

# Patient information

## Shellfish allergy

### What are shellfish?

- Shellfish is a culinary and fisheries term for aquatic invertebrates used as food. Although most kinds of shellfish are harvested from saltwater, some are only found in fresh water or even on land (crabs and snails).
- Shellfish are not related to fish in any way other than that they are both animals that live in water. Shellfish allergic people will usually be able to eat fish.
- Shellfish are divided into two families: molluscs and crustaceans. The European Union law on Allergen Labelling covers only crustaceans, so only ingredients made from crustaceans must be identified with an allergy warning. The members of the shellfish families are:
  - **Crustaceans:** crabs, crayfish, langoustines, lobster, prawns, scampi and shrimp.
  - **Molluscs:** **Bivalves** - clam, mussel, oyster and scallops  
**Gastropods** - cockle, limpet, periwinkle and snail  
**Cephalopods** - calamari, cuttlefish, octopus and squid
- People allergic to one type of crustacean are generally allergic to all other crustaceans, but may be able to eat molluscs. Similarly, a mollusc allergic person should avoid all molluscs but may be able to eat crustaceans. Allergy testing is the safest way to determine which shellfish, if any, a person can eat.
- The allergic protein in shellfish (tropomyosin) is not only found in sea creatures, but also in land snails and crabs, cockroaches and house dust mites. Shellfish allergic people can also be allergic to cockroaches or house dust mites, or land snails.

## **Symptoms of shellfish allergy**

- Shellfish allergy is the commonest food allergy in adults in the US. Unlike many food allergies (eg milk, egg, peanuts) shellfish allergy tends to present in adulthood (or later in childhood). Shellfish allergies tend to be severe and lifelong allergies.
- Symptoms usually occur within minutes up to 2 hours after ingestion, and can be mild or severe.
- Some people report that even the smell of shellfish cooking can cause symptoms. This is because shellfish retain their ability to cause allergic reactions despite being boiled.
- Shellfish allergy is the most common cause of exercise-induced anaphylaxis, in which the combination of eating a food allergen and exercising causes anaphylaxis.

## **Diagnosis of shellfish allergy**

- Adverse reactions to shellfish (see below non-allergic reactions) need not be allergic, so allergy to shellfish can only be confirmed where symptoms or a history of an allergic reaction are confirmed by an allergy test to make the diagnosis.
- Tests are skin prick test or blood test for IgE antibodies, or dietary challenge if needed.

## **Living with shellfish allergy**

- As there is no cure for shellfish allergy at this time, the only treatment is to avoid eating shellfish, and being prepared to treat any future reactions from accidental contact.
- The children's allergy team will provide an individualised written management plan. In all cases antihistamines (Cetirizine) will be provided and in some cases an adrenaline autoinjector (EpiPen or Jext) will be prescribed.
- A person who is shellfish allergic should always check the label of pre-packed foods for any type of shellfish to which they are allergic; and learn to ask questions when eating in a restaurant.

- Restaurants to avoid because of a high risk of contamination with shellfish:
  - Chinese, Japanese, Thai, Vietnamese and Malaysian foods often contain a fish sauce from shrimp
  - Cajun or Creole food often contains shrimp or other shellfish
  - Seafood restaurants are obviously a bad choice
- Dishes that often contain shellfish:
  - Bouillabaise, Callaloo, Ceviche, Cioppino, Clamato
  - Clam chowder, Crevette, Curanto, Etouffee, Frito misto
  - Fruit de mer, Gumbo, Jambalaya, Kedgerree, Lobster bisque
  - Paella, Sashimi, Surimi, Sushi, Prawn crackers
  - Fish sauces that may contain shellfish eg Nam Prik, Mam Tom
- Non-food sources of shellfish:
  - Compost and fertilisers
  - Pet food and fish food
  - Calcium supplements made from oyster shells or coral
  - Glucosamine
  - Omega-3 supplements (usually made from fish but may contain shellfish)

## **Shellfish poisoning**

- The shellfish that are filter feeders such as the bivalve molluscs (clams, mussels, oysters and scallops) can accumulate toxins made by microscopic algae. Anyone eating affected molluscs can experience shellfish poisoning. There are four types of poisoning, called Amnesic, Diarrhoeal, Neurotoxic and Paralytic shellfish poisoning.
- Symptoms of poisoning occur within 30 minutes of eating tainted shellfish so may be confused with shellfish allergy.
- Symptoms of shellfish poisoning can include tingling or burning in the mouth or extremities, nausea, vomiting and diarrhoea. Shellfish poisoning can be very serious.

## Shellfish allergy and Iodine

- People who are allergic to shellfish are sometimes advised that they may be allergic to iodine as well, based on cross reactivity. This is not true. It is possible to be allergic to iodine, but those allergies are not related to shellfish allergies.

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