



Step by Step

Instrument Processing: Putting It All Together

All that you've learned so far about cleaning, preparing, packaging, sterilizing, and storage comes together to create a protocol for processing reusable patient care items.

Remove contaminated items from the operatory.

- 1 To prepare the operatory for the next patient, safely remove contaminated materials. Discard all contaminated single-use disposable items (see "Managing Medical Waste," p. 70-72, for details on disposal).
- 2 Place reusable patient-care items in a leak-proof, puncture-resistant container with solid sides and bottom.
- 3 Cover the container to prevent accidental exposures.
- 4 Walk the container of contaminated reusable instruments to the designated instrument processing area.
- 5 If instruments will be cleaned immediately, proceed to Step 9.

If instruments cannot be cleaned immediately, use a holding solution.

- 6 Once in the processing area, add a non-corrosive solution containing a surfactant — like an enzymatic presoak/cleaner or dishwashing detergent — to the transport container.

— or —

Alternatively, don puncture-resistant utility gloves and carefully transfer the contaminated instruments from the transport container to a previously prepared holding solution contained in a hard-walled, spill-proof container. Be sure the instruments are immersed in the solution.

- Change holding solution at least twice each day, more often if it is cloudy or visibly contaminated.
- Thoroughly clean and decontaminate the container on a routine basis.

When instruments are ready to be cleaned...

- 7 Don puncture-resistant utility gloves, face and eye protection, and protective apparel.
- 8 If you used a holding solution...
 - Use forceps to remove loose instruments. Even with utility gloves in place, do not reach into the container with your hands.
 - Rinse items under running water to remove solution and any loose debris from instrument surfaces. **NOTE:** Rinsing is important. Your holding solution may not be compatible with your automated cleaning unit.

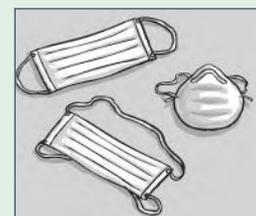
Clean the instruments...

- 9 Proceed according to instructions for the method of cleaning you will be using: ultrasonic cleaning, instrument washer/washer-disinfector, or handscrubbing (see p. 54).

PPE in Processing Patient-Care Items

When processing contaminated instruments, have puncture-resistant utility gloves, face and eye protection, and protective apparel in place to prevent sharps injuries and splashes to skin, nose and mouth, eyes, and street clothes.

Thoroughly wash and dry hands after removing utility gloves.



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Prepare and package instruments for heat sterilization

- 10 With utility gloves still in place, apply anti-corrosive agents as directed by the manufacturer of the instruments to be sterilized (for example, to non-stainless items that will be steam-sterilized).
- 11 Separate instruments into functional sets and add any patient care items that will be needed for treatment (such as cotton rolls or gauze).
- 12 Wrap, bag, or otherwise package instrument sets. Only use material that has been designed for use in heat sterilizers, and be sure the packaging material is compatible with the method of heat sterilization you will be using (autoclave, dry heat, or unsaturated chemical vapor).
- 13 Include a chemical indicator inside each instrument pack. Once per week, place a biological indicator (spore test) inside one instrument pack to be sterilized. (See “Sterilization Monitoring,” p. 56-8.)
- 14 Seal each instrument pack. If the chemical indicator inside the package is no longer visible, place another on the outside of the pack. (See “Routine Sterilization Monitoring,” p. 56.) Label the package as described on p. 50. Don't use water-soluble ink.

Sterilize the wrapped instruments

- 15 Load the sterilizer according to the manufacturer's instructions. Only use devices that are cleared by the FDA for sterilization. Do not overload the chamber.
- 16 Select and run the sterilization cycle. Check gauges for proper operating parameters (e.g., time, temperature, pressure). Do not open the chamber door while the sterilizer is operating.
- 17 After the cycle, allow instrument packets to dry (if sterilized using steam) and/or cool before handling.
- 18 Check external chemical indicators for proper reaction. Retrieve biological indicators for incubation and analysis.
 - Do not use instrument packs if mechanical or chemical indicators suggest sterilizer malfunction.
 - If a spore test (biological indicator) comes back positive, follow instructions for “Troubleshooting a Sterilization Failure,” p. 58.

Distribute or store sterile packs

- 19 Store sterile packs or distribute to chairside. Leave packaging intact until instruments are ready to be used in patient care.
- 20 Prior to use in patient treatment, inspect all packages containing sterile supplies to verify that the packaging material has not become torn, punctured, or wet. Damp packages are not considered sterile.
 - If a sterilized instrument pack is dry and intact, open it at chairside and use its contents during patient care.
 - If a sterile pack has been compromised, do not use the instruments inside for patient care. Instead, clean and repackage the instruments and subject the pack to another sterilization cycle.



After the cleaning cycle, inspect items for residual debris and damage.



Wearing heavy-duty utility gloves, pat cleaned instruments dry under several layers of disposable paper towels.



Pack and seal cleaned instruments in material that is compatible with the heat sterilizer. This pouch will be placed in an autoclave.



Load instrument packs in the sterilizer chamber. Leave room between packs so the sterilizing agent can contact all sides of every pack.



Store sterile instrument packs away from contaminants, preferably in a closed or covered cabinet or drawer.