

Disinfection **vs** Sterilization: Know your Options



This is
Low-Temperature
Sterilization



This is
Automated High-Level
Disinfection

Disinfection and Sterilization – What’s the Difference?¹

Sterilization

A process that destroys or eliminates all forms of microbial life

Disinfection

A process that eliminates many or all pathogenic microorganisms, *except some bacterial spores*

High-level disinfection is not sterilization.

Organism	Reprocessing Modality	
	Sterilization	High-Level Disinfection (HLD)
Bacterial Spores	✓	X
Mycobacteria	✓	✓
Fungi	✓	✓
Vegetative Bacteria	✓	✓
Enveloped Viruses	✓	✓

Most Difficult to Kill ↑
↓
Less Difficult to Kill

Why Sterilization For Semi-Critical Devices²

For over thirty years, many infection control professionals have relied on the Spaulding Classification of critical and semi-critical instruments to determine the reprocessing modality.

Classification	Examples
Critical	Surgical instruments, ultrasound probes used in sterile body cavity
Semi-Critical	Laryngoscopes and some endoscopes used in GI procedures

Times are changing.

Key organizations such as AAMI and AORN are calling for a shift to sterilization.



AAMI TIR68: 2018 3.4³

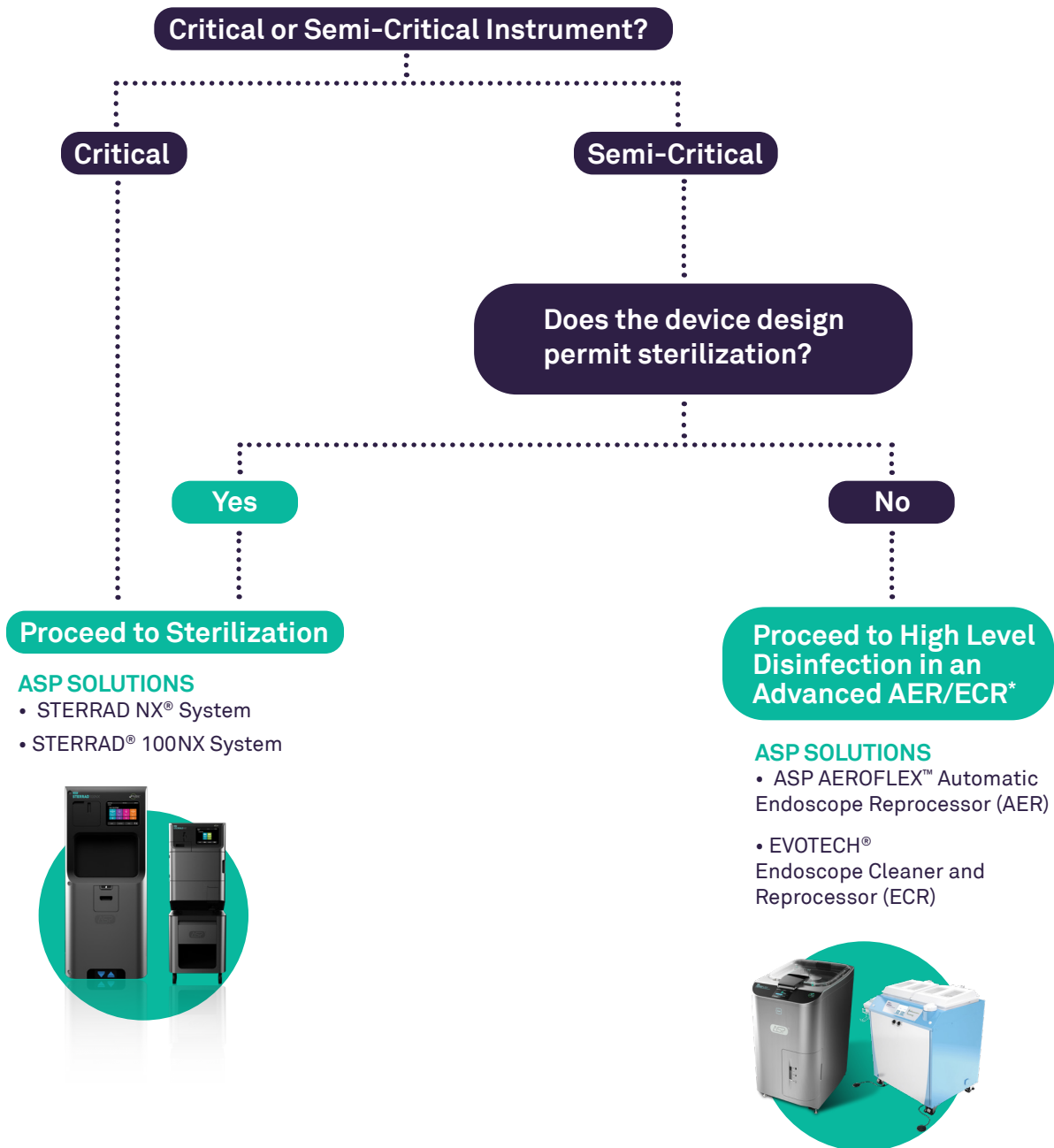
“Semi-critical devices are devices that contact intact mucous membranes or non-intact skin. Users should be instructed to thoroughly clean these devices and then **reprocess them by sterilization**. If the device design does not permit sterilization (e.g., device materials cannot withstand sterilization), then high-level disinfection should be used.”



AORN Recommendation⁴

“Items that are classified as semi-critical, such as endoscopes, **should be sterilized whenever possible** and undergo HLD at a minimum if sterilization is not possible.”

Evaluating the Appropriate Reprocessing Modality



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“Semicritical items represent the greatest risk of disease transmission because far more health care-associated infections have been caused by reusable semicritical items than critical or non-critical items.”⁵

- William A. Rutala, PhD, MPH, CIC

STERRAD® Systems can sterilize a wide-range of instruments

ANESTHESIA

Flexible Difficult Intubation Scopes*
Laryngoscope Blades/Handles

CARDIAC

Defibrillator Paddles
Doppler Pencils and Cords
Power Equipment (sternal saw)

ENT/ RESPIRATORY

Bronchoscopes*
Cameras and Light Cords
Esophageal Dilators
Laryngoscopes
Powered Batteries
Powered Equipment
Telescopes
Tooth Guards
Video Cameras and Couplers

GENERAL

Bipolar Forceps
Cameras and Light Cords
Harmonic® Scalpel Hand Piece
Laparoscopic Instruments
Probes
Sonicision® Battery and Generator

GYNECOLOGY

Cameras and Light Cords
Rigid Endoscopes

NEUROLOGY

Bipolar Electrocautery Instruments
Doppler Pencils and Cords
Powered Batteries
Powered Equipment

OPHTHALMOLOGY

Cornea Protectors
Ophthalmic Lenses

ORTHOPEDICS

Arthroscopes
Bipolar Cords and Forceps
Cameras and Light Cords
Curettes
Power Batteries
Powered Equipment
Pneumatic Saws and Drills

ROBOTICS

Da Vinci 3DHD Endoscopes

UROLOGY

Cameras and Light Cords
Electrodes
Flexible Endoscopes (Cystoscopes, Ureteroscopes etc.)*
Fiberoptic Light Source Cable
Telescopes
Ultrasound Probes and Transducers

*Flexible endoscopes can also be high-level
disinfected in an automated AER/ECR.

For a list of model numbers that can be sterilized in STERRAD® Systems, please visit
the STERRAD® Sterility Guide at www.sterradsterilityguide.com.

References

- Centers for Disease Control and Prevention (CDC). Introduction, Methods, Definition of Terms -Guideline for Disinfection and Sterilization in Healthcare Facilities (2008) <https://www.cdc.gov/infectioncontrol/guidelines/disinfection/introduction.html>.
- Centers for Disease Control and Prevention (CDC). A Rational Approach to Disinfection and Sterilization - Guideline for Disinfection and Sterilization in Healthcare Facilities (2008). <https://www.cdc.gov/infectioncontrol/guidelines/disinfection/rational-approach.html>.
- American National Standard/Association for the Advancement of Medical Instrumentation. ANSI/AAMI TIR68:2018 Low and intermediate-level disinfection in healthcare settings for medical devices and patient care equipment and sterile processing environmental surfaces.
- Association of periOperative Registered Nurses (AORN). 6 Dos and Don'ts for Sterile Processing in ASCs. September 25, 2019. <https://www.aorn.org/about-aorn/aorn-newsroom/periop-today-newsletter/2019/2019-articles/sterile-processing-in-asc>
- Rutala W.A., Weber D.J. 2016. Reprocessing semi critical items: Current issues and new technologies. Am J Infect Control, 44 e53-62.

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Important Information: Prior to use, refer to the complete instructions for use (IFU) supplied with the device(s) for proper use, indications, contraindications, warnings and precautions.

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