



## Guideline 9.4.7 - Envenomation - Fish Stings

### Introduction

Many fish have spines with attached venom glands. When trodden upon, the spines of the marine Stonefish (*Synanceia* spp) and the freshwater Bullrout (*Notesthes robusta*) penetrate deeply and deposit venom causing excruciating pain. General cardiovascular toxic effects can occur but are rare. Handling these or similar fish is also potentially dangerous.

The barbed spines on the tails of stingrays can inflict a serious gash or penetrating stab injury with subsequent venom-induced tissue death. Organs and blood vessels may be damaged and fragments of spine may remain in the wound requiring surgical removal. Injuries usually occur when the victim stands on an unseen fish, pulls a captured fish into a boat or swims too closely over a fish on the sea-floor.

### Recognition

Symptoms and signs may include:

- intense pain, leading to irrational behaviour
- swelling
- sometimes a local grey/blue discolouration
- an open wound
- bleeding

### Management

- Call an ambulance
- If the sting is to the trunk (chest, abdomen), assess the victim for signs of bleeding and treat as per [ANZCOR Guideline 9.1.1 Principles of Control of Bleeding for First Aiders](#)
- If there is an embedded object (eg. a barb from a stingray sting), do not remove it as it may be plugging the wound and restricting bleeding. Place padding around or above and

below the object and apply pressure over the pads.

- If the sting is to a limb, place the victim's stung hand or foot in hot water (no hotter than the rescuer can comfortably tolerate)<sup>1-8</sup> (Class A, LOE IV).
- Transport the victim to a medical facility.

If the victim is unresponsive and not breathing normally, follow Australian Resuscitation Council and New Zealand Resuscitation Council [Basic Life Support Flowchart \(ANZCOR Guideline 8\)](#).

**Note:**

DO NOT use the Pressure Immobilisation Technique. Antivenom is available for stonefish envenomation. (LOE IV, CLASS A)

**AUSTRALIAN VENOM RESEARCH UNIT**

**For urgent advice** concerning any marine envenomation you can call the Australian Venom Research Unit 24 hour advisory line.

**1300 760 451**

## References

1. Clark RF, Girard RH, Rao D, Ly BT, Davis DP. Stingray envenomations: a retrospective review of clinical presentation and treatment in 119 cases. *J Emerg Med* 2007; 33: 33-37.
2. Atkinson PR, Boyle A, Hartin D, McAuley D. Is hot water immersion an effective treatment for marine envenomation? *Emerg Med J* 2006; 23: 503-508.
3. Isbister GK. Venomous fish stings in tropical northern Australia. *Am J Emerg Med* 2001; 19: 561-565.
4. Aldred B, Erickson T, Lipscomb J. Lionfish envenomations in an urban wilderness. *Wilderness Environ Med* 1996; 7: 291-296.
5. Kizer KW, McKinney HE, Auerbach PS. Scorpaenidae envenomation. A five-year poison center experience. *JAMA* 1985; 253: 807-810.
6. Ngo SY, Ong SH, Ponampalam R. Stonefish envenomation presenting to a Singapore hospital. *Singapore Mewd J* 2009; 50: 506-9.
7. Satora L, Kuciel M, Gawlikowski T. Catfish stings and the venom apparatus of the African catfish *Clarias gariepinus* (Burchell, 1822), and stinging catfish *Heteropneustes fossilis* (Bloch, 1794). *Ann Agric Environ Med* 2008; 15: 163-8.
8. Grandcolas N, Galéa J, Ananda R. et al. Stonefish stings : difficult analgesia and notable risk of complications. [Article in French] *Presse Med* 2008; 37: 395-400.

## Further Reading

[ANZCOR Guideline 8 Cardiopulmonary Resuscitation](#)

[ANZCOR Guideline 9.1.1 Principles of Control of Bleeding for First Aiders](#)

## About this Guideline

<b>Search date/s</b>	2014
<b>Question/PICO:</b>	Not available
<b>Method:</b>	Literature review
<b>Primary reviewers:</b>	Not available
<b>Other consultation</b>	
<b>Worksheet</b>	Not available
<b>Approved:</b>	2014
<b>Guidelines superseded:</b>	9.4.7