



[Authoritative facts](#) about the skin from the [New Zealand Dermatological Society Incorporated](#).

[Home](#) | [Skin reactions to external agents](#)

Scombroid fish poisoning

What is scombroid poisoning?

Scombroid fish poisoning is a toxic reaction to decomposing scombroid fish, such as kahawai, mackerel, tuna, bonito and butterfly kingfish. These have a dark meat. Occasionally other fish species are responsible.

Scombroid fish contain a chemical called histadine. Bacteria multiply in fish stored in warm conditions (>15C) and turn the histadine into scombrotoxin. The main component of scombrotoxin is histamine, which is responsible for the symptoms of scombroid poisoning.

Cooking or smoking the fish does not reduce histamine levels even though the causative bacteria have been destroyed. However, the amount of histamine in the meat varies according to the decomposition in that particular portion, so only one or two that eat the meat may be affected by scombroid poisoning and the rest of the diners will feel fine.

Scombroid poisoning is not infectious. Nor is it due to allergy. It is quite safe to eat the same kind of fish again as long as it is freshly caught and chilled.

What are the symptoms of scombroid poisoning?

Illness begins within 30 minutes to an hour or two of consuming the fish, usually with a feeling of warmth and flushing. An impressive rash develops on the face, neck, chest, and upper back. Affected areas are bright red, hot and itchy. The rash is a form of [urticaria](#), but unlike an allergic reaction, there is no wealing (skin swelling).

Scombroid fish poisoning (tuna)



At the same time as the rash, other symptoms may occur:

- Burning feeling in the mouth
- Pounding headache
- Raising heart
- Dizziness
- Difficulty breathing
- Abdominal pain
- Nausea

- Diarrhoea
- Collapse due to low blood pressure

Symptoms usually persist for about three hours, but in severe cases it may take longer to recover.

What is the treatment?

Luckily, oral [antihistamines](#) are very effective. All symptoms should improve, and possibly completely resolve, within ten to fifteen minutes of taking a quick-acting non-sedating or conventional antihistamine tablet.

If there is not immediate improvement in symptoms, seek urgent medical attention.

In bad attacks it may be necessary to continue the antihistamines for several days. Suitable medications include:

- Cetirizine
- Loratidine
- Fexofenadine

So-called H2 blockers such as cimetidine and ranitidine are also helpful (these are usually used to reduce stomach acidity).

Scombroid poisoning is not an allergic reaction ([anaphylaxis](#)). Therefore, it does not require adrenaline (epinephrine) injections or [corticosteroids](#). As it is not an infection, antibiotics are not helpful.

How should scombroid poisoning be prevented?

Freshly caught and killed fish should be immediately refrigerated or kept on ice and eaten the same day. It will taste better too!

Affected fish sometimes has a peppery taste but normal taste does not guarantee safety.

International and local hygiene regulations apply to the handling of fish. The US FDA requires fish to have a histamine level of less than 50 mg/kg; a level of 200 mg/kg is considered hazardous.

Related information

On DermNet NZ:

- [Skin reactions to external agents](#)
- [Urticaria](#)

Other websites:

- [NZFSA](#) – Scombroid (Histamine) Poisoning
- Emedicine dermatology, the online textbook: [Toxicity, scombroid](#)

Books about skin diseases:

See the [DermNet NZ bookstore](#)

Author: [Clin Assoc Prof Amanda Oakley](#), Department of Dermatology, Health Waikato

DermNet does not provide an on-line consultation service.

If you have any concerns with your skin or its treatment, see a [dermatologist](#) for advice.

Created 2004. Last updated 26 Dec 2006. © 2007 NZDS. Disclaimer.