



# 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

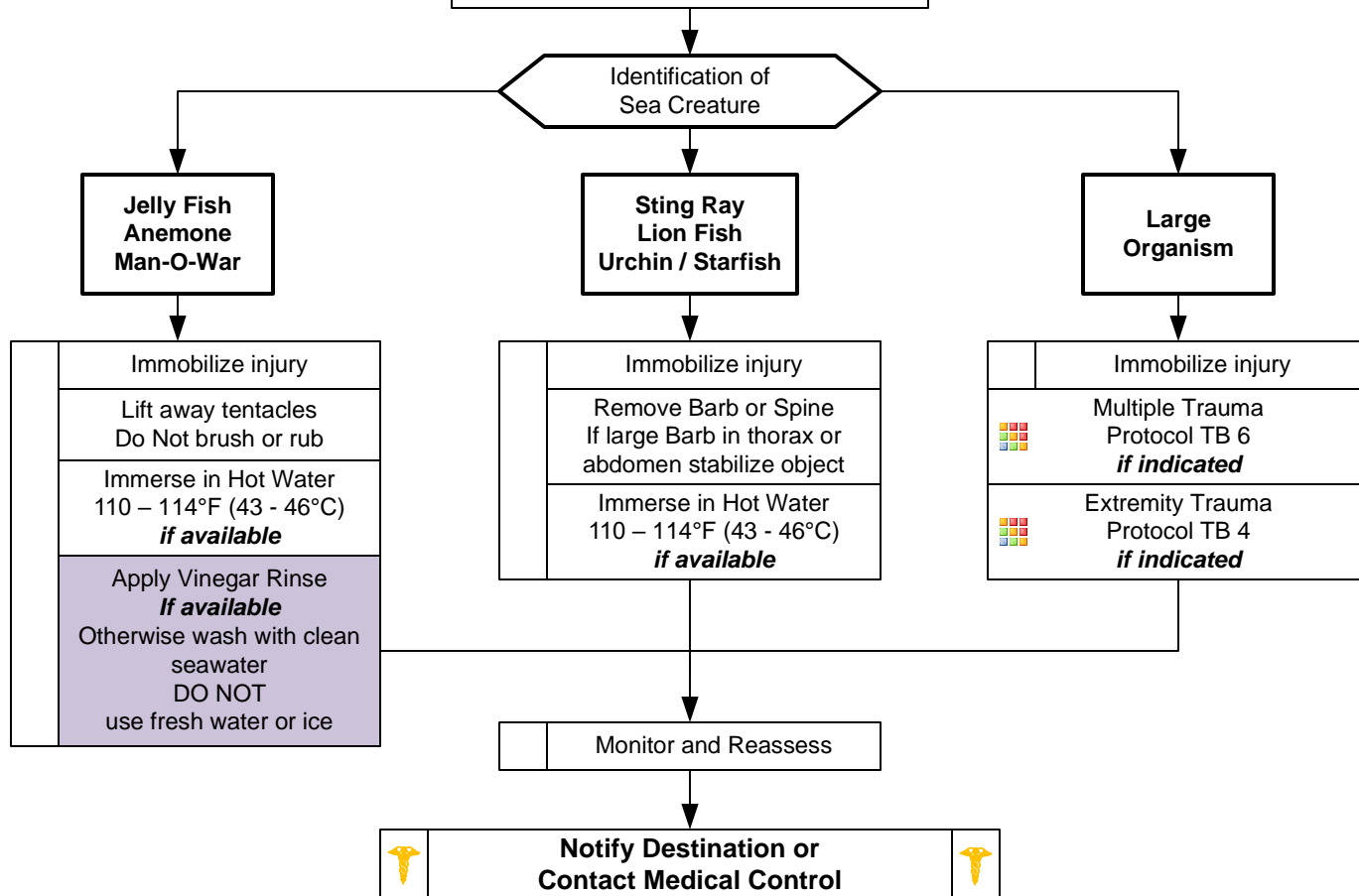
## Differential

- 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 <i>if indicated</i>
P	Cardiac Monitor <i>if indicated</i>
	Drowning Protocol TE 3 <i>if indicated</i>
	Age Appropriate Allergy/ Anaphylaxis Protocol AM 1/ PM 1 <i>if indicated</i>
	Age Appropriate Hypotension/ Shock Protocol AM 5/ PM 3 <i>if indicated</i>
	Pain Control Protocol UP 11 <i>if indicated</i>

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





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## **Poison Control:**

Poison control is a valuable resource, have a low threshold to engage them with any medication or chemical exposure.

Poison control can aid with chemical or medication identification and treatment.

Poison control can prevent unnecessary emergency department visits and EMS transports:

They may instruct the patient to remain at home based on the type and nature of the ingestion or exposure.

They can follow the patient at home with repeated phone calls and reassessments.

Poison control centers are connected nationwide. When you call 1-800-222-1222, you will most often be connected with Carolinas Poison Control, however if the NC center is busy, you may be directed to any poison center in the US.

When calling 1-800-222-1222, choose option #2 at the first voice prompt, and choose option #2 at the second voice prompt.

## **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 scraping 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.