

Guideline at a Glance: Energy-Generating Devices

The AORN Guideline at a Glance is a key component of the *Guideline Essentials*, a suite of online implementation tools designed to help the perioperative team translate AORN's evidence-based guidelines into practice. Each Guideline at a Glance highlights important elements of the full guideline and includes images, implementation steps, and the rationale for why these steps are important to promote safety and optimal outcomes for patients undergoing operative and other invasive procedures. Facilities can provide team access to the entire set of *Guideline Essentials* through a subscription to the multiuser, online edition (eSubscription) of the *AORN Guidelines for Perioperative Practice*. Individuals can obtain the same access through a subscription to the AORN Guideline eBook Mobile App. For more information about the complete set of implementation tools included in the *Guideline Essentials*, visit <https://www.aorn.org/guidelines/purchase-guidelines/guideline-essentials>.



- Do not place containers of liquids on energy-generating devices.
- Encase foot pedal accessories in a fluid-resistant cover when there is potential for fluid spills.
- Ensure safety and warning alarms and activation indicators are operational, audible, and visible at all times.
- Select the lowest power setting that achieves the desired result.
- Confirm the power settings with the operator before use.
- Ensure the energy-generating device foot pedal is activated only by the person in control of the energy-delivering hand piece.
- Inspect energy-generating device accessories for damage before and after use.
- Secure device cords to the sterile drapes:
 - with a plastic or other non-conductive device
 - with a non-piercing device
 - in a manner which does not crush or damage the cord

★ *Energy-generating devices are an ignition source and the most frequent source of ignition in OR fires.*

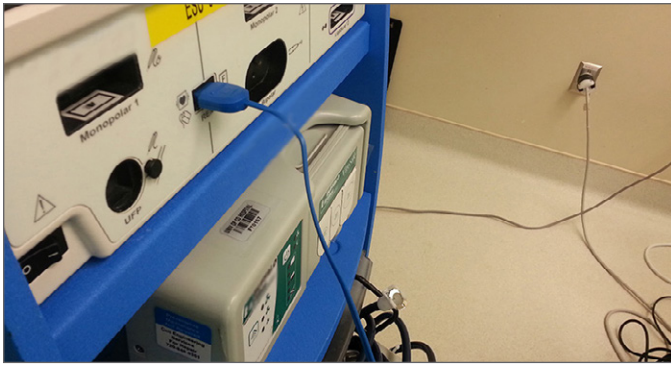
FIRE SAFETY PRECAUTIONS

- Use technologies other than monopolar or laser devices (such as bipolar, coblation, or non-energy-applying instruments) in high fire-risk situations.
- Use moist sponges near the ignition source.
- Do not use alcohol-soaked sponges on the surgical field.
- Stop delivery of oxygen or decrease it to the lowest tolerable level before activating an energy-generating device near the head, face, or neck.
- Use water-soluble lubricants near the surgical site.

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INJURY PRECAUTIONS

- Secure the electrocautery unit (ESU) on a tip-resistant cart or shelf, and do not use the ESU as a shelf or table.
- Do not activate the ESU active electrode until it is in close proximity to or in contact with the target tissue.
- Remove the patient's metal jewelry that is between the active and dispersive electrodes.
- During the use of monopolar devices, ensure the patient is not touching metal objects.
- Prevent antenna coupling by:
 - placing the cord joining the monopolar active electrode to the generator as far as possible from or at 90 degrees to other cords
 - placing patient monitoring electrodes as far as possible from the surgical site
- Use alternate technologies (bipolar, ultrasonic) instead of monopolar electrocautery when neuromonitoring electrodes are present.
- For minimally invasive surgery:
 - use conductive trocar systems
 - examine instruments for intact insulation before use
 - use active electrode monitoring and shielding devices
 - examine instruments with an active electrode insulation integrity tester after decontamination

★ *Alternate site injuries are reported to potentially occur because of insulation failure, capacitive coupling, or current leakage. Current leakage occurs when the electricity finds a route to ground that is shorter than the route that includes the dispersive electrode.*



ACTIVE ELECTRODE

- Visually inspect the active electrode before use for damage to the cord or hand piece.
- Firmly seat the tip into the hand piece with no gaps between the tip insulation and the hand piece.
- Connect the active electrode directly to a designated receptacle on the ESU.
- Place the active electrode in a clean, dry, nonconductive safety holster when not in use.
- Use only adaptors approved by the manufacturers of both the ESU and the accessories used.
- Clean the active electrode tip:
 - whenever there is visible eschar present
 - away from the incision
 - with a moistened sponge or instrument wipe for nonstick-coated electrocautery tips
 - with an abrasive electrode cleaning pad for noncoated electrodes
- Do not alter active electrode tips unless this is allowed by manufacturer's instructions for use (IFU).

★ *Proper care and handling of all energy-generating devices is essential to patient and personnel safety. Precautions should be taken to mitigate the risk for injury associated with the use of electrocautery devices.*

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