Scombrotoxic Fish Poisoning

While not all reactions to seafood are allergic in origin, some can resemble allergic reactions.

Scombroid fish poisoning describes an allergic-like reaction that occurs after eating foods with high histamine content. These are generally fish that have been improperly refrigerated. This may occur at sea when dead fish are caught in long-line nets and there is a delay in refrigeration, or after retail distribution. Marine germs (*bacteria*) within the gut of unrefrigerated fish convert the amino acid histidine into histamine. Fish involved include:

- Mackerel.
- Tuna.
- Herring.
- Sardines.
- Marlin.
- Anchovies.
- Bluefish.

Affected fish often have a metallic or peppery taste. Scombrotoxic fish poisoning is also known as scombroid or histamine fish poisoning.

SYMPTOMS

The most common symptoms are:

- Rash.
- Diarrhea.
- Becoming red faced (*flushing*).
- Sweating.
- Headache.
- Urticaria/hives.
- Feeling sick to your stomach (*nausea*).
- Vomiting.
- Belly (*abdominal*) cramps and pain.
- Dizziness, and
- Irregular heart beat *(palpitations*).
- Burning or swelling of the mouth, or a metallic taste may also occur.

Most patients have mild symptoms that go away within a few hours. Some people may get wheezing and a drop in blood pressure. Treatment is generally unnecessary. Antihistamines or epinephrine may be needed in certain instances. Symptoms may be more severe in patients taking certain medications that slow the breakdown of histamine by their liver, such as isoniazide and doxycycline.

DIAGNOSIS

Diagnosis of marine toxin poisoning is generally based on symptoms and a history of recently eating a particular kind of seafood. Laboratory testing for the specific toxin in patient samples is generally not necessary. This testing requires techniques and equipment available in only specialized laboratories. When available, leftover fish or shellfish can be tested. Identification of the specific toxin is not usually necessary for treating patients because there is no specific treatment.

TREATMENT

Treatment involves taking antihistamines and waiting until the swallowed histamine is broken down.

GENERAL GUIDELINES FOR SAFE SEAFOOD CONSUMPTION:

- Any person eating fish or shellfish containing toxin or disease-causing bacteria may become ill. Persons with weakened immune systems or liver problems should not eat raw seafood because of their higher risk of infection.
- Keep seafood on ice or refrigerated at less than 38° F (3.33° C).
- Keep fresh tuna, mackerel, grouper, and mahi mahi refrigerated to prevent development of histamine. Cooking spoiled or toxic seafood will not keep you safe. These toxins are not destroyed by cooking.
- Do not eat barracuda, especially, those from the Caribbean.
- Check with local health officials before collecting shellfish. These messages may be posted at fishing supply stores. Look for local health department advisories about:
  - Algal blooms.
  - Dinoflagellate growth.

- Redtide conditions.
- Do not eat finfish or shellfish sold as bait. Bait products do not need to meet the same food safety regulations as seafood for human consumption.

SEEK IMMEDIATE MEDICAL CARE IF YOU EAT FISH AND:

- You have difficulty breathing, or you are wheezing or have a tight feeling in your chest or throat.
- You have a swollen mouth, or have hives, swelling or itching over your body.
- You feel faint or pass out.
- You develop chest pain or a worsening of the problems which originally caused you to seek medical help.

If you have eaten seafood and develop problems or symptoms that seem unusual for you, seek advice from your caregiver. **If the problems are severe, call your local medical emergency services (in the US dial 911**).

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