

Summary of Recommendations Regarding HLD vs. Sterilization

CDC Guidelines for Infection Control in Dental Health-Care Settings -- 2003, pg. 24

<http://www.augusta.edu/dentalmedicine/patientservices/infection/documents/cdcguidelines2003.pdf>

“Sterilization and Disinfection of Patient-Care Items

Patient-care items (dental instruments, devices, and equipment) are categorized as critical, semicritical, or noncritical, depending on the potential risk for infection associated with their intended use (Table 4)²⁴². Critical items used to penetrate soft tissue or bone have the greatest risk of transmitting infection and should be sterilized by heat. Semicritical items touch mucous membranes or nonintact skin and have a lower risk of transmission; because the majority of semicritical items in dentistry are heat-tolerant, they also should be sterilized by using heat. If a semicritical item is heat-sensitive, it should, at a minimum, be processed with high-level disinfection².”

II. American Dental Association

http://www.ada.org/~media/ADA/Member%20Center/Files/cdc_sterilization.pdf?la=en

“Sterilization and Disinfection of Dental Instruments

According to the Centers for Disease Control, dental instruments are classified into three categories depending on the risk of transmitting infection. The classifications of critical, semicritical and noncritical are based on the following criteria:

- 1) Critical instruments are those used to penetrate soft tissue or bone, or enter into or contact the bloodstream or other normally sterile tissue. They should be sterilized after each use. Sterilization is achieved by steam under pressure (autoclaving), dry heat, or heat/chemical vapor. Critical instruments include forceps, scalpels, bone chisels, scalers and surgical burs.
- 2) Semi-critical instruments are those that do not penetrate soft tissues or bone but contact mucous membranes or non-intact skin, such as mirrors, reusable impression trays and amalgam condensers. These devices also should be sterilized after each use. In some cases, however, sterilization is not feasible and, therefore, high-level disinfection is appropriate. A high-level disinfectant is registered with the U.S. Environmental Protection Agency (EPA) as a "sterilant/disinfectant" and must be labeled as such.

“Processing Instruments

All critical and semicritical dental instruments that are heat stable should be sterilized after each use by steam under pressure (autoclaving), dry heat, or chemical vapor.”

III. Guideline for Disinfection and Sterilization in Healthcare Facilities, 2008, pg. 20 (http://www.cdc.gov/hicpac/pdf/guidelines/disinfection_nov_2008.pdf)

“Dental Instruments

Scientific articles and increased publicity about the potential for transmitting infectious agents in dentistry have focused attention on dental instruments as possible agents for pathogen transmission^{207, 208}. The American Dental Association recommends that surgical and other instruments that normally penetrate soft tissue or bone (e.g., extraction forceps, scalpel blades, bone chisels, periodontal scalers, and surgical burs) be classified as critical devices that should be sterilized after each use or discarded. Instruments not intended to penetrate oral soft tissues or bone (e.g., amalgam condensers, and air/water syringes) but that could contact oral tissues are classified as semicritical, but sterilization after each use is recommended if the instruments are heat-tolerant^{43, 209}. If a semicritical item is heat-sensitive, it should, at a minimum, be processed with high-level disinfection^{43, 210}. Handpieces can be contaminated internally with patient material and should be heat sterilized after each patient. Handpieces that cannot be heat sterilized should not be used²¹¹. Methods of sterilization that can be used for critical or semicritical dental instruments and materials that are heat-stable include steam under pressure (autoclave), chemical (formaldehyde) vapor, and dry heat (e.g., 320°F for 2 hours). Dental professionals most commonly use the steam sterilizer²¹². All three sterilization procedures can damage some dental instruments, including steam-sterilized hand pieces²¹³. Heat-tolerant alternatives are available for most clinical dental applications and are preferred⁴³.”