

Does Your Instrument Cleaning Process Need an Update?

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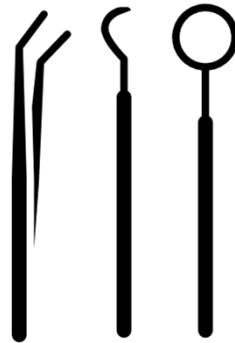
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Course Overview

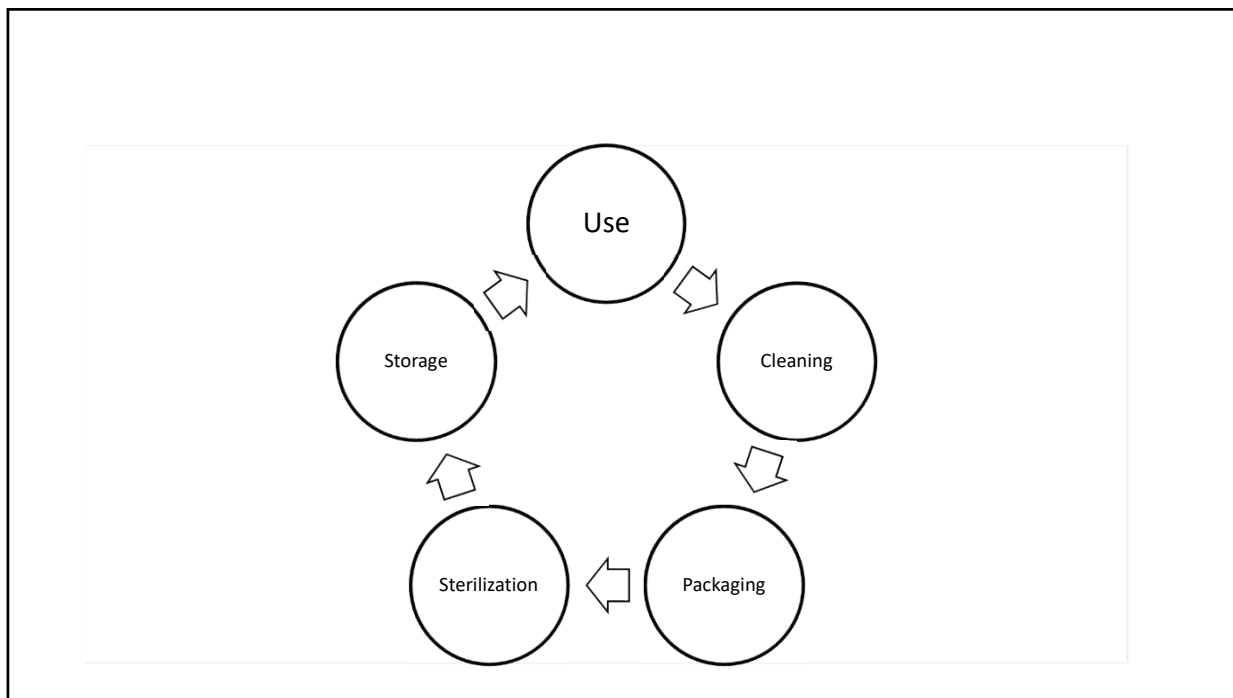
- Discuss importance of instrument cleaning prior to sterilization
- Compare instrument cleaning methods
- Identify the various components of instrument cleaning



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Instrument Reprocessing Begins with Cleaning

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OSHA says:

1910.1030(d)(4)(iii)(E)
 Reusable sharps that are contaminated with blood or other potentially infectious materials shall not be stored or processed in a manner that requires employees to reach by hand into the containers where these sharps have been placed.

1910.1030(d)(2)(viii)
 Immediately or as soon as possible after use, contaminated reusable sharps shall be placed in appropriate containers until properly reprocessed. These containers shall be:

1910.1030(d)(2)(viii)(A)
 Puncture resistant;

1910.1030(d)(2)(viii)(B)
 Labeled or color-coded in accordance with this standard;

1910.1030(d)(2)(viii)(C)
 Leakproof on the sides and bottom; and

https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_id=10051&p_table=STANDARDS

UNITED STATES DEPARTMENT OF LABOR
 Occupational Safety and Health Administration

OSHA ▾ STANDARDS ▾ TOPICS ▾ HELP AND RESOURCES ▾

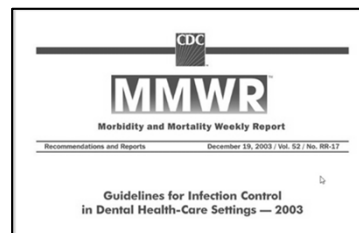
Regulations (Standards - 29 CFR) - Table of Contents

| | |
|--------------------|--|
| • Part Number: | 1910 |
| • Part Title: | Occupational Safety and Health Standards |
| • Subpart: | 2 |
| • Subpart Title: | Toxic and Hazardous Substances |
| • Standard Number: | 1910.1030 |
| • Title: | Bloodborne pathogens. |
| • Appendix: | A |
| • GPO Source: | e-CFR |

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CDC says:

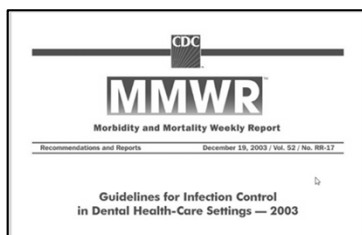
Cleaning should precede all disinfection and sterilization processes; it should involve removal of debris as well as organic and inorganic contamination. Removal of debris and contamination is achieved either by scrubbing with a surfactant, detergent, and water, or by an automated process (e.g., ultrasonic cleaner or washer-disinfector) using chemical agents. If visible debris, whether inorganic or organic matter, is not removed, it will interfere with microbial inactivation and can compromise the disinfection or sterilization process (244,249–252).



[RR5217 Dental Front.pmd \(cdc.gov\)](#)

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CDC also says:

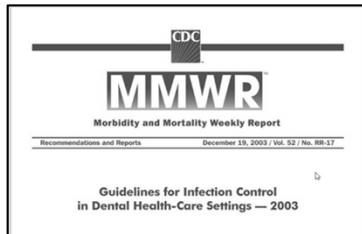


Considerations in selecting cleaning methods and equipment include 1) efficacy of the method, process, and equipment; 2) compatibility with items to be cleaned; and 3) occupational health and exposure risks

[RR5217 Dental Front.pmd \(cdc.gov\)](#)

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CDC also says:



Use of automated cleaning equipment (e.g., ultrasonic cleaner or washer-disinfector) does not require presoaking or scrubbing of instruments and can increase productivity, improve cleaning effectiveness, and decrease worker exposure to blood and body fluids. Thus, using automated equipment can be safer and more efficient than manually cleaning contaminated instruments (253).

[RR5217 Dental Front.pmd \(cdc.gov\)](#)

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CDC also says:

If manual cleaning is not performed immediately, placing instruments in a puncture-resistant container and soaking them with detergent, a disinfectant/detergent, or an enzymatic cleaner will prevent drying of patient material and make cleaning easier and less time-consuming. Use of a liquid chemical sterilant/high-level disinfectant (e.g., glutaraldehyde) as a holding solution is not recommended (244). Using work-practice controls (e.g., long-handled brush) to keep the scrubbing hand away from sharp instruments is recommended (14).

[RR5217 Dental Front.pmd \(cdc.gov\)](#)

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CDC also says:

To avoid injury from sharp instruments, DHCP should wear puncture resistant, heavy-duty utility gloves when handling or manually cleaning contaminated instruments and devices (6). Employees should not reach into trays or containers holding sharp instruments that cannot be seen (e.g., sinks filled with soapy water in which sharp instruments have been placed). Work-practice controls should include use of a strainer-type basket to hold instruments and forceps to remove the items. Because splashing is likely to occur, a mask, protective eyewear or face shield, and gown or jacket should be worn (13).

[RR5217 Dental Front.pmd \(cdc.gov\)](#)

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Application of these guidelines

- Transporting instruments
 - Closed, puncture resistant, color-coded, leakproof container
 - Not loose on an open tray
 - Trays with locking lids
 - For loose instruments and cassettes
 - Tubs with locking lids
 - For larger cassettes
 - Color code or label with biohazard symbol
 - One container per treatment room
 - Disinfect between uses with surface disinfectant



Source: YouTube



Source: Hufriedy Group



Source: Zirc



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Application of these guidelines

- Instruments should be placed in a container for pre-soaking prior to cleaning.
- Prevent blood and debris from drying on the instruments and other items
 - Separate container
 - Ultrasonic unit



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Difficult to clean instruments

- Blood – especially dried blood
 - Enzymatic pre-treatment gel or foam
 - Heparinized solution – presoak only
 - ONLY in separate container not in ultrasonic
 - ~2cc Heparin added to solution
 - Very effective for surgical instruments



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Difficult to clean instruments

- Surgical suction tips
- Instruments with serrated tips
 - Bone files



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Instrument Washers

- Types
 - Washers
 - Thermal disinfectors
 - Water quality may be an issue
 - **NO DISHWASHERS!!!**
 - Non-FDA cleared medical devices
 - Can't use instrument cleaning solutions



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Instrument Washers

- Advantages
 - Less handling of instruments
 - Automated process (clean, rinse, dry)
- Disadvantages
 - Cost
 - Space requirements
 - Cycle time



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Ultrasonic Cleaners

- Counter/table-top
- Recessed
- Wide variety of sizes - capacity
 - Capacity
 - Loose instruments vs. cassettes/containers
 - Always use mesh basket for loose instruments
 - Types of instruments
 - Surgical, hygiene, restorative



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Ultrasonic Cleaners

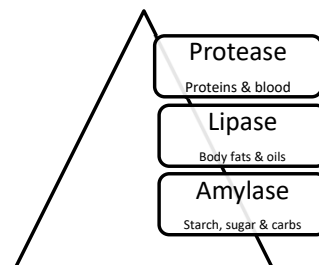
- Load capacity – MFU
- Cycle times – MFU
- Heated vs. non-heated cycle
- Maintenance
 - Testing for efficacy
 - Foil test
 - Cleaning indicators



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Ultrasonic Cleaners

- Solutions
 - General purpose
 - Single or dual enzyme
 - Triple enzyme



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Ultrasonic Cleaners

- Liquid vs. Tablets
 - Follow MFU's for dilution
- Multi-purpose solutions
 - Some can also be used for evacuation systems
 - Follow MFU's



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PPE



Appropriate PPE must be worn when cleaning instruments.

- Respiratory protection – ASTM level 3 mask
- Protective eyewear – full face shield
- Heavy duty utility gloves – puncture resistant
- Protective clothing – scrub jacket, gown, lab coat

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Inspection after cleaning

- All instruments must be checked for remaining debris
 - If debris present
 - Selectively hand scrub
 - Run through another cycle
 - Troubleshoot protocol
 - Prevent blood/debris from drying on instruments
 - Troubleshoot the instrument cleaner/washer



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Thank You!



Home - Brandmax

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