

# Ciguatera Fish Poisoning

## What is it?

Ciguatera poisoning is a form of food poisoning. It is caused by eating warm-water ocean fish that carry toxins. These toxins are produced by a dinoflagellate (small algae-like organism), which attaches itself to algae growing in warm ocean reef areas. Small plant-eating fish eat the toxic algae and in turn are eaten by larger predatory fish. Ciguatera fish poisoning occurs when humans consume fish that have accumulated a significant amount of the toxin.

## What types of fish cause ciguatera poisoning?

Any predatory fish that feeds on warm ocean waters can be carriers of ciguatera toxins. Many fish species have been implicated including coral trout, barracuda, red snapper, donu, parrotfish, grouper, Spanish mackerel, red emperor, wrasse, reef cod, sturgeon fish, trevally, kingfish and moray eel.

Ciguatera toxin does not affect the appearance, odour or taste of the fish so consumers will not be aware that the toxin is present. Freezing or cooking the fish once it has been contaminated will not kill the toxin or prevent illness.

## Who is affected?

Anyone who consumes contaminated fish can be affected by ciguatera poisoning.

## What are the symptoms?

Symptoms usually start between one to 48 hours after eating a toxic fish. The time before onset of illness and the range of symptoms can depend on how much fish is eaten, how much toxin is in the fish and each person's susceptibility to the toxin.

Symptoms can include:

- Tingling and numbness in fingers, toes (extremities), around lips, tongue, mouth and throat
- Nausea, vomiting, diarrhoea and/or abdominal cramps
- Dizziness or light headedness
- Burning sensation or pain on contact with cold water
- Joint and muscle pains with muscular weakness
- Headache
- Fatigue and lethargy
- Itch
- Reversed temperature sensation
- Difficulty breathing in severe cases

Gastrointestinal symptoms (diarrhoea, vomiting, abdominal pain) generally occur first, often within 24 hours.

Neurological symptoms may occur at the same time as the gastrointestinal symptoms or follow one to two days later. In some cases, neurological symptoms may occur without gastrointestinal symptoms.

## How long do symptoms last?

Gastrointestinal symptoms usually resolve over a few days. Most patients recover completely within a few weeks although intermittent recurrences of neurological symptoms can occur over months to years.

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## Minimising the risk

- Avoid eating the head, roe, liver or other organs of warm water ocean fish. As the toxin is highest in these parts of the fish.
- Vary the type of warm water fish eaten.
- Avoid eating large warm water fish. Limit whole weight to around five kilograms per fish, as ciguatera fish poisoning occurs more frequently when larger fish are eaten.
- When first eating a warm water ocean fish, eat a small portion only – no more than 150 to 200 grams. If ciguatera-like symptoms develop, do not eat further portions of that fish.

## Recovering from ciguatera fish poisoning

We recommend you don't consume alcohol, caffeine, fish, fish sauces and nuts and avoid excessive or strenuous physical activity for 6 months as this may cause your symptoms to recur. Men are advised to use a condom/barrier protection while having sexual activity for the next 6 months.

Once completely recovered, initially eat only a small portion of warm water ocean fish, no more than 200 grams. If symptoms recur, seek medical advice and avoid eating warm water ocean fish for a few more months.

### Source

Adapted from the following sources:

- Ciguatera – Food Safety fact sheet 37, Queensland Health [www.health.qld.gov.au/foodsafety](http://www.health.qld.gov.au/foodsafety)
- Ciguatera fish poisoning. Up To Date [www.uptodate.com](http://www.uptodate.com)