments.

7. When does the CDC recommend debriding or pre-cleaning instruments?
   a. As soon as possible to prevent the drying of debris.
   b. Within 2 hours after use.
   c. Routinely after processing in an automated cleaner.
   d. Pre-cleaning is not necessary.

8. During instrument preparation, there are several times when rinsing is needed. Identify the situation (step) where instruments do NOT need to be rinsed.
   a. After hand scrubbing, before entering the ultrasonic cleaner.
   b. After processing in a full cycle of an instrument washer.
   c. After processing in an ultrasonic cleaner.
   d. After pre-cleaning with an enzyme spray, before the ultrasonic cleaner.

9. When pre-cleaning instruments by soaking, follow all but one of the procedures below. Identify the incorrect protocol.
   a. Use a protective sink or container to submerge instruments.
   b. Use surface disinfectant or glutaraldehyde as a presoak.
   c. Use enzymatic solution as directed.
   d. Wear protective PPE and avoid contaminating handwashing sink.

10. Identify the correct statement about inspecting instruments before packaging.
    a. Inspect instruments weekly to monitor their condition.
    b. Inspection is not necessary if cleaning instructions are followed.
    c. Use adequate light and magnification for instrument inspection.
    d. The purpose of instrument inspection is to count instruments.

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FROM THE Editor's Desk

New ASHRAE Standard 241 to Control Infectious Aerosols

For dentists trying to address office air quality, the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) has developed a new enforceable standard, to control indoor airborne pathogens: a new building readiness plan with clear guidelines. Key elements are:

- Recommendations provide definitive mathematical models for designing and monitoring indoor air quality (IAQ).
- In addition to minimum ventilation rates for buildings, are new enhanced requirements for an infection risk management mode (IRMM) that apply during times of higher levels of infection risk.
- Requirements for IRMM for a space are based on number of occupants. They are stated as equivalent clean airflow rate per occupant of pathogen free air, and can be met by outside air, filtered recirculated air, and by disinfected air.
- Requirements for assessment, planning, implementation, and verification of airborne infection risk reduction systems apply to existing and new buildings.
- There are special requirements for residential and healthcare facilities used by infected and/or vulnerable occupants.

This Standard defines the difference between standards for "normal" times and creates a special operating mode (readiness) for use when conditions warrant.

It considers multiple air quality control methods and expresses requirements in quantities per number of occupants in specified areas. There are newly expanded requirements for filter and air cleaner testing, utilizing effective upgraded technology to ensure performance and safety.[10]

For additional details or to purchase Standard 241 visit **ashrae.org/241** or contact ASHRAE Customer Contact Center at 1-800-527-4723 (United States and Canada), 404-636-8400 (worldwide) or fax 678-539-2129.

Looking Ahead:

OSAP 2024 Annual Conference!

When: May 30–June 1, 2024
Where: At the Westin La Paloma Resort and Spa, Tucson, AZ.

Mark your calendar, share the dates and stay tuned for updates. The 2024 Annual Conference will mark the **40th year of OSAP!**

The Annual Conference is a unique opportunity for members of the oral healthcare community to immerse themselves in high-caliber educational sessions, networking events, and knowledge-sharing with colleagues.

Gain insights into the latest scientific findings and evidence-based practices in dental infection prevention, occupational health, and patient safety.

OSAP-DALE Foundation Dental Infection Prevention and Control Certificate™

A comprehensive online educational program for anyone who wants to learn more about dental infection prevention and control. Earning the certificate demonstrates an in-depth understanding of CDC guidelines and OSHA standards related to standard precautions.

1. Complete the OSAP-DALE Foundation online CDEA® module **Understanding CDC's Summary of Infection Prevention Practices in Dental Settings** ($30)
2. Complete the **OSAP-DALE Foundation Dental Infection Prevention and Control eHandbook™** ($195)

Bundle Price $215* **Get the Bundle!**

*Discounts are available for the purchase of multiple courses and groups of learners.

Those who successfully complete the program receive a certificate of completion and a digital badge that can be shared on social media, emailed to friends or colleagues, or downloaded.

dentalinfectioncontrol.org/education

For certification opportunities see page 18, Set Yourself Apart.

OSAP is on the MOVE in 2023

Thanks to all who came by the OSAP booth to say Hello! at the American Association of Dental Office Management (AADOM) Annual Conference in September.

If you will be attending the **National Network for Oral Health Access** (NNOHA) Conference in November, we look forward to meeting you at:

NNOHA Annual Conference
Sheraton Denver Downtown Hotel
Denver, CO

DENTAL INFECTION CONTROL EDUCATION & CERTIFICATION®

SET YOURSELF APART

Education

OSAP-DALE Foundation Dental Infection Prevention and Control Certificate™

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Developed by OSAP and the DALE Foundation

Certification

Dental Industry Specialist in Infection Prevention and Control® (DISIPC®)

Intended for those who play important roles in dental infection prevention and control, such as practice managers, sales representatives, customer service personnel, and service technicians who do not provide clinical care. Earning DISIPC demonstrates knowledge related to infection control guidelines and standards.

Developed by OSAP and DANB

Certified in Dental Infection Prevention and Control® (CDIPC®)

Intended for the dental team, educators, consultants, and others with a clinical background. Earning CDIPC certification demonstrates an advanced level of infection control guidelines and standards knowledge and the analytical and critical-thinking skills to apply them in various scenarios.

Developed by OSAP and DANB

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