



UNDERSTANDING ELECTROCAUTERY:

"Electrocautery is arguably the single most-used surgical technique, yet it is perhaps the least understood and least appreciated by surgeons."

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	BIPOLAR	MONOPOLAR
OVERVIEW	<p>Bipolar forceps electrocautery is used for very precise hemostasis. It is more precise because electricity does not spread in all directions from the tip to the grounding pad as in monopolar electrocautery.</p> <p>Instead, with bipolar forceps electrocautery, electrical current passes only from one tip of the forceps to the other.</p> <p>Only the tissue between the tips of the forceps is exposed to the electrocautery current. This reduces collateral damage and reduces injury to other parts of the body such as cardiac defibrillators and joint implants. These can be damaged when monopolar electrocautery current pass through them on its way to the grounding pad in the thigh.</p>	<p>Monopolar electrocautery passes current through the patient's body to cauterize at the location of surgery. The monopolar pencil contains one electrode, the other is a grounding pad usually attached the thigh of the patient.</p> <p>The surgeon touches the pencil electrode to the point of hemorrhage and presses a button on the pencil. This button activates electrosurgery current which then passes from the tip of the pencil electrode in all directions to cauterize everything in the vicinity. The current then passes through the patient's body to the grounding pad on the thigh.</p>
POINT OF CONTACT	Two contacts with current flow limited to the space between the contacts, tips of forceps.	A single point of contact with body tissues and a grounding pad with electrical current spreading out in all directions from the point of contact.
TISSUE DAMAGE	<p>More Precise.</p> <p>Less tissue damage and is therefore essential for cautery around nerves, blood vessels and vital organs like the brain, spinal cord and heart.</p>	<p>Less Precise.</p> <p>Generally the accepted form of electrosurgery for dissection. Current can spread unpredictably, damaging vital structures.</p>
CONTRA-INDICATIONS	None.	Pacemaker, metal implants
RISK OF PATIENT BURNS	Low risk.	Present.
RISK OF O.R. FIRE	Low risk.	Present.
DESSICATION EFFECT	Superior.	Inferior.