

Shellfish Allergy: The Facts

This factsheet aims to answer some of the questions which you and your family might have about living with allergy to shellfish. Our aim is to provide information that will help you minimise risks and know how to treat an allergic reaction should it occur.

If you know or suspect you may be allergic to shellfish, the key message is to seek medical advice by visiting your GP.

Throughout the text you will see brief medical references given in brackets. More complete references are published towards the end of this fact sheet.

Different kinds of shellfish

Shellfish can be divided into the following groups:

Crustaceans: for example crab, lobster, crayfish, prawns.

Molluscs:

- a) Bivalves (for example, mussels, oysters, razor shells, scallops, clams)
- b) Gastropods (for example, limpets, periwinkles and also snails found on land)
- c) Cephalopods (for example, squid, octopus, cuttlefish)

People who react to one type of shellfish (such as crab) are likely to react to other members of the same group (in this case, other crustaceans). Some may react to molluscs as well. A special reason for being cautious is because of the relatively high risk of cross-contamination among different types of shellfish, for example on fish counters or in fish markets.

What are the symptoms of food allergy?

The symptoms of a food allergy can come on rapidly. These may include nettle rash (otherwise known as hives or urticaria) anywhere on the body, or a tingling or itchy feeling in the mouth.

More serious symptoms may include:

- Swelling in the face, throat and/or mouth
- Difficulty breathing
- Severe asthma
- Abdominal pain, nausea and vomiting

The term for this more serious form of allergy is anaphylaxis. In extreme cases there could be a dramatic fall in blood pressure (anaphylactic shock). The person may become weak and floppy and may have a sense of something terrible happening. This may lead to collapse and unconsciousness. On rare occasions, death can occur.

How can I get a diagnosis?

If you know or suspect you are allergic to shellfish, it is important to see your GP as soon as possible. Some GPs have a clear understanding of allergy, but as allergy is a specialist subject your doctor may need to refer you to an allergy clinic. The results of skin prick tests and blood tests will help form a clear picture.

Your GP can locate an allergy clinic in your area by visiting the website of the British Society for Allergy and Clinical Immunology (www.bsaci.org).

In many cases, doctors cannot easily determine whether a food allergy is mild or severe. However, there will be certain clues. For example, the severity of the reaction you suffered and the amount of shellfish that caused it are important factors. If you have reacted to a very small amount, this suggests your allergy is probably severe. If you have asthma you may face a higher risk of severe reactions, especially if your asthma is poorly-controlled.

Allergy to shellfish is rarely outgrown (Boyce et al., 2010).

Treating symptoms

If severe shellfish allergy is strongly suspected you should have an emergency treatment plan which will include antihistamines and adrenaline (also known as epinephrine). The adrenaline injectors prescribed in the UK at present are Emerade®, EpiPen® and Jext®. These injectors are easy to use and designed for self-administration. Your injector should be available at all times – with no exceptions. Medical attention should be sought after use as symptoms may return after a short period and more than one injection of adrenaline may be required.

If you are prescribed an adrenaline injector, you will need to know how and when to use it. Ask your pharmacist, GP or allergist for advice. You can also find help on the website relevant to the injector you carry.

Is it necessary to avoid fish?

We are aware of no evidence to suggest that people who are allergic to shellfish are at significantly increased risk of allergy to fish such as cod, plaice, haddock, herring, trout, salmon and tuna. Uncommonly, people may suffer allergy to both groups, but this is more likely to be due to coincidence than cross-reactivity.

If you suspect you are allergic to fish as well as shellfish, discuss this with your doctor.

People with allergies to fish are encouraged to read our separate fact sheet on fish allergy:
<http://www.anaphylaxis.org.uk/wp-content/uploads/2015/06/Fish-V10a-formatted-with-footer-correction.pdf>

Pre-packaged foods

Always check ingredients. Under European law, all pre-packaged food sold within the EU must declare and highlight major allergens, including the presence of crustaceans, molluscs and fish, even if they appear in minute quantities.

Eating out

In restaurants, tell staff about your allergy. Even if you think you have chosen a safe dish still query the ingredients, including those in stocks and soups.

Check to find out if there is any risk of cross-contamination. Find out what your food is fried in and whether the oil has been used for anything else. For example, your chips could be fried in the same oil as scampi; or there could be traces of prawns in a stir fry (Lehrer et al., 2007).

Caterers are governed by strict laws. When you eat out or buy from a takeaway, the food business will be required to provide information on major allergenic ingredients. This information can be provided in writing and/or by word of mouth. If information is provided by word of mouth, the food business will need to ensure there is written signage clearly visible to indicate that you can obtain allergen information from a member of staff. Systems must be in place to ensure the information you receive is accurate. These rules also apply to food sold loose – for example on deli counters or in-store bakeries.

Reactions to shellfish vapour

If your allergy to shellfish is particularly severe, there is a chance you may react when you breathe in the vapours while shellfish are being cooked. If you think this applies to you, your family or friends should avoid cooking shellfish in your presence.

Iodine

A very small proportion of the population suffer adverse symptoms triggered by radiocontrast dye containing iodine, which are agents used in some medical procedures. People with shellfish allergy are sometimes warned they are likely to be allergic to these medications. Scientists say this is a myth and that there is no link between allergy to shellfish and adverse symptoms caused by radiocontrast material or iodine. The allergen present in shellfish is muscle protein in the flesh.

Dishes, products and ingredients to look out for

Scampi is the name given to a kind of small lobster. When you buy scampi, always check to see if the company has used other shellfish, such as prawn. Pre-packed scampi should make the ingredients clear on the label.

Oyster sauce is used to flavour some savoury dishes, especially in Chinese cooking. Examples would be noodle stir-fries, chow mein and beef with stir-fried vegetables. Oyster sauce can also be used as a topping for some dishes.

Fish sauce is commonly served here in the UK and also elsewhere in the world – notably in the Far East. It can be made with shellfish as well as fish.

Lancashire hotpot traditionally contained oysters, although increasing cost eliminated them from common usage.

Examples of foreign dishes to watch out for:

Kedgerie
Paella
Bouillabaisse
Gumbo
Jambalaya
Fritto Misto
Etouffee

If you see any of these on sale, check with staff to find out exactly what ingredients are used.

Shellfish shell and skeleton derivatives

Glucosamine, used in the treatment of arthritis, is derived from the skeletons of shellfish. Although one study (Villacis et al., 2006) found that glucosamine supplements “from specific manufacturers” appear to pose no threat to people with shellfish allergy, we believe people with shellfish allergy who wish to take this treatment should be cautious and ask for shellfish-free glucosamine.

Chitin, derived from shellfish shells, is used in commercial “fat absorbers” such as Chitosan HD, and should be avoided. Moisturisers can also contain shellfish-derived chitin. Some calcium supplements may contain ground oyster shells.

Occupational allergy and asthma

Allergic reactions among workers in the seafood industry have become more common because of their exposure to seafood. Symptoms include occupational asthma, contact rashes, rhinitis and conjunctivitis. The problems seem to be caused by either aerosolized tiny particles of shellfish or cooking steam (Jeebhay, 2011). Any seafood worker who has experienced allergy-like symptoms is advised to seek medical advice.

Other causes of symptoms

Some people who suspect they are allergic to shellfish or fish may in fact suffer from one of these conditions:

- **The cod worm:** *Anisakis simplex* (also known as the cod worm) is a common parasite present in many marine fish and shellfish (Olivares et al., 2015). Not only can it cause human infection, it can also cause allergic reactions in a very small minority of people. People reacting to *Anisakis* may think they have fish or shellfish allergy. Anyone reacting to a particular shellfish or fish that they have previously eaten with no problem should consider the possibility that the cod worm was responsible and seek medical advice.
- **Toxic algal blooms:** Shellfish sometimes absorb poison from toxic algal blooms, which appear in the waters at certain times of the year. This can cause illnesses known as amnesic, diarrhetic, paralytic and neurotoxic shellfish poisonings (Watkins et al., 2008). These toxins will affect all who ate the affected shellfish.

Your doctor should be able to confirm whether you have an allergy or whether one of the above conditions caused your symptoms.

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Supporting people at risk of severe allergies

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Reviewers

This fact sheet was peer reviewed by Dr Shuaib Nasser, Consultant in Allergy and Asthma at Cambridge University Hospitals NHS Foundation Trust; and Dr Isabel Skypala, Clinical Lead for Food Allergy, Royal Brompton and Harefield NHS Foundation Trust. Neither reviewer has declared any conflict of interest in relation to their review of this work.

Disclaimer – The information provided in this Factsheet is given in good faith. Every effort has been taken to ensure accuracy. All patients are different, and specific cases need specific advice. There is no substitute for good medical advice provided by a medical professional.

About the Anaphylaxis Campaign: Supporting people with severe allergies

The Anaphylaxis Campaign is the only UK wide charity to exclusively meet the needs of the growing numbers of people at risk from severe allergic reactions (anaphylaxis) by providing information and support relating to foods and other triggers such as latex, drugs and insect stings. Our focus is on medical facts, food labelling, risk reduction and allergen management. The Campaign offers tailored services for individual, clinical professional and corporate members.

Visit our website www.anaphylaxis.org.uk and follow us on Twitter [@Anaphylaxiscoms](https://twitter.com/Anaphylaxiscoms).