Lionfish have venomous spines that can cause severe pain and swelling, which may persist for days or even weeks. They have 13 long, separated dorsal spines located along their backs in addition to a few relatively short and inconspicuous anal and pelvic spines (not to be confused with their dramatic-looking, fan-like pectoral fins) located on the bottom side of the fish. All of these spines are venomous.

IF ENVENOMATED BY A LIONFISH, SEEK PROFESSIONAL MEDICAL ATTENTION AS SOON AS POSSIBLE!

**First Aid Response to Lionfish Envenomation**

While considering transportation options to a healthcare facility, the basic first aid response to lionfish envenomation consists of:

1. **Hot Water Immersion Therapy.** Lionfish venom is partly broken down by heat. Rapid application of hot water should therefore bring some pain relief and cannot be sufficiently stressed. The wound and surrounding area should be immersed in water as hot as the victim can stand (but NOT boiling water) for about 30 to 90 minutes. Water should be no hotter than 45 degrees Celsius (114 degrees Fahrenheit) in order to prevent scalding and other heat-related injuries.

2. **Administer Over-the-Counter Painkillers.** Over-the-counter painkillers may also be taken for partial pain relief (if pain is not responsive to immersion in hot water) while in transport to a healthcare facility. A responsible person accompanying the victim should take note of the type and dosages of painkiller administered and subsequently report this information to the healthcare provider upon arrival.

3. **Immediate Transport to a Healthcare Facility.**
**The Bahamas National Lionfish Response Project**

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**How Do I Obtain Hot Water for First Aid on a Boat?**

If envenomated by a lionfish while out at sea, there are two ways in which you can obtain hot water for immersion therapy.

1. **Outboard Engines.** Outboard engines use water as a coolant. This water becomes quite hot in the process of cooling down the boat engine and is usually ejected from a jet on the side of a boat. You can therefore place a clean towel in this hot water and then wrap the towel around the wound as a substitute for hot water immersion therapy.

2. **First Aid Instant Hot Packs.** Instant hot packs use chemicals that rapidly release a lot of heat when activated, usually by dissolving in water. Once activated, some hot packs can reach temperatures of up to 110 degrees Fahrenheit for as long as 30 minutes. Persons working on boats should consider including several instant hot packs in their marine first aid kits for use in the event of lionfish envenomation.

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**A Special Note To Divers**

Whether using SCUBA or compressors, the following steps should be followed in the event of lionfish envenomation while diving.

1. **Remain Calm.** Envenomation by a lionfish can be extremely painful but it is crucial that you remain calm. Panicking while underwater can result in hyperventilation or breath-holding, which can lead to serious diving-related complications.

2. **Notify Your Dive Buddy/Partner.** Create a hand signal for a lionfish envenomation and make sure that your dive buddy/partner is familiar with the signal. Immediately notify your buddy if you are envenomated by a lionfish. Your dive buddy should assist you in any way necessary and accompany you back to the boat.

3. **Slowly Ascend and Proceed with Your Planned Safety/Decompression Stop.** Although a lionfish envenomation is painful, it is important to slowly ascend at a controlled rate. Remain at the appropriate depth and time for the entire duration of your planned safety/decompression stop. Lung overexpansion injuries or decompression sickness are generally far more difficult to treat than a lionfish envenomation!

4. **Administer Basic First Aid.** Allow your dive buddy/partner or other persons on the boat to assist you with basic first aid for lionfish envenomation.

5. **Immediate Transport to a Healthcare Facility.** A responsible person should accompany the victim to a healthcare facility and report: the approximate amount of time that has transpired since the victim was envenomated; the exact nature of the first aid that was administered (including type and dosages of over-the-counter painkillers, if taken); and, whether or not the victim slowly ascended from depth underwater and adhered to the rules pertaining to planned safety/decompression stops. All of this information may be important in treating the victim.

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**References**

