



# Marine Envenomation/ Injury

## History

- Type of bite/ sting
- Identification of organism
- Previous reaction to marine organism
- Immunocompromised
- Household pet

## Signs and Symptoms

- Intense localized pain
- Increased oral secretions
- Nausea/ vomiting
- Abdominal cramping
- Allergic reaction / anaphylaxis

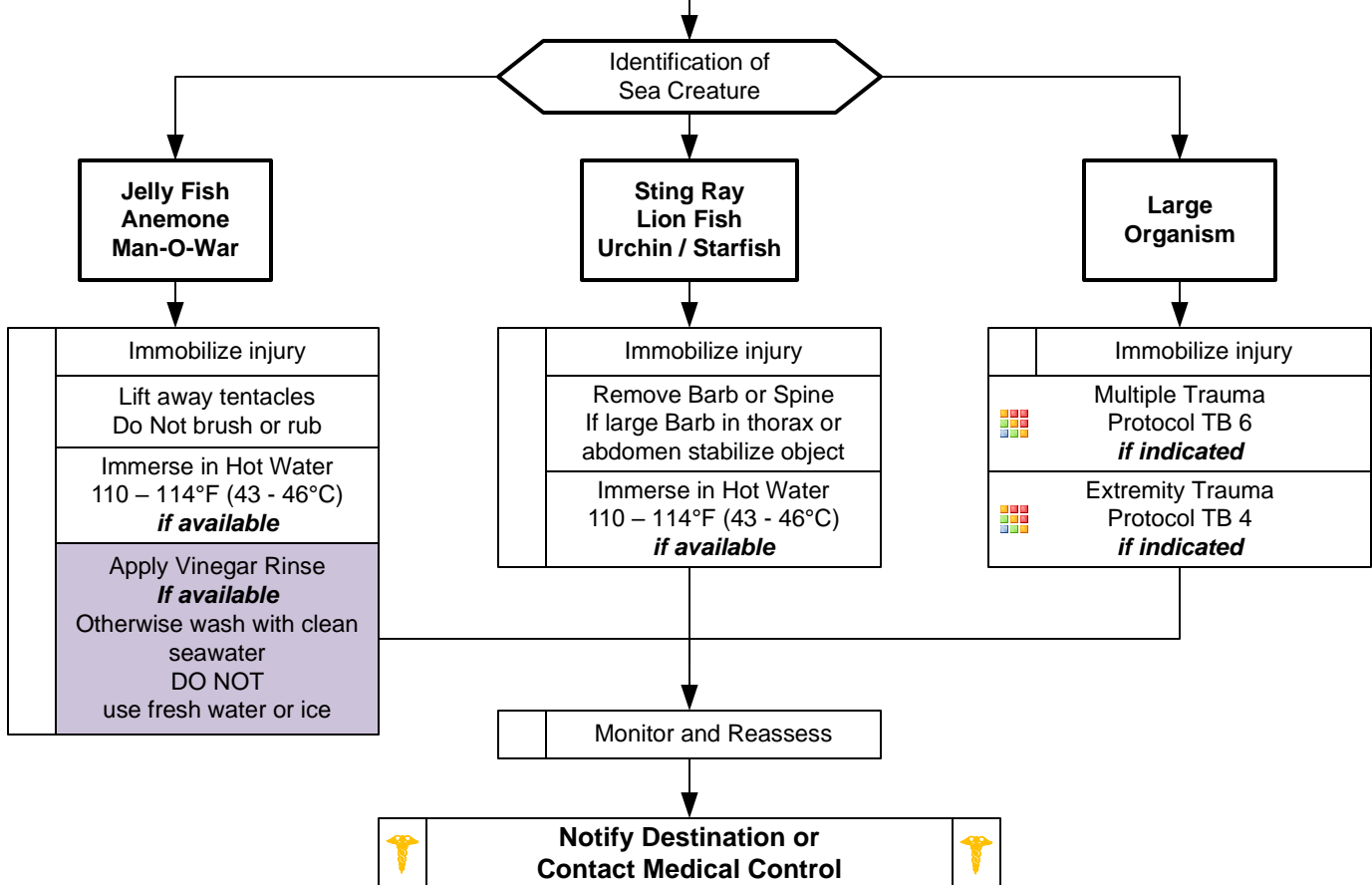
## Differential

- Jellyfish sting
- Sea Urchin sting
- Sting ray barb
- Coral sting
- Swimmers itch
- Cone Shell sting
- Fish bite
- Lion Fish sting

Call for help/ additional resources  
Stage until scene safe

	General Wound Care Procedure
	IV or IO Access Protocol UP 6 <b>if indicated</b>
<b>P</b>	Cardiac Monitor <b>if indicated</b>
	Drowning Protocol TE 3 <b>if indicated</b>
	Age Appropriate Allergy/ Anaphylaxis Protocol AM 1/ PM 1 <b>if indicated</b>
	Age Appropriate Hypotension/ Shock Protocol AM 5/ PM 3 <b>if indicated</b>
	Pain Control Protocol UP 11 <b>if indicated</b>

Contact  
Carolinas Poison Control  
1-800-222-1222  
Or  
Agency Specific Number



Toxic-Environmental Protocol Section



# Marine Envenomation/ Injury

## Pearls

- **Ensure your safety: Avoid the organism or fragments of the organism as they may impart further sting or injury.**
- **Priority is removal of the patient from the water to prevent drowning.**
- **Coral:**
  - Coral is covered by various living organisms which are easily dislodged from the structure.
  - Victim may swim into coral causing small cuts and abrasions and the coral may enter into cuts, causing little if any symptoms initially, but later causing inflammation, pain and/ or infection.
  - The next 24 – 48 hours may reveal an inflammatory reaction with swelling, redness, itching, tenderness, and ulceration.
  - Treatment is flushing with large amounts of fresh water or soapy water then repeating.
- **Jelly Fish/ Anemone/ Man-O-War:**
  - Wash the area with fresh seawater to remove tentacles and nematocysts.
  - Do not apply fresh water or ice as this will cause nematocysts firing as well.
  - Recent evidence does not demonstrate a clear choice of any solution that neutralizes nematocysts.
  - Vinegar (immersion for 30 seconds), 50:50 mixture of Baking Soda and Seawater, and even meat tenderizer may have similar effects.
  - Immersion in warm water for 20 minutes, 110 – 114°F (43 - 46°C), is effective in pain control.
  - Shaving cream may be useful in removing the tentacles and nematocysts with a sharp edge (card).
  - Stimulation of the nematocysts by pressure or rubbing cause the nematocyst to fire even if detached from the jellyfish.
  - Lift away tentacles as scrapping or rubbing will cause nematocysts firing.
  - Typically symptoms are immediate stinging sensation on contact, intensity increases over 10 minutes.
  - Redness and itching usually occur.
  - Papules, vesicles and pustules may be noted and ulcers may form on the skin.
  - Increased oral secretions and gastrointestinal cramping, nausea, pain, or vomiting may occur.
  - Muscle spasm, respiratory, and cardiovascular collapse may follow.
- **Lionfish:**
  - In North Carolina this would typically occur in a residence/ business as lionfish are often kept as pets in saltwater aquariums.
  - Remove any obvious protruding spines and irrigate area with copious amounts of saline.
  - The venom is heat labile so immersion in hot water, 110 – 114°F for 30 to 90 minutes is the treatment of choice but do not delay transport if indicated.
- **Stingrays:**
  - Typical injury is swimmer stepping on ray and muscular tail drives 1 – 4 barbs into victim.
  - Venom released when barb is broken.
  - Typical symptoms are immediate pain which increases over 1 – 2 hours.
  - Bleeding may be profuse due to deep puncture wound.
  - Nausea, vomiting, diarrhea, muscle cramping, and increased urination and salivation may occur.
  - Seizures, hypotension, and respiratory or cardiovascular collapse may occur.
  - Irrigate wound with saline. Extract the spine or barb unless in the abdomen or thorax, Contact Medical Control for advice.
  - Immersion in hot water, if available, for 30 to 90 minutes but do not delay transport.
- Patients can suffer cardiovascular collapse from both the venom and/ or anaphylaxis even in seemingly minor envenomation.
- Sea creature stings and bites impart moderate to severe pain.
- Arrest the envenomation by inactivation of the venom as appropriate.
- Ensure good wound care, immobilization and pain control.