

INFECTION CONTROL SNAPSHOT

Dental Handpiece Infection Control



It has been well documented in published studies that patient materials may enter the internal components of handpieces and attachments and that these retained patient materials can exit into the mouth of the next patient if the equipment is not properly cleaned and heat sterilized. Therefore, all dental handpieces must be cleaned, packaged, and heat sterilized between patients. This includes, but is not limited to, high-speed, low-speed, electric and surgical handpieces, all handpiece motors and attachments such as reusable prophylaxis angles, nosecones, and contra-angles.

Infection control protocols/asepsis for dental handpieces and other devices that can be removed from the air and waterlines must address both the outside and the inside of the device. Infection control procedures begin chair side by carefully wiping any visible debris from the handpiece and flushing the lines as described below. Following this, all handpieces and attachments should be transported to the clinic instrument processing area. Various commercially-available systems are available to help with handpiece maintenance before heat sterilization. The products range from manually-operated purging stations to automated equipment which cleans, lubricates, and purges multiple handpieces. Automated maintenance systems have the potential to save time, provide consistency to the overall handpiece maintenance process, and reduce repair costs.

- Follow the manufacturer's instructions for cleaning, lubrication, and sterilization of handpieces and other intraoral instruments that can be removed from the air and waterlines of dental units.**

WHY? This ensures both the effectiveness of the cleaning and sterilization processes and the longevity of handpieces.

- After each patient, carefully wipe visible debris off of the handpiece(s) and discharge water and air for a minimum of 20–30 seconds from any device connected to the dental water system that enters the patient's mouth (e.g., handpieces, ultrasonic scalers, and air/water syringes).**

WHY? This procedure is intended to help physically flush out patient material that might have entered the turbine and air and waterlines.

- Clean, lubricate, and heat-sterilize all dental handpieces, including prophylaxis angles (unless disposable) and motors between patients. If pre- and post-sterilization lubrication is indicated, be sure to use separate cans of the lubricant/cleaner before and after sterilization to prevent cross contamination.**

WHY? Studies have confirmed the potential for retracting oral fluids into internal compartments of high- and low-speed handpieces; this determination indicates that retained patient material can be expelled intraorally during subsequent uses if the devices are not properly cleaned and heat sterilized.

- Do not surface-disinfect, use liquid chemical sterilants, or use ethylene oxide on handpieces and other intraoral instruments that can be removed from the air and waterlines of dental units.**

WHY? These processes cannot adequately clean, disinfect or sterilize the internal components of the handpiece that become contaminated during treatment; some chemicals may lead to long-term harmful effects (e.g., corrosion) of the metals.



Just a few things to think about

- Do you operate the handpiece for 20–30 seconds after each patient? Why?
- Do you heat sterilize all handpieces, including the low-speed motor, between patients?
- Do you use an automatic handpiece maintenance system to assist with preparing dental handpieces for heat sterilization?

If you want more info

- CDC Guidelines for Infection Control in Dental Health-Care Settings (www.cdc.gov/oralhealth).
- USAF Guidelines for Infection Control in Dentistry (<http://airforcemedicine.afms.mil/decs>).
- [Click Here](#) for additional information and references supporting heat sterilization of dental handpieces.



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