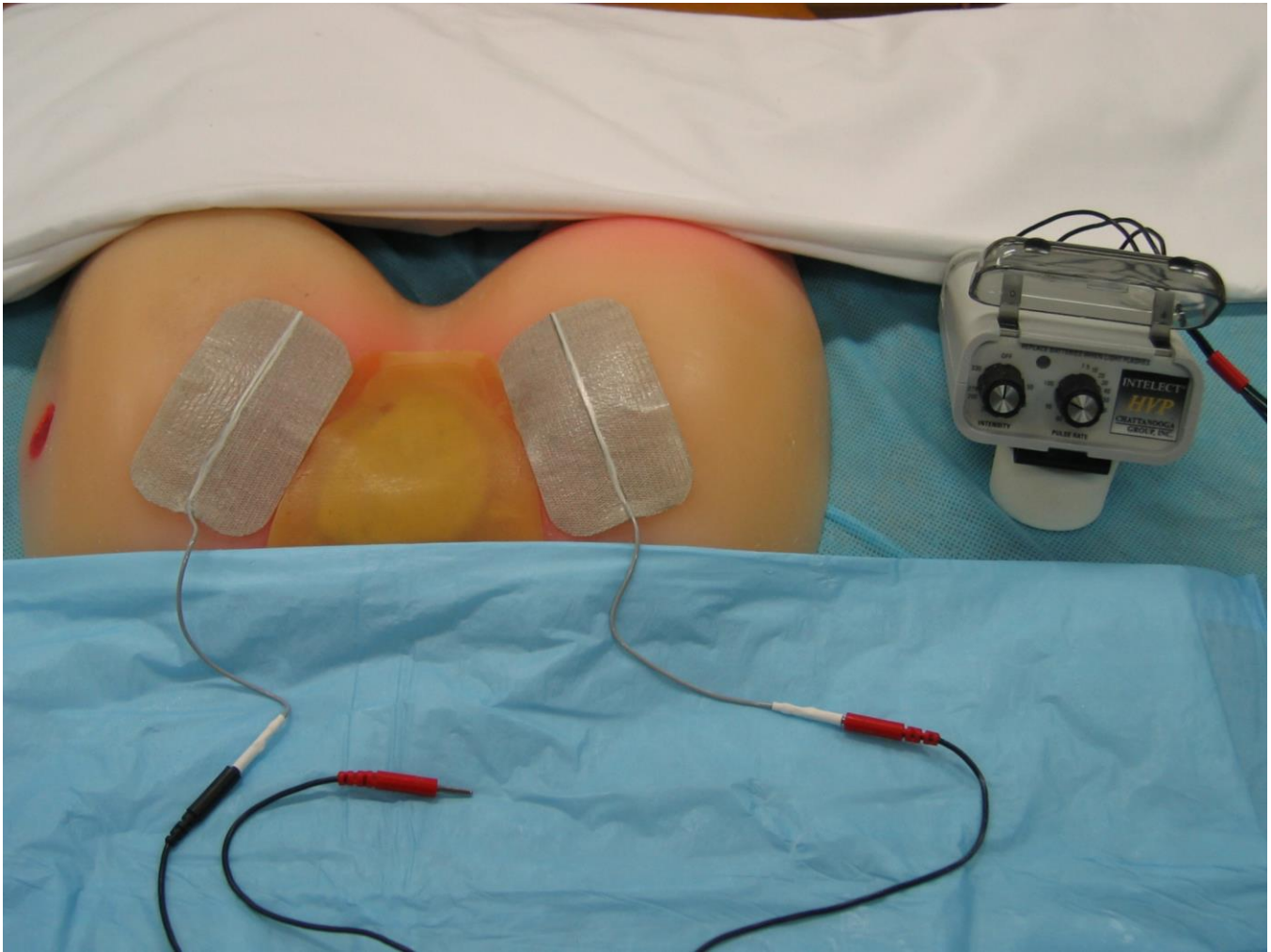


Electrical Stimulation with Two external electrodes (Bipolar).



STEPS

1. Cleanse wound with lots of sterile water or saline. Dab off excess water around the area.
2. Loosely pack the wound with saline soaked gauze, hydrogel, pre-moistened gelling hydrofiber, and/or Silver nylon dressing. If the wound is dry, add hydrogel to the dressing to provide adequate hydration to the wound.
3. Cover the wound with an absorptive Semi occlusive dressing so that wound fluid does not leak out and soak the electrodes located on either side of the wound.
4. Place two self adhesive electrodes of equal size (2 x 4/5 cm) on healthy intact skin on either side of the wound (approx 1cm from the wound edge). You may need to reinforce them with paper or cloth tape to ensure they stay attached to the skin.
5. Attach the electrodes to the red and black lead wires coming from the machine. The red and black coloured wires can be connected to either side of the machine and either side of the wound. It does not matter which side.
6. Insert extension wires between the machine lead and the electrode if you need extra length in order to place the machine away from the wound or the patient needs to be able to see the machine.

7. Protect the skin from the hard plastic of the lead wires and other connections using a thick dressing (foam or thick hydrocolloid). Try to minimize the number of times the hydrocolloid is replaced so that the skin denuding is lessened.
8. Once the electrodes are secured and the leads connected the stimulator can be turned on
9. Set Stimulus parameters
 - Pulse Frequency: Low – 4-10 Hz
 - Intensity: Motor level – work with patient to produce visible ms twitch that is comfortable
 - Note: this is a higher intensity than the sensory level used for monopolar (active electrode in wound). If the electrodes are placed over a body location where muscles are not visible, then you will have to establish what intensity is needed to activate muscle on another area with healthy skin (?arm) - (look at number on the dial)
 - Treatment time: 1.5hrs
 - Treatment Schedule: applied BID (two times a day) at least 3-7 times a week
 - Note treatment times are longer than monopolar technique
 - Alt/Cont: continuous mode will allow current to flow throughout the 1.5 hr treatment
 - Alternate mode can be selected to avoid muscle fatigue (current flow on 50% - automatically turns on and off every 10 seconds) – do not connect the second red lead wire.

CAUTION

1. Treatment should not be applied when the wound is dry. To optimize current around the wound area, it is best to apply the current when the wound is moist (not right after application of dry - absorptive dressing). Apply treatments prior to dressing change rather than after putting dry dressings in the wound.
2. Make sure the electrodes stay in place and do not touch each other. This can cause a potentially harmful situation where electrical arching between the electrodes occurs and tissue damage can occur.
3. Wound exudate should not leak out of cover dressing. If fluid soaks dressings between both electrodes, electrical arching and tissue burn can occur.
4. Dressings used (any wound packing or cover) should not contain hypertonic salt solutions (normal saline is fine) or metals such as most silver dressings or zinc based products (see list of compatible wound products for Estim).
5. Do not remove the electrodes while the machine is on. - removing the electrodes during stimulation may cause a non-harmful but strong sensation.
6. Do not apply self adhesive electrodes over broken skin
7. A skin rash due an adhesive allergy can develop under the self adhesive electrode – use a black carbon-based electrode with hydrogel interface that are held in place by a Velcro strap.
8. Tell the patient to report any pain or discomfort during treatment. Discontinue if you feel they are associated with this treatment.
9. Discontinue treatment if wound condition deteriorates. (wound size increases)
10. If the wound is located below the knee, monitor leg edema and discontinue if this treatment exacerbates this condition.
11. The area around the electrodes should be kept dry. If the electrodes are in contact with air or dry dressings, the current will not be delivered to the wound.

Discontinue the treatment if the machine does not seem to be working or if any of the above adverse reactions are observed. Report any problems or if you require more supplies to your local representative. Do not continue or restart your Estim treatments until your wound has been reassessed and you have had your questions/concerns addressed satisfactorily.

CONTACT INFORMATION for Estim Provider

Name

phone/email/fax