

Stingray Information Handout

You are receiving this because it is suspected that you have been stung by a...

STINGRAY



Phone: 310-939-7200

Medical Treatment



Lifeguards & Paramedics

•HOT WATER

- Heat decreases the pain drastically
- Antiseptic wound cleaning

Emergency Department (Hospital)

•HOT WATER

- X-ray
- Spine removal
- Deep wound cleaning with antiseptic
- Pain management
- Antibiotics
- Tetanus Update

The water should be exchanged with more hot water to keep the temperature as hot as tolerable for 30-90 minutes until the pain diminishes.⁵

When the venom has been deactivated by the hot water, routine wound care with **antiseptic** is priority. If any other symptoms occur, go to a hospital.

Hospital treatment will also start with hot water, but the wound care will be more in depth. X-ray images will be taken, and all remnants of the spine and any sand or dirt must be removed.⁴

Due to the bacteria in the water antibiotics are recommended. If you notice any **signs of infection (redness, swelling)** seek further medical attention!

Stingrays

Stingrays are bottom dwellers and found partially buried in shallow sandy waters during the temperate summer months. They are flat fish with eyes and nostrils on the top side of their bodies and their mouths and gills on the underside.

The stingray's defense mechanism is camouflage, but if stepped on, it will sting. The stinging mechanism is composed of the tail, one or more barbed spines on the tail, and the venom on the spine. When the stingray is at rest the spine is flat against the tail.

The spine is 1-1.5 inches long and made of a hard tooth like material. The spine has many small barbs or serrations like small fish hooks going opposite the direction of the point of the spine.³The spine is housed in a thin sheath which encases a mixture of venom and mucus.





Stingrays



The Envenomation (The “Sting”)

When provoked, the stingray will instinctively lash its tail upwards and side to side very fast. The injury from the stingray has two mechanisms. The first is the trauma from the puncture of the spine and tearing from the barbs. The second is the protein based venom that gets released when the sheath is broken. Envenomation occurs in up to 75% of reported stingray injuries.² The spine and/or barbs break off in approximately 5% of reported cases.²



Clinical Presentation

(What it looks and feels like)

Typically patients present with a small puncture wound to the foot. After the initial puncture, patients commonly describe the pain as very intense, throbbing, and radiating up the leg.

There could be minor bleeding to severe hemorrhaging depending on the location of the puncture. Due to the force of the puncture a bruise often develops.

Although much less common, effects of the envenomation could include, muscle cramps, sweating, abdominal pain, diarrhea, nausea, vomiting, seizures, loss of consciousness, hypotension, and in rare cases death.⁴

Prevention

(“The Stingray Shuffle”)

Stingrays are docile creatures that avoid humans. Stingrays can be avoided by shuffling ones feet along the sandy bottom, giving time for the stingray to move away.

References

1. “Round Stingray (Round Ray).” Aquarium of Pacific, Long Beach, CA. n.d. Web. 1 Sep. 2013
2. Fenner, P.J. et al. “Fatal and Non-Fatal Stingray Envenomation.” *Medical Journal of Australia* 151 (1989) : 621-625. Print.
3. Williamson, John A., Peter J. Fenner, and Joseph W. Burnett. *Venomous and Poisonous Marine Animals: A Medical and Biological Handbook*. Sydney, Australia: University of New South Wales Press, 1996. Print.
4. Meade, John L. et al. “Stingray Envenomation.” *Medscape*. 2013. Web. 1 September 2013.
5. Clark R. F. et al. “Stingray envenomation: a retrospective review of clinical presentation and treatment in 119 cases.” *Journal of Emergency Medicine*. 33.1 (2007): 33-37. Print.

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