A HOLISTIC SOLUTION TO PREVENT RETURN ELECTRODE INJURIES.

Designed to protect patients and your hospital

Medtronic
Further, Together

THE RISK IS REAL

Electrosurgical injuries reportedly happen at about the same rate as wrong-site surgery.[1] And the problem is well documented:

~40,000
patients are burned

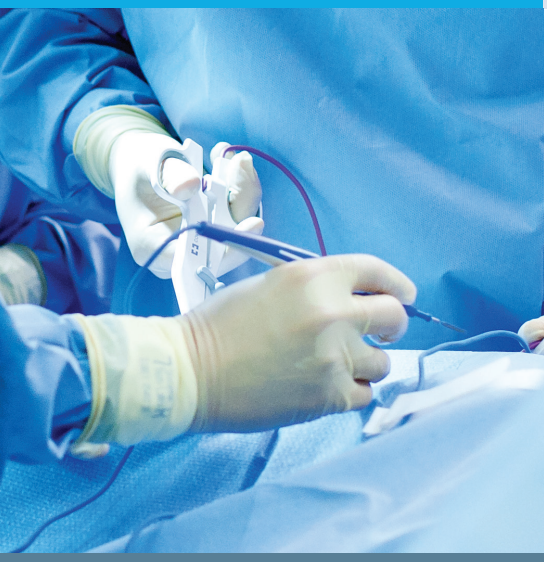
from electrosurgical devices every year[1]

52% of thermal burns reported to FDA are attributed to grounding failure, insulation failure, or capacitive coupling[2]

Grounding failure makes up to
29%
of thermal burns[2]

~600
injuries occur each year

due to misuse of energy devices[1]



CONTRIBUTING FACTORS

Patient return electrodes (PRE) are an essential component of electrosurgery — and to ensuring patient safety. Yet they are also the site of injuries.

Despite guidelines and warnings in instructions for use (IFU), off label usage in high current/long duration procedures occurs and may increase potential for patient injury.[3]

Potential causes of pad site injury:

1. A combination of high current and long activation times, in conjunction with localized pressure at the return electrode site and/or the use of conductive fluids, may create the potential for patient injury.
2. The greater the concentration of energy at the return electrode site, the greater the risk of electrode site burns.[4]
3. Poor return electrode placement may lead to poor surgical effect from the active electrode.[4] This could necessitate an increase in generator power settings — adding more energy to the electrical circuit and potentially increasing risk of thermal injury.

A PAD SOLUTION **THAT STICKS.**

REM Polyhesive™ II Patient Return Electrodes

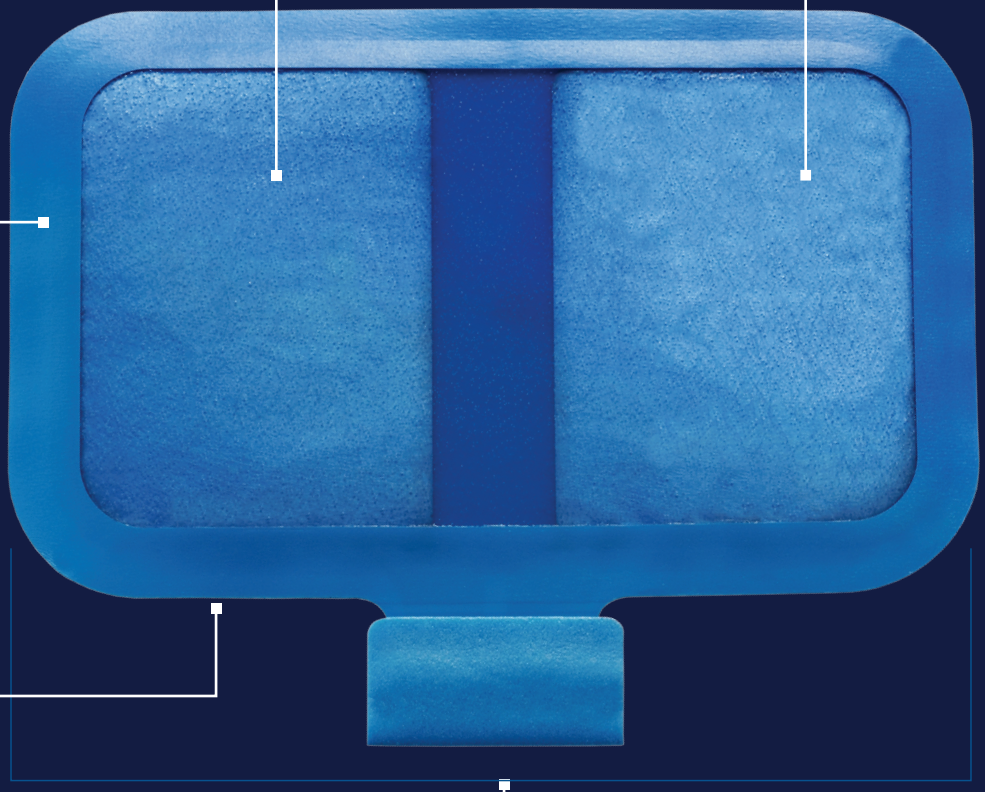
Advanced patient monitoring for safety

Our REM™ contact quality monitoring system monitors patient-pad interface throughout a procedure. If the system detects elevated impedance or poor pad-to-patient contact at the patient return electrode, it sounds an alarm and deactivates the electrosurgical generator. Combined with our REM Polyhesive™ II patient return electrodes, they ensure safer electrosurgery for patients.

Polyhesive™ hydrogel

Made up of more than 70% water, it effectively bonds to the skin. And provides uniform contact over the entire pad surface area — without having to shave the patient.

With a thickness between 0.078 cm and 0.155 cm, it helps mitigate the potential for exposed foil "hot spots" on the pad surface.



Enhanced adhesion

An acrylic adhesive strip on the perimeter improves electrode-to-patient contact quality.

Flexible strength

Closed-cell foam backing conforms to any patient contour, preventing tearing of the return electrode.

Optimum size

A large surface area (21.25 sq. in./37 cm^2) and a thick layer (0.050 in./0.127 cm) of Polyhesive™ hydrogel disperses current over a large area, minimizing heat production.

PAD SIZE MATTERS

A return electrode burn occurs when the heat produced, over time, is not safely dissipated by the size or conductivity of the patient return electrode (PRE).[4] That's why the return electrode size is important to patient safety.

E7507
137 cm² (active area)

E7507 REM Polyhesive™ II patient return electrodes are designed and sized with patient safety in mind.

The active area of an E7510 infant REM Polyhesive™ II patient return electrode is approximately 75 cm² and only indicated for patients up to 30 lbs.

E7510
75 cm² (active area)

REDUCE THE RISKS OF PAD SITE BURNS.

We stand by the clinical performance of our products — and the effectiveness of our training and support services.

That's why we created our Hold Harmless Agreement. To offer enrolled customers a guarantee that indemnifies them from liability in the event of a pad site burn.

For more information, contact your local Medtronic sales representative or visit us online at **medtronic.com/covidien**

1. Jones DB, et al. Current Problems in Surgery. 2015;(52):447.
2. Overbey DM, Townsend NT, Chapman BC, et al. Surgical energy-based device injuries and fatalities reported to the Food and Drug Administration. *J Am Coll Surg.* 2015;221(1):197-205.
3. Reducing grounding pad burns during high current electrosurgical procedures. 3M Technical Bulletin. 2007.
4. Based on internal report #1009567, Principles of Electrosurgery. 2008.

5920 Longbow Drive
Boulder, CO 80301 800.722.8772 **medtronic.com/covidien**

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