

GUIDELINE FOR CARE AND CLEANING OF SURGICAL INSTRUMENTS

The Guideline for Care and Cleaning of Surgical Instruments was approved by the AORN Guidelines Advisory Board and became effective as of October 12, 2020. The recommendations in the guideline are intended to be achievable and represent what is believed to be an optimal level of practice. Policies and procedures will reflect variations in practice settings and/or clinical situations that determine the degree to which the guideline can be implemented. AORN recognizes the many diverse settings in which perioperative nurses practice; therefore, this guideline is adaptable to all areas where operative or other invasive procedures may be performed.

Purpose

This document provides guidance for **cleaning** surgical instruments, including point-of-use treatment, transport, **decontamination**, inspection, and general care of reusable medical devices (eg, surgical instruments). Guidance is also provided for selection of cleaning chemicals (eg, detergent, enzymatic, disinfectant), selection of decontamination equipment, monitoring and control of water quality, and the use of personal protective equipment (PPE) that must be worn during cleaning and care of instruments. Special considerations are addressed for processing ophthalmic instruments, processing laryngoscope blades and handles, and minimizing the risk for transmitting prion diseases from contaminated reusable medical devices. The recommendations are general recommendations; specific guidance for care and cleaning of each instrument can be found in the instrument's US Food and Drug Administration (FDA)-cleared manufacturer-validated instructions for use (IFU).¹

Failure to correctly clean and decontaminate surgical instruments and other medical devices used in invasive procedures can lead to subsequent failures in high-level disinfection and sterilization that put patients at risk for developing a surgical site infection (SSI).² Approximately 50% of SSIs are deemed to be preventable with the use of evidence-based strategies.³ Effective decontamination^{2,4} and subsequent sterilization are essential SSI prevention measures.^{2,5} The number of SSIs that can be attributed to inadequate medical device processing is unknown because this is not often investigated as the cause.⁶

Sterilization, packaging for sterilization, high-level disinfection, processing of flexible endoscopes, and reprocessing of single-use devices are outside the scope of this document. Guidance for these topics is provided in the AORN Guideline for Sterilization,⁷ Guideline for High-Level

Disinfection,⁸ Guideline for Sterilization Packaging Systems,⁹ and Guideline for Processing Flexible Endoscopes.¹⁰

Evidence Review

A medical librarian with a perioperative background conducted a systematic search of the databases Ovid MEDLINE®, Ovid Embase®, EBSCO CINAHL®, and the Cochrane Database of Systematic Reviews. The search was limited to literature published in English from January 2014 through August 2019. At the time of the initial search, weekly alerts were created on the topics included in that search. Results from these alerts were provided to the lead author until November 2019. The lead author requested additional articles that either did not fit the original search criteria or were discovered during the evidence appraisal process. The lead author and the medical librarian also identified relevant guidelines from government agencies, professional organizations, and standards-setting bodies.

Search terms included *adenosine triphosphate, antineoplastic agents, arthroscopic shavers, asepsis, bacteria, bacterial adhesion, bacterial load, biofilms, biofoul, borescopes, cart washers, case cart, central services department, chemical safety, cleaning verification, corrosion, Creutzfeldt-Jakob syndrome, cross infection, cytotoxic, decontamination, detergents, disinfection, disinfection and sterilization, endotoxins, enzymatic detergents, equipment and supplies, equipment contamination, equipment reuse, evaluation studies as topic, guidelines as topic, impingement, infection control, instrument air, instrument cleaning, instrument coating, instrument dipping, instrument disinfectant, instrument drying, instrument marking, instrument tape, insulation test, ionized water, laryngoscopes, leaching, luciferases, luminescent measurements, magnification, maintenance, medical device reprocessing, microbial sensitivity tests, mitomycin, occupational hazards, occupational exposure, powered surgical equipment, printing (three-dimensional), prion diseases, protein test, rigid endoscopes, risk management, robotic instruments, satellite sterile processing, sterile water, sterile processing department, sterilization, surgical equipment and supplies, surgical instruments, surgical procedures (operative), surgical wound infection, TOSI test, toxic anterior segment syndrome, toxic endothelial cell destruction, ultrasonic, washer disinfectant, washing system, water microbiology, water purification, and water supply.*

Included were research and non-research literature in English, complete publications, and publications with dates within the time restriction when available. Excluded were non-peer-reviewed publications and older evidence within the time restriction when more recent evidence was available. Editorials, news items, and other brief items were