

STERILE TECHNIQUE



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MEDICAL ABBREVIATIONS & ACRONYMS

AAMI – Association for the Advancement of
Medical Instrumentation

CDC – Centers for Disease Control and Prevention

CFU – Colony-Forming Unit

CVC – Central Venous Catheter

FDA – US Food and Drug Administration

IFU – Instructions for Use

OR – Operating Room

PAPR – Powered Air-Purifying Respirator

PICC – Peripherally Inserted Central Catheter

PPE – Personal Protective Equipment

RCT – Randomized Controlled Trial

SSI – Surgical Site Infection

WHO – World Health Organization

GUIDELINE FOR STERILE TECHNIQUE

The Guideline for Sterile Technique has been approved by the AORN Guidelines Advisory Board. It was presented as a proposed guideline for comments by members and others. The guideline is effective November 1, 2018. 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 on the principles and processes of **sterile technique**. Sterile technique involves the use of specific actions and activities to maintain sterility and prevent contamination of the **sterile field** and sterile items during operative and other invasive procedures. Thoughtful and diligent implementation of sterile technique is a cornerstone of perioperative nursing practice and a key strategy in the prevention of surgical site infections (SSIs).

All individuals who are involved in operative or other invasive procedures have a responsibility to provide a safe environment for patient care.¹ Perioperative team members must be vigilant in preventing contamination of the sterile field and ensuring that the principles and processes of sterile technique are implemented. Perioperative leaders have a duty to promote a culture of safety by creating an environment in which perioperative personnel are encouraged to identify, question, or stop practices believed to be unsafe without fear of repercussions.²

Adhering to the principles and processes of sterile technique is a matter of ethical obligation, individual conscience, and patient advocacy that applies to all members of the perioperative team.^{1,3} Surgical patients are vulnerable; thus, perioperative team members are required to mindfully practice the principles of sterile technique to ensure the sterile field is maintained. Perioperative nurses have a long-standing reputation of advocating for patients and working with members of the interdisciplinary health care team to provide a safe perioperative environment.²

Although these recommendations include references to other AORN Guidelines, the focus of this document is sterile technique. Surgical attire, hand hygiene, product evaluation, and the effects of forced-air warming equipment are outside the scope of these recommendations. The reader

should refer to the AORN Guideline for Surgical Attire,⁴ Guideline for Hand Hygiene,⁵ Guideline for Medical Device and Product Evaluation,⁶ and Guideline for Prevention of Unplanned Patient Hypothermia⁷ for additional guidance.

Evidence Review

A medical librarian with a perioperative background conducted a systematic search of the databases Ovid MEDLINE®, EBSCO CINAHL®, Scopus®, and the Cochrane Database of Systematic Reviews. The search was limited to literature published in English from 2012 through 2017. 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 April 2018. 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 subject headings such as *abdominal and perineal surgery, aerosolization, asepsis, aseptic practice, aseptic technique, assembled instruments, assisted gloving, barrier precautions, blocked vents, blood, body exhaust suits, bone and bones, bone cements, bowel isolation technique, bowel surgery, bowel technique, break in sterile technique, C-arm, case classifications, cerebrospinal fluid shunts, cesarean birth, cesarean section, changing levels, chemical indicator, chemical integrator, chewing gum, clamped instruments, clean closure technique, clean to dirty case, closed gloving, closing instruments, closing trays, colorectal surgery, complex procedure, contamination, conversations, corrective actions, cough, cover equipment, cover implants, cover instrument trays, critical zone, cuffing, cystoscopic surgery, cystoscopy, debris, delivery of sterile items, delivery to sterile field, dispensing sterile items, doffing, donning, door openings, double gloving, dual sterile fields, education, endovascular procedures, endovascular surgery, event-related sterility, extended cuffs, facing back to back, facing front to front, fluid and fat absorption, fluid warmers, fluoroscopy, gastrointestinal tract, glove compromise, glove expansion and fluid, glove gown interface, glove inspection, glove integrity, glove perforation, gloves (surgical), gowns, grease, hair, hand hygiene, handling sterile items, health physics, heavy items, human factors, hybrid operating room, hybrid procedure room, hybrid surgical suites, immediate action, increased activity, indicator systems, indicators and reagents, individual interventions, inspection of sterile supplies, instrument inspection, instrument set removal, instrument trays, instrument wrap, interoperative MRI, intraoperative MRI, introduction of sterile supplies, Ioban, iodine impregnated*