

Exercise-induced anaphylaxis

Exercise-induced anaphylaxis is a rare but serious allergic reaction that is brought on by exercise. When there are additional factors involved, such as certain foods, the condition is called food-dependent, exercise-induced anaphylaxis. As reactions can be serious, speak to your GP if you have had allergy symptoms during or after physical activity.

What is exercise-induced anaphylaxis?

Exercise-induced anaphylaxis (pronounced anna-fill-axis) is a type of serious allergic reaction that happens during or after physical activity. It can be brought on by exercise alone, but for most people it happens when there are other factors involved, such as eating certain foods or taking certain medicines.

What causes exercise-induced anaphylaxis?

Exactly what causes exercise-induced anaphylaxis is not fully understood. It is thought to involve a combination of factors that trigger the body to release chemicals such as histamine. It is the release of these chemicals that causes symptoms.

Doctors and scientists are still learning about exercise-induced anaphylaxis. It is not clear whether it can go away on its own or if you may have it for the rest of your life.

The type, intensity and duration of exercise that is enough to trigger anaphylaxis can vary from person to person, but it usually involves aerobic activities like running or cycling. Sometimes exercise alone will cause anaphylaxis, but in most people it only happens when there are other factors involved, such as certain foods or medicines.

Food-dependent, Exercise- Induced Anaphylaxis (FDEIA)

Some people only react to exercise if they have eaten a specific food beforehand or just afterwards. This is called food-dependent, exercise-induced anaphylaxis (FDEIA). The food on its own, without exercise, won't cause any symptoms.

Any food can be a trigger, but the most common foods involved in FDEIA are:

- wheat
- shellfish
- nuts
- eggs
- milk

People with Lipid Transfer Protein allergy often find they only react to their trigger foods when they exercise.

[Read more about LTP allergy](#)

Medicines plus exercise

Some people may only react to exercise if they have taken certain medicines before or afterwards. Aspirin or non-steroidal anti-inflammatory drugs such as ibuprofen and naproxen are the ones most often involved.

Other factors plus exercise

Some people have other factors that raise their risk for this type of anaphylaxis (co-factors).

These include:

- hormonal changes
- infections
- stress
- alcohol

What are the symptoms of exercise-induced anaphylaxis?

The symptoms of exercise-induced anaphylaxis usually come on quickly and can be serious.

Serious symptoms are often referred to as the ABC symptoms and can include:

- AIRWAY - swelling in the throat, tongue or upper airways (tightening of the throat, hoarse voice, difficulty swallowing).
- BREATHING - sudden onset wheezing, breathing difficulty, noisy breathing.
- CIRCULATION - dizziness, feeling faint, sudden sleepiness, tiredness, confusion, pale clammy skin, loss of consciousness.

Most healthcare professionals consider an allergic reaction to be anaphylaxis when it involves difficulty breathing or affects the heart rhythm or blood pressure. Any one or more of the ABC symptoms above may be present.

In extreme cases there could be a dramatic fall in blood pressure. The person may become weak and floppy and may have a sense of something terrible happening. Any of the ABC symptoms may lead to collapse and loss of consciousness and, on rare occasions, can be fatal.

[Read more about anaphylaxis.](#)

Other symptoms

Other symptoms that might be present include:

- a red raised rash (known as hives or urticaria) anywhere on the body
- a tingling or itchy feeling in the mouth
- swelling of lips, face or eyes
- stomach pain or vomiting.

These symptoms can also happen on their own. If you don't have the ABC symptoms, the reaction is likely to be less serious and is not the same as anaphylaxis but watch carefully in case ABC symptoms develop.

Getting a diagnosis

If you think you may have exercise-induced anaphylaxis, see your GP who can refer you to a specialist allergy clinic. They can find a clinic in your area from the [British Society for Allergy and Clinical Immunology \(BSACI\)](#).

Exercise-induced anaphylaxis can be difficult to diagnose because the symptoms might not happen every time you exercise, or they could be mistaken for other conditions.

Your specialist will usually make a diagnosis by asking detailed questions about your symptoms and whether they happen in relation to exercise. They might offer you an exercise challenge test to confirm the diagnosis. It can also help them find out what type and intensity of exercise triggers the reaction. This kind of test is always done under medical supervision in hospital.

If you have asthma and it's not well controlled, this could make an allergic reaction worse. Make sure you discuss this with your GP or allergy specialist and take any prescribed medicines.

Treating symptoms

If you are diagnosed with exercise-induced anaphylaxis, you will be prescribed adrenaline to use in an emergency.

Adrenaline comes in pre-loaded adrenaline auto-injectors (AAIs) that are designed to be easy to use. Make sure you know how and when to use them. Ask your healthcare professional to show you how to use your specific brand of AAI. You can also find help and training videos on the manufacturer's website and get a free trainer device to practise with.

The adrenaline auto-injectors normally prescribed in the UK are:

- [Emerade](#)
- [EpiPen](#)
- [Jext](#)

You must carry two AAls with you at all times, as you may need to use a second one if your symptoms don't improve after five minutes or get worse.

[Read more about what to do in an emergency.](#)

Managing exercise-induced anaphylaxis

The best way to manage exercise-induced anaphylaxis is to avoid the triggers that cause it.

This may mean you need to:

- avoid the type or intensity of exercise that has caused anaphylaxis before
- avoid exercising for some time before and after eating your trigger food if you have FDEIA
- avoid taking any medicines that you know raise your risk of anaphylaxis for a considerable time before you plan to exercise
- avoid exercising in cold temperatures if cold is one of your triggers
- always carry your AAls when you exercise – keep them with you at all times
- always exercise with a partner who is aware of your condition and knows how to use an AAI
- stop exercising immediately if you feel any symptoms of anaphylaxis and use your AAI
- wear a medical alert bracelet or talisman to let health professionals in an emergency know you have anaphylaxis.

Key points

- If you think you might have exercise-induced anaphylaxis, see your GP and ask for a referral to an allergy clinic.
- Once diagnosed, always carry two adrenaline auto-injectors (AAls).
- If you have any symptoms of an allergic reaction, stop exercising immediately and rest.
- Use your adrenaline as soon as you think a reaction may be serious and call 999.

Feedback

Please help us to improve our information resources by sending us your feedback at:

<https://www.anaphylaxis.org.uk/information-resources-feedback/>

Sources

All the information we produce is evidence-based or follows expert opinion and is checked by our clinical and research reviewers. If you wish to know the sources we used in producing any of our information products, please contact info@anaphylaxis.org.uk and we will gladly supply details.

Reviewers

The content of this Factsheet has been peer reviewed by Dr George Gkimpas.

Disclosures

We are not aware of any conflicts of interest in relation to the review of this factsheet.

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 Anaphylaxis UK

Anaphylaxis UK is the only UK-wide charity solely focused on supporting people at risk of serious, life-threatening allergic reactions. We provide information and support to people living with allergies through our free national helpline and local support groups. We also fundraise to achieve our ultimate aim, to create a safer environment for all people at risk of serious allergies. Visit our website www.anaphylaxis.org.uk and follow us to keep up-to-date with our latest news. We're on Facebook @anaphylaxisUK, LinkedIn, Instagram @anaphylaxisUK, Twitter @AnaphylaxisUK and YouTube.