

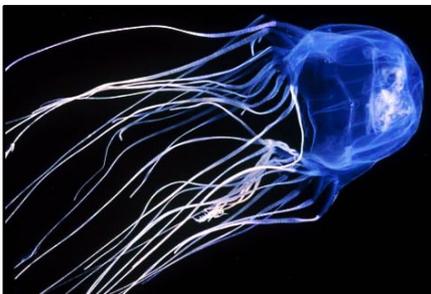
HAZARD ALERT

Jellyfish Stings

The incidence of jellyfish stings is on the rise in the Top End with warmer temperatures prompting stingers to drift within range of the shore. October to May is the peak season for dangerous jellyfish and fishers and aquaculture workers are advised to be vigilant, particularly when launching boats or working at the waters edge with the creatures preferring shallow water. Jellyfish are also known to be caught in fishing gear and can be inadvertently handled as they can be difficult to see if small or if their tentacles are entangled in gear. There are numerous species of jellyfish that can cause painful stings to humans, but the two species that result in the most serious injuries and deaths across Northern Australia are the Box Jellyfish and the Irukandji Jellyfish.

Box Jellyfish (*Chironex fleckeri*)

The Box Jellyfish is a large, transparent, pale blue jellyfish and bell or cube shaped, hence its name. Measuring up to 20 cm along each side of the bell the Box Jellyfish has as many as 60 flat tentacles, which can be 3 metres in length and contain millions of nematocysts (stinging cells).



Box Jellyfish (*Chironex fleckeri*)

Season and habitat

Box jellyfish are found in NT waters all year round but are most prevalent during the wet season (Oct – May). They are usually found in estuarine and inshore areas and tend to move inshore on a rising tide in calm weather, particularly after rain.



Box Jellyfish Sting

Envenomation

A Box jellyfish sting occurs when the tentacles (not the bell) contact the bare skin causing the nematocysts (stinging cells) to inject millions of little doses of venom into a large area of tissue, which allows very rapid absorption. The venom is fired into the skin in 3 milliseconds – faster than the inflation of a car airbag in an accident.

Signs and Symptoms

Box jellyfish venom is cardiotoxic (attacks the heart) and highly dermatonecrotic (destroys skin). A sting causes immediate excruciating localized pain and within minutes white welts appear where the tentacle contact occurred followed by red whip-like lines which might later blister. A massive dose of venom can cause cardiac dysfunction, resulting in loss of consciousness, cardiac arrest and death within a few minutes of being stung. The pain of a sting is so bad that people who are stung by a Box Jellyfish can quickly go into shock and deaths from drowning have occurred. Fatalities from Box Jellyfish stings are fortunately rare in comparison with the number of people stung every year.

Irukandji Jellyfish

Related to the larger Box jellyfish (*Chironex fleckeri*), Irukandji Jellyfish are also a type of box jellyfish. The Irukandji jellyfish, of which several species have been discovered, are known to cause a particular syndrome known as Irukandji syndrome, named after a local aboriginal tribe in the locality of North QLD where they were originally identified. Like their larger cousins, Irukandji jellyfish are box-like in shape, however they only have one tentacle per corner of the bell and are generally much smaller in size, ranging from only 3mm to over 100mm in bell length. Because of their small size and near transparency it is extremely difficult to spot these animals in the water and very few victims see the animal that is responsible for their sting.



Irukandji jellyfish

Season and habitat

Irukandji jellyfish are found in NT waters all year round but are most prevalent during the wet season (Oct – May). They are usually offshore animals but move inshore in swarms with currents created by northerly breezes, which push the animals towards the shoreline. They then remain in these areas until the currents change and push them back offshore.

Envenomation

Irukandji jellyfish have nematocysts (stinging cells) on their body as well as their tentacles. The stinging cells are like round bulbs and stings from an Irukandji jellyfish look like a cluster or line of dots, which mirror the position of stinging cells on the animal.

Signs and Symptoms

A sting from an Irukandji jellyfish is only moderately painful at first but becomes intensely painful over about 30 minutes and Irukandji 'syndrome' may include symptoms such as severe backache, muscle pains, chest and abdominal pain, nausea and vomiting, headaches, sweating and (rarely) pulmonary oedema.

STING FIRST AID

Box and Irukandji jellyfish stings:



- Call for help – dial 000
- Assess the victim and commence CPR if necessary.
- Liberally douse the stung area with vinegar to neutralise the stinging cells – do not wash with fresh or sea water or methylated spirits or alcohol or rub with towels / sand.
- Seek medical assistance and transport to hospital immediately.

STING PREVENTION & RISK MANAGEMENT

- **Protective Clothing** – the best form of sting prevention is to have clothing between you and the jellyfish as box jellyfish spp. cannot sting through even the thinnest layers of clothing. The best material for this is neoprene but it can get hot / cumbersome if working in it. Lycra all in one 'stinger suits' are available, are cooler than neoprene and easier to work in. Gloves, boots and hoods are also recommended for maximum protection
- **Clothing Gaps** – care should be taken to minimize where skin may become exposed or where whole animals / tentacles may become trapped against the skin.
- **Procedure and training** – take the time to write down an emergency procedure for dealing with jellyfish stings. Ensure that crew / staff have CPR training and are inducted into what to do if they or another person gets stung.
- **Vinegar** – ensure there is enough vinegar on board / on shore.