



Department: Dental Number: HHS-5111 D

Attachment: _____

Policy: Instrument Sterilization

Date: October 1995 Revised: July 2001, July 2007, December 2012

Approved by:  Date: 5/1/13

Policy Statement:

Controlling bacterial contamination through sterilization has long been considered the most essential component in the infection control process and vital to patient safety. The result of proper instrument sterilization is the protection of the patient, physician and staff from various infectious diseases. STERILE – an absolute term (no living organism survives).

Purpose:

Assure proper instrument sterilization process, minimize environmental contamination, reduce errors, maintain the sterility of instruments and ensure staff and patient safety. Brushes are available for removal of blood and debris.

Procedure:

The following procedures should be carried out while wearing the proper P.P.E's.

1. RINSING

Immediately after surgery, rinse instruments under warm running water. Rinse should remove all blood, body fluids and tissue.

2. CLEANING

To minimize the risk of personnel injury, instruments should be cleaned with hands-free mechanical process such as an ultrasonic cleaner prior to sterilization. Ultrasonic cleaning is the preferred process since it is safer and more effective than the manual cleaning and more efficient in penetrating inaccessible areas such as crevices and joints. It is important to ensure that instruments are rinsed thoroughly and the majority of the bioburden is washed off prior to placing them in an ultrasonic cleaner. Visually inspect the instruments for residual debris, damage and reclean or replace any instruments as appropriate. Hand scrubbing is not recommended because of the risk of "sticks" from sharp instruments, but can be done with caution.

Handpieces

The burs should be removed from the handpiece. They should be properly cleaned and sterilized per the manufacturer's requirements. The external surfaces of the handpiece should be wiped to remove debris. Follow their recommended guideline for lubricating the handpiece prior to sterilization.

A. Ultrasonic Cleaning

Instruments should be processed in ultrasonic cleaner for the full recommended cycle time 10 minutes. Place instruments in open position into the ultrasonic basket that assures positioning of the instruments at a proper distance from the bottom of the tank while keeping them completely immersed in ultrasonic solution. Make sure "Sharp" (scissors, knives osteotomes, etc.) blades do not touch other instruments. All Instruments have to be fully submerged. Do not place dissimilar metals (stainless, copper, chrome plated, etc.) in the same cleaning cycle. Rinse instruments thoroughly after ultrasonic cleaning with water to remove ultrasonic cleaning solution.

Fresh ultrasonic solution should be mixed at the start of each day. Drain ultrasonic solution, remove instrument basket, rinse ultrasonic basin with water, wipe basin with towel at the end of each day.

DO NOT place handpieces or hygiene ultrasonic inserts in the ultrasonic cleaners or solution.

B. Manual Cleaning

Most instrument manufacturers recommend ultrasonic cleaning as the best and most effective way to clean surgical instruments, particularly those with hinges, locks and other moving parts. If ultra sonic cleaning is not available observe the following steps.

I. Use stiff plastic cleaning brushes do not use steel wool or wire brushes except specially recommended stainless steel wire brushes for instruments such as bone files, or on stained areas.

II. Brush delicate instruments carefully and, if possible, handle them totally separate from general instruments.

III. Make sure all instrument surfaces are visibly clean and free from stains and tissue. This is a good time to inspect each instrument for proper function and condition. Check and make sure that: Scissors blades glide smoothly all the way (they must not be loose when in closed position). Forceps have properly aligned tips. Hemostats and Needle Holders do not show light between the jaws, lock and unlock easily, joints are not too loose. Check Needle Holders for wear on jaw surfaces. Suction tubes are clean inside. Retractors function properly. Cutting instruments and knives have sharp, undamaged blades.

IV. After scrubbing, rinse instruments thoroughly under running water. While rinsing, open and close Scissors, Hemostats, Needle Holders and other hinged instruments to make sure the hinge areas are rinsed out, as well as the outside of the instruments.



3. AFTER ULTRASONIC CLEANING

Instruments are to be let air dry before processing for the autoclave.

4. AUTOCLAVING

A. Lubricate all instruments which have any "metal to metal" action such as scissors, hemostats, needle holders, self-retaining retractors, etc. Recommend surgical lubricants such as instrument milk are best. Do not use WD- 40, oil or other industrial lubricants.

Handpieces

Follow handpiece manufacturer's recommended maintenance protocol. Each handpiece manufacturer has specific protocols for cleaning their handpieces. Follow their recommended guideline for cleaning and lubricating the handpiece prior to sterilization.

Instrument packaging

Disposable pouches with dual biologic indicators are required to be used for instrument sterilization. Make sure you use a wide enough pouch (4" or wider) for instruments with ratchet locks such as needle holders and hemostats so the instrument can be sterilized in an open (unlocked) position. Unlock all instruments and sterilize them in an open position.

Never lock an instrument during autoclaving. It will not be sterile as steam cannot reach the metal to metal surfaces. The instrument will develop cracks in hinge areas because of heat expansion during the autoclave cycle. Do not overload the autoclave chamber as pockets may form that do not permit steam penetration.

CAUTION – At the end of the autoclave cycle the autoclave door will release and open slightly. Avoid the heated air and steam that may escape. If the autoclave door is opened fully before the drying cycle, cold room air will rush into the chamber, causing condensation on the instruments. This will result in water stains on instruments and also cause wet packs.

Instrument storage

Sterilized instruments are to be stored in a clean, dry and protected place. Instruments packages should be rotated on a first in, first out basis. To minimize the possibility of contamination, instruments should remain packaged until required for a procedure. Packaging should be inspected prior to use to assure it is intact. If the sterile packaging has been punctured or gotten wet, it should be re- sterilized before using on a patient.