MUSCAT ENDOSCOPY ACADEMY

Endoscope reprocessing

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Definition

- Endoscope processing is the process of cleaning and disinfecting reusable endoscopes before patient use

- To reduce the risk of infections using these reusable devices and to ensure the highest level of patient care and safety.

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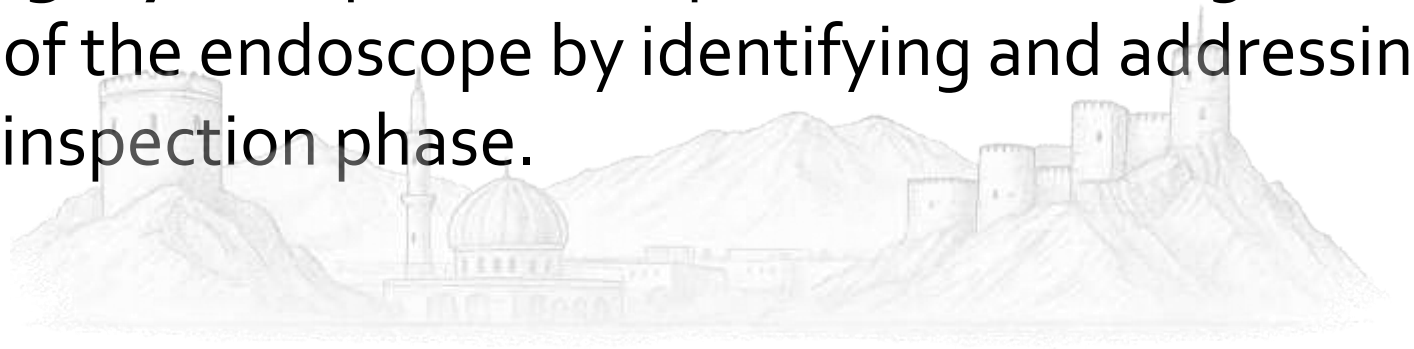
Importance of proper reprocessing

- **Patient safety:** Proper reprocessing is essential to prevent the transmission of dangerous pathogens and protect patients from infection.
- **Compliance:** Hospitals must follow strict guidelines from manufacturers and professional societies to ensure the effectiveness of the process.
- **Device integrity:** The process helps ensure the long-term usability and safety of the endoscope by identifying and addressing damage during the inspection phase.



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Steps of Reprocessing

- Pre-cleaning
- Leakage test
- Manual cleaning
- Rinse after cleaning
- Visual inspection
- High-level disinfection(manual or automated)
- Rinse after high level disinfection
- Drying
- Storage

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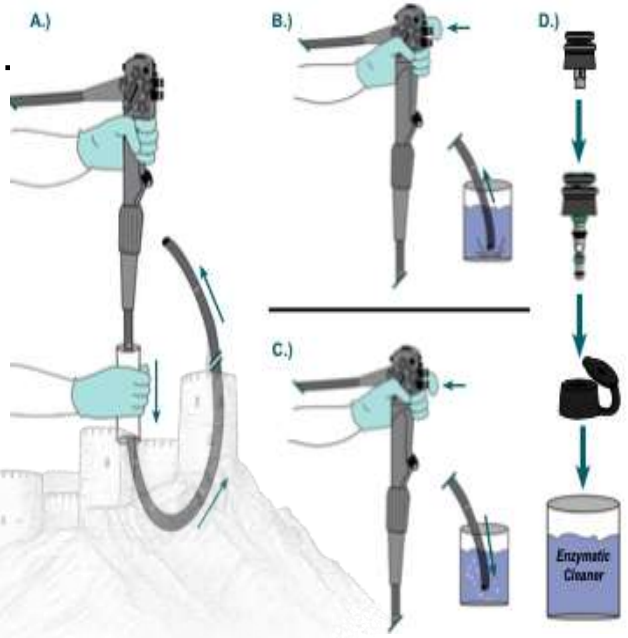
1.Pre-cleaning

- PPE
- Occurs in the procedure room immediately
- Before disconnecting the endoscope from the power source
- Removes organic material e.g. blood, body
- sponge/lint-free cloth
- Channel block - suction & flush
- Detach the scope from the light source



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Safe endoscope transport

- Place the endoscope in a clean container and transport it to the automated washer or manual cleaning area.
- to protect the instrument from damage and the environment from contamination.

2.Leakage test

- Detects damage to the interior or exterior of the endoscope
- Before immersion of the endoscope in reprocessing solution
- Manual (dry)
- Mechanical (wet)
- Mechanical(dry)
- Mechanical in AER

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Mechanical (wet)

- Remove the valves
- Discard disposable parts
- Attach the leak tester and pressurize the scope
- Submerge the scope completely in the water
- Flex the distal portion in all directions >>watch for bubbles
- If the endoscope passed the test>> move to next steps

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3.Manual cleaning

- Wash the exterior of the scope by brushing and wiping in detergent solution
- Wash the valves, openings
- Wash the anterior of the scope using soft brush, all accessible endoscope channels
- After each passage, rinse the brush in detergent solution

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- Attach the cleaning adapters for suction, biobsy, air and water channels
- Flush all channels with detergent solution to remove debris

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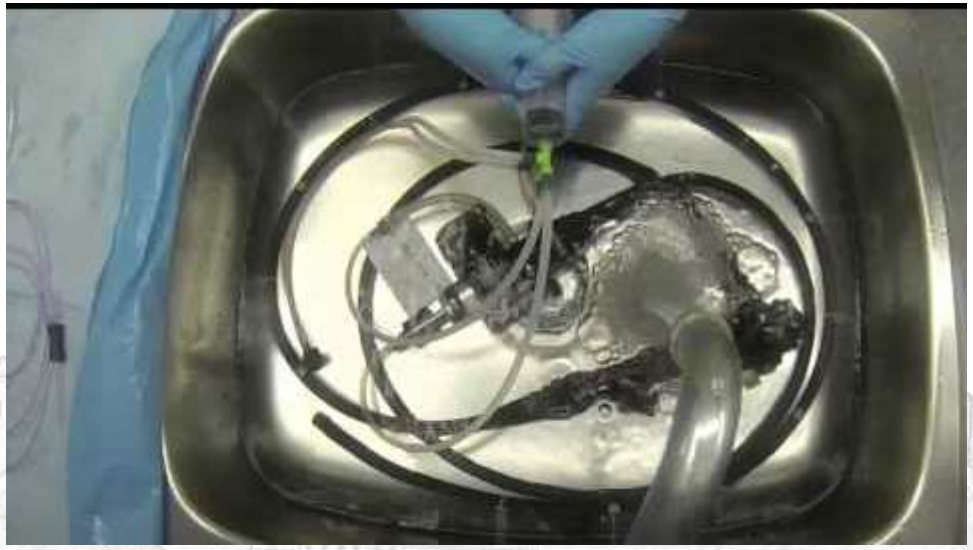
4.Rinse after manual cleaning

- Rinse the endoscope and all removable parts with clean water
- Purge water from all channels using forced air
- Dry the exterior of the scope with a soft,lint free cloth



5. Visual inspection

- Make sure the endoscope is visibly clean
- Safety stop or time out before proceeding to next step of HLD
- Repeat manual cleaning steps if not clean

6.a. Manual High level Disinfection

- Immerse endoscope and all removable parts in a basin of HLD
- Temperature between 30 and 45 C
- Contact time for at least 10 minutes
- Flush the disinfectant into all channels of endoscope until it can be seen exiting the opposite end of each channel

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6. High level Disinfection

- HLD destroys all visible microorganisms, but not necessarily all bacterial spores.
- a. effective precleaning, manual and rinsing
- b. drying after rinsing to avoid diluting HLD
- c. proper preparation and use

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- HDL must be tested before each load/use to assure that it remains above Minimum Effective Concentration.
- If below MEC or exceed recommended reuse life >>change the disinfectant

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- Cover the soaking basin with a tight fitting lid to minimize chemical vapor exposure.
- Soak endoscope in high level disinfectant for time/temperature required to achieve HLD
- Purge all channels completely with air before removing endoscope
- Rinse after HLD (step no.7)>>>coming soon

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6.B Automated reprocessing/AER

- Standardize the disinfection process / extra level of safety
- Decrease personal exposure to high level disinfectant
- Manual cleaning and brushing are still necessary when AER
- Follow the instructions from the manufacturer to ensure exposure of all internal surfaces with the disinfectant
- If machine uses enzymatic detergent, it should be compatible with the reprocessor and the scope.

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AER features

- Machine should circulate fluids through all channels at equal pressure
- Detergent and disinfectant cycles should be followed by rinse cycle and forced air
- Disinfectant should not be diluted
- Machine should be self-disinfecting
- No residual water should remain in hoses and reservoirs
- Self contained or external water filtration system

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7. Rinse after high level disinfectation

- Required for manual high level disinfectation
- Rinse all surfaces and removable parts, flush all channels and valves with clean water.

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8. Drying

- Moisture allows microorganisms to survive and multiply
- Drying with forced air
- Use compressed air that has been filtered to remove microorganisms
- Avoid excessive high air pressure

9. Storage

- Clean area , well ventilated and dust free
- Scope that is not dry must be reprocessed before use
- Hang freely to prevent physical impact
- Drying cabinet: control air quality and humidity
- 7- days storage interval
- Horizontal / vertical

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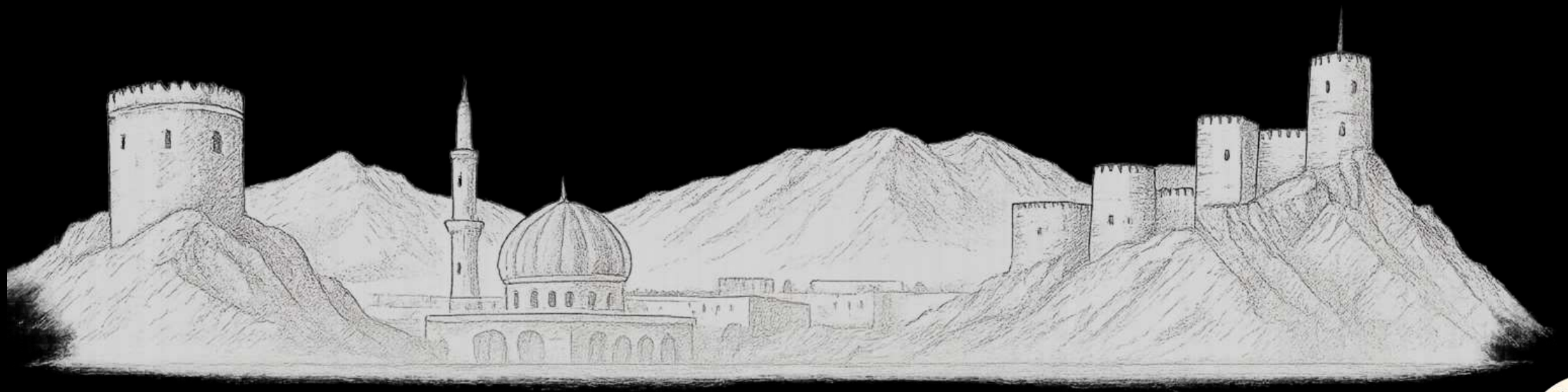

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