



Defense Health Agency (DHA) Special Feature Webinar

Resource List – Special Feature Webinar

Evidence-Based Methods for Sterility and High Level Disinfection Assurance: The Path to High Reliability

The Centers for Disease Control and Prevention (CDC) has published [Disinfection and Sterilization](#). This webpage provides a summary of recommendations for a various conditions. Detailed guidelines for indications and methods of sterilization and disinfection for occupational health, healthcare facilities and medical equipment are discussed. Recent updates include information regarding the Ebola Virus, flexible gastrointestinal endoscope reprocessing, environmental flogging and Clostridium difficile are included.

The National Institute for Occupational Safety and Health (NIOSH) has published [Health and Safety Practices Survey of Healthcare Workers- Chemical Sterilants](#). This webpage provides an overview of chemical sterilants used on surgical instruments and medical supplies and discusses the relevant standards and guidelines to reduce exposure. A study that focused on sterilization systems using ethylene oxide (EtO) and hydrogen peroxide gas plasma (HPGP) is referenced. The risks of acute and chronic exposure to both chemicals are listed. A survey was conducted of healthcare workers that reported using EtO or HPGP. The survey suggests that use of EtO has diminished in favor of HPGP. The survey also advocates that employees should be trained on the hazards of EtO and HPGP and standard operating procedures should be available to ensure safe use of these stimulants.

Achieving disinfection and sterilization is essential for ensuring that medical and surgical instruments do not transmit infections pathogens to patients. [Disinfection and Sterilization in Health Care Facilities: An Overview and Current Issues](#) examines the importance of disinfection and sterilization for the safe use of invasive and noninvasive medical devices. The method of disinfection and sterilization depends on the intended use of the medical device. Methods used for critical items (contact sterile tissue), semicritical items (contact mucous membranes or non-intact skin) and noncritical items (contact intact skin) are described. This article reports that cleaning should always precede disinfection and sterilization.

The U.S. Food and Drug Administration (FDA) has published the [FDA-Cleared Sterilants and High Level Disinfectants with General Claims for Processing Reusable Medical and Dental Devices](#). This table lists the FDA-cleared chemical stimulants and disinfectants. For each of the 36 products noted, the manufacturer, active ingredients, and contact conditions are listed. The content of this list is current as of September 25, 2019.

The World Health Organization partnered with the Pan American Health Organization to produce [Decontamination and Reprocessing of Medical Devices for Health-Care Facilities](#). This manual provides guidance to health managers and health workers on required infrastructures and standard procedures for effective sterilization, and decontamination reprocessing of medical devices.



Defense Health Agency (DHA) Special Feature Webinar

References

Centers for Disease Control and Prevention. (2019). *Disinfection and sterilization*.

<https://www.cdc.gov/infectioncontrol/guidelines/disinfection/index.html>

National Institute for Occupational Safety and Health. (2020). *Health and Safety Practices Survey of Healthcare Workers- Chemical Sterilants*.

<https://www.cdc.gov/niosh/topics/healthcarehsp/sterilants.html>

Rutala, W.A., Weber, D.J. (2016). Disinfection and Sterilization in Health Care Facilities: An Overview and Current Issues. *Infectious Disease Clinics of North America*, (30)3, 609-637.

<https://doi.org/10.1016/j.idc.2016.04.002>

U.S. Food and Drug Administration. (2015). *FDA-Cleared Sterilants and High Level Disinfectants with General Claims for Processing Reusable Medical and Dental Devices*.

<https://www.fda.gov/medical-devices/reprocessing-reusable-medical-devices-information-manufacturers/fda-cleared-sterilants-and-high-level-disinfectants-general-claims-processing-reusable-medical-and>

World Health Organization, Pan American Health Organization. (2016). *Decontamination and Reprocessing of Medical Devices for Health-Care Facilities*.

<https://apps.who.int/iris/bitstream/handle/10665/250232/9789241549851-eng.pdf;jsessionid=90828D2CAACDB0E2329986E8D8049EDE?sequence=>