

**STINGS, BITES AND POISONING FROM
DANGEROUS MARINE ANIMALS**
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Authors, Mexico: Health and Safety Travel Guide

Jellyfish - Many of Mexico's most beautiful beaches harbor the treacherous jellyfish. Twenty or more species are common in the waters around Mexico; most cause painful stings. Some are harmless but even a few rare species can be fatal. Jellyfish tentacles are armed with thousands of tiny needle-like filaments that can deliver small doses of venom just below the surface of a victim's skin. Stings can be very painful, especially if an extensive area of the body is involved. Children, asthmatics, or people with a history of significant allergies may be badly affected, and some cases of respiratory distress and shock have been reported. Seek medical attention if there is shortness of breath, nausea, vomiting, severe dizziness, or a severe rash after a sting.

If you do find yourself among a school of jellyfish try not to panic. Slowly tread water until you are sure you are clear of the school. If you are stung, rubbing your wounds may aggravate the pain. Do not immediately remove any stray tentacles from your body. If you are able, apply shaving cream, baking soda, or flour first and then after a few minutes scrape off the tentacle(s) with a knife or credit card after it has dried out a bit. This process prevents the further discharge of venom. Do not apply alcohol or vinegar despite what you may have heard. Vinegar may be helpful for preventing further venom discharge in some species but harmful in others. Therefore, do not use vinegar unless one of the locals has seen what jellyfish has stung you and recommends that you use it. Cold compresses or topical anesthetic sprays may be useful in relieving pain. Also, ammonia products, such as Windex®, or certain over-the-counter salves may help soothe the pain. Believe it or not, the primary component of urine is ammonia and if applied to a fresh sting, it may help ease your suffering. Meat tenderizer with papain, applied as a wet paste, destroys venom. Soaking the extremity in very warm (not scalding) water for up to 90 minutes may help deactivate the venom.

There is a new lotion on the market that prevents jellyfish stings and the stings of a number of other marine animals such as sea lice, sea nettle, coral, or sea anemone. The product, called SafeSea™, has the same protective chemical found in clown fish that prevents them from being stung. It is mixed with various strengths of SPF protection and it seems to work on most but not all subjects tested. It has not yet been tested on the Portuguese man-of-war jellyfish that is common to the waters surrounding Mexico, but it makes sense that it would work on all jellyfish. SafeSea™ may be purchased at www.nidaria.com.

Stingrays - They may be found just under the sandy surface of the ocean floor, typically in shallower waters. The stinger, used by the animal for protection from predators, is located at the end of the ray's tail. Swimmers and divers are stung when they unknowingly step on the stingray and the long tail reflexively lashes out at the offending leg or ankle. Although the barb of a stingray is poisonous, most of the damage is caused by the actual wound itself or subsequent infection. If enough venom enters the blood stream systemic effects such as dizziness, nausea, vomiting, or fainting may occur. If you or someone you know is stung by a stingray treat it like you would any contaminated puncture wound. Immediately irrigate the wound with clean or sterile saline solution or water. The more you are able to irrigate the wound the better your chance of avoiding a deep wound infection or abscess. Soak the limb in warm soapy water as often as you can. If you do develop any signs of wound infection, seek medical attention immediately. Make sure your tetanus immunization is up-to-date. If cleaning of the wound has been delayed for more than three or four hours consideration should be given to preventative antibiotics. Appropriate antibiotics would include Augmentin or Biaxin.

Echinoderms - Starfish and Sea Urchins - Sea Urchins are small, spiny bottom dwellers that if stepped on can inject a venom that may cause nausea, vomiting, muscle cramps, shortness of breath, or localized swelling, redness, and numbness. Local affects are most common. The spines are difficult to remove and may cause infection, especially if they have broken off and lodged under the skin. If you are wounded by a sea urchin make sure your tetanus immunization is up-to-date, remove easy-to-access spines, and seek medical attention if there are deeper spines that you cannot remove. Follow basic wound care treatment guidelines (see www.medtogo.com/239.html). Soaking an affected extremity in very warm soapy water may be effective at neutralizing toxins and cleaning out any wounds. If eaten and improperly prepared, sea urchins may cause significant intestinal disturbances.

Mexican starfish are not poisonous. They may cause cuts or abrasions if they are stepped on or mishandled. Follow routine wound care guidelines as applicable.

Poisonous Fish - Poisonous fish common to the waters surrounding Mexico include the scorpion (*Scorpaena*) and zebra (*Pterois*) fish. These fish have long venomous spines growing out of their skin. Stings from these fish are known to be extremely painful and cause severe swelling at the site of injury. The venom may be destroyed with heat, so soaking the extremity in very warm water (100°-115° F or about 50° C) for up to 90 minutes will help reduce the duration of pain. Topical anesthetics may be helpful. If the pain is severe, seek medical attention and request an anesthetic injection. Follow standard wound care precautions for puncture wounds.

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