

## LEECH THERAPY

### PURPOSE:

To outline nursing responsibility for providing leech therapy.

### SUPPORTIVE DATA:

Leech therapy may be used for patients with documented venous congestion associated with microvascular surgery, re-implanted soft tissues, or for patients with skin flaps that exhibit signs and symptoms of venous congestion and are at risk for necrosis.

The leech produces secretions that contain a local anesthetic, a local vasodilator, and an anticoagulant that prevents clotting and relieves venous congestion by promoting bleeding from the site. The bleeding may continue for several hours after removal of the leech. The leech is used only once.

Leeches are obtained from pharmacy and are stored in a specialized solution called Hirudo salt. They must be refrigerated. The container should be covered with cheesecloth secured with a rubber band or a lid with small openings to maintain ventilation and prevent their escape.

### EQUIPMENT LIST:

- Leech(es) (in sterile water solution)
- Forceps
- Sterile 20-gauge needle
- 70% alcohol
- Gauze
- Normal Saline
- Towels

### STEPS

### KEY POINTS

1. Verify provider's order includes:
  - Body portion requiring leech therapy
  - Number of leeches to be used with each therapy
  - Frequency of therapy with number of hours and days of treatment (e.g. q4 hours x 3 days)
2. Explain benefits of leech therapy prior to procedure
3. Prepare area of patient's skin by cleansing with only sterile non-chlorinated water
4. Obtain leech(es) from storage receptacle with forceps

An attached digit may only require one leech at a time, whereas a skin flap may require six each time

### STEPS

5. Apply to patient's skin in area surrounding wound. Do not apply directly over open wound. If leech does not attach:
  - Prick the area with a 20 gauge sterile needle or
  - Try a different leech
6. Surround the leech and proposed attachment area with a normal saline-soaked gauze
7. Place towels around exterior of moist gauze
8. Monitor leech continuously while on the patient
9. Allow the leech to detach on its own
10. Place leech(es) in container of 70% alcohol after removal
11. Dispose of leech(es) in bio-hazardous waste container after alcohol treatment
12. Remove any clots gently from the area to promote bleeding
13. Check hemoglobin/hematocrit as ordered
14. Notify provider for:
  - Excessive bleeding from wound site
  - Decrease in hemoglobin/hematocrit after leech therapy
  - Signs of swelling, ecchymosis, or petechial hemorrhages
  - Signs of infection

### KEY POINTS

This will contain the leech within the desired area of wound attachment and prevent migration to other areas of the wound or body.

This will further assist with the prevention of leech migration

This is especially important when used on the tongue as the leech will release once feeding has completed and can block the airway

Do not use heat lamp over area while leeches are on the patient

Typically, the leech will detach once fully engorged (average of 20-45 minutes). **NEVER pull or forcibly remove the leech**, as forcibly removing the leech may cause the jaw to be left in the patient or result in regurgitation of leech's stomach contents into the wound which increases the risk of infection

**NEVER RE-USE LEECHES**  
Never return used leeches to the Pharmacy

**STEPS**

**KEY POINTS**

15. Teach patient/family:
  - Purpose of leech therapy
  - When leeches will be removed
  - To notify nurse if leech migrates off the attachment site
  
16. Document the following in the electronic healthcare record:
  - Leech Therapy section of Systems Assessment in iView (customize view).
  - Assessment of tissue prior to leech application and post procedure
  - Signs of infection
  - Patient/family education and response to treatment

Initial date approved: 03/2017	Reviewed and approved by: Professional Practice Committee Pharmacy & Therapeutics Committee Nurse Executive Counsel Attending Staff Association Executive Committee	Revision Date: 8/20
-----------------------------------	---	------------------------