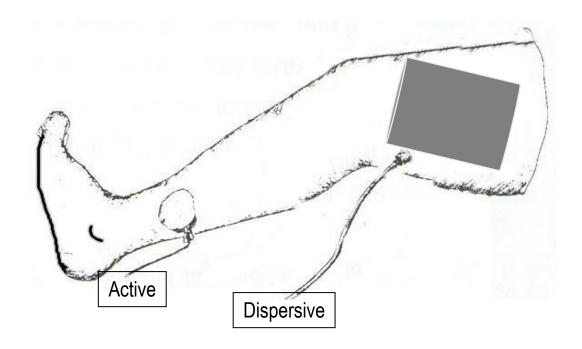
# **GENERIC PROTOCOL: Electrical Stimulation for Chronic Wounds MONOPOLAR ELECTRODE SET UP**



**Active**: Smaller electrode placed directly in/over ulcer composed of sterile/single use conductive material Types:

- saline soaked gauze, hydrogel gauze, hydrofibre
- covered with self adhesive or carbon electrode
- silver nylon dressing

# **Dispersive**:

LARGE that is at least twice the size of active placed on intact healthy skin proximal to wound at least 20 cm away Types:

- self adhesive (5" x 8")
- carbon coated electrode over damp cloth

### **ELECTRICAL STIMULATION Treatment Protocol**

### 1. Identify Patient

Indications	Contraindications	Precautions
	Local active (skin) cancer or metastatic cancer	
Chronic (open) wounds	under investigation or treatment	Impaired sensation
fail to heal with conventional care	Osteomyelitis (untreated, copious exudate)	Impaired cognition
Individuals with history of impaired	Cardiac pacemaker in vicinity	Mild/moderate PVD
healing eg. Diabetes,	Blood clot (DVT) or thrombophlebitis	(ABPI>0.5)
Spinal Cord Injury	Pregnancy	Coagulopathy
WBP: underlying cause addressed	Over excitable tissue (anterior neck, genitalia)	Unstable cardiac arrhythmia
Healable wounds	Over fragile, broken skin	Autonomic dysreflexia
	Uncontrolled or advancing infection	Adhesive allergies
	Severe arterial insufficiency (ABPI < 0.05)	Metal implants
	Residue from wound care products containing	
	metal (silver, zinc) or petrolatum	

### 2, Patient Explanation

- Describe Treatment set up, time comittment, and costs
- Describe sensation expected
- Explanation of Risks and Benefits
  - o Skin irritation under electrode make sure secure and do not move
  - o Pain adjust intensity with patient feedback, avoid muscle activation
  - o Risk of infection/deterioration use good aseptic techniques at all times and only sterile products
  - o Sudden electrical surge caused if machine malfunctions get checked at least annually

### 3. Obtain Consent? written/signed

### 4, Prepare Wound

- remove unwanted residue (petroleum or metal) wound irrigation
- remove foreign necrotic tissue where indicated
- apply conducting agent (water, gel, saline)

### 5. Select Equipment

• machine: HVPC, monophasic or unbalanced pulsed current

### 6. Apply Electrodes

- Active into wound using sterile/single use conductive material:
  - carbon or self adhesive + hydrofibre, saline soaked gauze or silver nylon dressing
- Dispersive: Large self-adhesive or carbon coated electrode placed on intact skin 20 cm away from wound

### 6. Connect to Machine

- Lead wires that come with machine
- Use extensions wires if needed

### 7. Set Stimulus Parameters

- Polarity(+/-): start with cathode (-) in the wound and alternate weekly
- Frequency: High (80-120Hz)
- Intensity: sensory (produce pins & needles sensation or submotor (below muscle twitch)
- Treatment Schedule: minimum of 45-60 minutes 3 times a week, coordinate with dressing changes

## 8. Communicate with Health Care Team

- Involve patient and their trusted caregiver(s)
- Discuss with physician (provide research evidence)
- Work in conjunction with wound care team
  - ✓ Need moist interactive wound environment (eg. Nurse providing daily wound care)
  - ✓ Avoid wound care products with metal (Zn<sup>+</sup>, Ag<sup>+</sup>), high salt(Cl<sup>-</sup> or I<sup>-</sup>) or petrolatum, oil-based products
- Document wound healing using reliable outcome measures