#### County of Los Angeles Board of Supervisors Hilda L. Solis Mark Ridley Sheila Kuehl

**3rd District** 

1st District

Thomas 2nd District

**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 under-side.

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.<sup>1</sup> The spine is housed in a thin sheath which encases a mixture of venom and mucus.



**STINGRAY HIDING IN THE SAND** 

Janice Hahn 4th District County Fire Department Fire (

Los Angeles County Fire Department Fire Chief Daryl L. Osby

#### Reference

1. Williamson, John A., Peter J. Fenner, and Joseph W. Burnett. Venomous and Poison-ous Marine Animals: A Medical and Biological Handbook. Sydney, Australia: University of New South Wales Press, 1996. Print.

2. 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.

3. Meade, John L. et al. "Stingray Envenomation." Medscape. 2013. Web. 1 Sep-tember 2013. –

4. Fenner, P.J. et al. "Fatal and Non-Fatal Stingray Envenomation." Medical Journal of Australia 151 (1989): 621-625. Print.

Special Thanks to Erik Martin and the Roundhouse Marine Studies Lab & Aquarium in Manhattan Beach



For more information about Stingrays and other beach hazards please visit: https://www.fire.lacounty.gov/lifeguard

(310) 939 - 7200



# WHAT HAPPENS IF YOU GET STUNG?



## Medical Treatment

- 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.<sup>2</sup>

When the venom has been deactivated by the hot water, routine wound care with <u>antiseptic</u> 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.<sup>3</sup>

Due to the bacteria in the water anti-biotics are recommended. If you notice ANY signs of infection (redness, swelling) seek further medical attention!





### 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.<sup>4</sup> The spine and/or barbs break off in approximately 5% of reported cases.<sup>4</sup>



#### **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.<sup>3</sup>

#### **ROUND STINGRAY**



#### PREVENTION

("The Stingray Shuffle") Stingrays are docile creatures that avoid humans. Stingrays can SOMETIMES be avoided by shuffling ones feet along the sandy bottom, giving time for the stingray to move away.

**BAT RAY** 

