

## Heemstra, Sarah

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**From:** Heemstra, Sarah  
**Sent:** Tuesday, February 19, 2019 1:30 PM  
**To:** Heemstra, Sarah  
**Subject:** Infection Prevention Champions Program: Proper Care and Handling of Endoscopes

## Infection Prevention Champions Program



Dear Champion,

Our next letter will focus on the **Proper Care and Handling of Endoscopes**. Knowing proper care and handling can significantly impact infection prevention and costly endoscope repairs. To understand the best methods of care, we will discuss the steps taken from the procedure room set up to final endoscope storage. These steps provide us with guidelines to assist us in the care of endoscopes in the GI unit.

### **Room Set Up:**

Make every effort to optimize the arrangement of your procedure room to avoid endoscope damage. In particular, be aware and help to prevent buckling of the insertion tube and umbilical cable. This can be avoided by the careful arrangement of the examination table, monitor and light source/processor. How we remove the endoscope from its storage closet is the first step in its proper care. Take care when picking up the instrument or putting it down. Inspect and test endoscopes prior to each procedure in order to catch damage early. Regularly check caps, pistons and visible seals for wear and tear to ensure the endoscope is watertight. Use gloves when handling to avoid any contamination from our hands. If transporting the endoscope to another area use a closed container for protection. Avoid any banging of the instrument, especially the distal tip and lens. A cracked lens is a very expensive repair that can be avoided. Properly coil the endoscope and position it on the processor tower so that it can be easily handled by the endoscopist. At the end of the procedure assist the endoscopist in the careful handling of the endoscope and its return to the processor tower for beginning the steps in pre-cleaning.

### **Pre-Cleaning:**

Pre-cleaning is the initial step in the reprocessing protocol. This is where we initiate infection prevention through our meticulous care. Immediately after removing the endoscope from the patient, wipe the insertion tube with a wet cloth or sponge soaked in freshly prepared detergent solution. This detergent should be carefully measured and mixed according to manufacturer's instructions. Using too much or too little of a detergent solution impacts the cleaning process. Place the distal end of the endoscope into the appropriate detergent solution and suction a large volume of detergent solution through the endoscope until clear. Flush air and water channels in accordance with the manufacturer's instructions. Flush the auxiliary water channel per manufacturer's instructions. Detach the endoscope from the light source and suction pump. Attach protective video cap (check the integrity of the cap and make sure it is dry). Transport the soiled endoscope to the reprocessing area in a closed container that prevents exposure to staff, patients or the environment to potentially infectious organisms. Remember endoscopes should be placed with the control knobs up, properly coiled and never stacked on top of each other. Carefully handling and transporting will reduce the risk of impact damage.

### **Leak Testing:**

The easiest way to avoid the most significant repairs and the risk of transmission of infection is to perform a rigorous leak test before completing the reprocessing of the endoscope. Common causes such as disconnecting the leak tester while the endoscope is

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immersed and attaching a leak tester that is wet compromise watertight integrity and lead to possible fluid invasion of the endoscope. If a leak is found the endoscope must immediately be taken out of use and sent for repair following manufacturer's instructions.

#### **Manual Cleaning:**

With the manual cleaning process comes a few care-related initiatives. Check sinks, drains and countertops for sharp edges; remove unnecessary objects nearby that could damage the endoscope. Proper sink size is very important. Avoid tightly looping the endoscope while cleaning in a basin or sink. This can impact the proper cleaning of the endoscope and also put stress on the endoscopes internal components. Remember to take care to avoid banging the endoscopes distal tip and lens while cleaning. Avoid undue chemical damage by adhering to OEM instructions for reprocessing time/temperature/concentrations using recommended detergents.

#### **Automated Endoscope Reprocessing (AER):**

Automated reprocessing standardizes the disinfection process. When using an AER take care to place the endoscope carefully inside the bay/basin of the AER. Avoid compressing areas on the insertion tube and control body when coiling the endoscope. If the endoscope is not carefully positioned in the AER, there is a risk for crush impact due to excess pressure. Again, be cautious and avoid any banging of the distal tip and lens.

#### **Care of the Clean Endoscope and Storage:**

After the endoscope has been cleaned and disinfected, flush all channels with 70% isopropyl alcohol until the alcohol can be seen exiting the opposite end of each channel. If using an AER, the alcohol flush may be part of the automated reprocessor cycle. Alcohol is used to assist in drying the interior channels. Use compressed air that has been filtered to remove microorganisms. Again, if using an AER, air may be circulated as part of the automated reprocessor cycle. Bacteria such as *Pseudomonas aeruginosa* have been identified in both tap and filtered water, and may multiply in a moist environment (Rutala & Weber, 2004). Dry the exterior of the endoscope with a soft, clean, lint-free towel. Thoroughly rinse and dry all removable parts and store separately from the endoscope during storage. Endoscopes should be stored in a manner that will protect it from contamination. Hang the endoscope in a vertical position, set locks to free position and stiffener (in certain models) to the neutral position to facilitate air flow. The storage area should be clean, well ventilated and dust free, thus discouraging any microbial contamination. Train reprocessing staff to be careful when hanging endoscopes, avoid excessive banging against the cabinet and be watchful to avoid entrapment of the insertion tube in the cabinet door.

#### **Preventative Maintenance**

Preventative maintenance is recommended. Fix minor damage quickly before it worsens. Regularly check endoscopic equipment and accessories for wear. Ensure endoscopes are repaired to OEM specifications.

By following the guidelines above for **Proper Care and Handling of Endoscopes**, you and your endoscopy team will avoid unnecessary spread of infectious organisms and avoid costly repairs to your endoscope inventory.

Requirements should either be emailed to [Champions@sgna.org](mailto:Champions@sgna.org) or faxed to 312-673-6694 as due. The the upcoming assignments are as follows:

1. Continue to develop and implement infection prevention education for your peers (total of 120 minutes)
2. Seek opportunities to educate yourself on infection prevention topics (total of 180 minutes)

These bi-monthly letters will be [archived](#) for you to access as needed. As always, SGNA is available for any questions or difficulties you may have.

Sincerely,  
The SGNA Infection Prevention Work Group

#### **References:**

**ASGE** Multisociety guideline on reprocessing flexible gastrointestinal endoscopes: 2016, Available at:

<https://www.asge.org/docs/default>

[-source/importfiles/publications\\_and\\_products/practice\\_guidelines/doc-multisociety-guideline-on-reprocessing-flexible-gastrointestinal.pdf](#)

**Olympus America** HANDLE with Care, Available

at: [http://www.olympusamerica.com/msg\\_section/files/handleendoscopeswithcare.pdf](http://www.olympusamerica.com/msg_section/files/handleendoscopeswithcare.pdf)

**Pentax Medical** Scope Handling - Tips on Proper Handling, Available at: <http://us.pentaxmedical.com/en/education/equipment-care/scope-handling.aspx>

**SGNA** Standards of Infection Control in Reprocessing of Flexible Gastrointestinal Endoscopes (2018). Available at: [https://www.sgna.org/Portals/0/SGNA%20Standards%20of%20infection%20prevention%20in%20reprocessing\\_FINAL.pdf?ver=2018-11-16-084835-387s\\_FINAL.pdf](https://www.sgna.org/Portals/0/SGNA%20Standards%20of%20infection%20prevention%20in%20reprocessing_FINAL.pdf?ver=2018-11-16-084835-387s_FINAL.pdf)

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