

Patient information

Risks associated with your anaesthetic

Serious allergy during an anaesthetic (anaphylaxis)

This leaflet explains what anaphylaxis is and why a rare allergic reaction might occur during your operation. Before, during and after your operation you will receive different medicines through drips, by mouth or other routes. It is possible to have a serious reaction to one of these, or to a combination of several different drugs and chemicals. This leaflet gives information about these reactions and how these can be treated. It also describes what testing you can have afterwards to find the cause.

What is anaphylaxis?

Anaphylaxis is a severe allergic reaction that occurs very rapidly, with massive release of chemical substances by the body. During the reaction these chemicals can result in breathing difficulty, wheezing, low blood pressure, swelling, and skin problems including urticaria (hives) and red rashes. Severe anaphylaxis is life threatening but, when this is recognised and treated quickly, death is very rare.

What can cause anaphylaxis during an anaesthetic?

Anaphylaxis is often caused by an allergy to a specific drug; this is called allergic anaphylaxis. The two most common causes of allergic anaphylaxis during anaesthesia are:

- drugs used to prevent movement during surgery (called muscle relaxants or neuromuscular blocking agents). These drugs are only given to patients who are already anaesthetised
- antibiotics – these are often needed during surgery to prevent infections.

Latex used to be a common cause of anaphylaxis during surgery. This is less so now as few latex containing products are used in hospitals.

Anaphylaxis can also be caused by a combination of drugs or substances working together to cause a reaction. During a general anaesthetic this includes anaesthetic drugs, stress on the body from surgery itself and infections. Anaphylaxis is more common in women, although it is not understood why.

If you have a serious anaphylactic reaction, in order to understand the cause, specialist testing is performed a few weeks after a reaction. Skin testing means putting a tiny drop of the drug on your skin and pricking the skin lightly with a small piece of plastic shaped like a toothpick. This is not painful and it is left for a few minutes to see if you develop an itchy lump on the skin. If this happens it means that you are allergic to that drug. Sometimes you might need to have an additional test where the injection goes a little bit deeper, and this will sting for a short time. Skin testing has to be carried out by someone who has been trained in diagnosing allergy.

If the cause of anaphylaxis is found to be an allergy to a specific drug, it is vital that you avoid this drug in the future to prevent further severe reactions.

How is anaphylaxis treated?

- Adrenaline is the best drug treatment and is given as injections
- You will usually be given oxygen and have an intravenous drip
- Antihistamines, steroids and asthma treatments might be prescribed if you need them

Usually the symptoms will settle down quite quickly, but it is important to keep a close watch so you might need to stay in hospital overnight. Very serious reactions will require treatment in an Intensive Care Unit (ICU). If the operation has not already started, surgery may be postponed unless it is very urgent.

All anaesthetists are trained to treat anaphylaxis and adrenaline (the drug used to treat severe allergic reactions) is immediately available in every operating theatre.

Your anaesthetist will take blood tests at the time of the reaction and then refer you for specialist investigation. In the UK every serious reaction is also reported to the Medicines and Healthcare products Regulatory Agency (MHRA) (<http://bit.ly/2kQARLe>); your anaesthetist will do this.

How frequently do anaesthetics cause anaphylaxis?

Estimates of life-threatening anaphylaxis around the world varies from 1 in 2,500 to 1 in 20,000 anaesthetics. (1,2)

Most people make a full recovery from anaphylaxis. We do not know how many anaphylactic reactions during anaesthesia have led to death or permanent disability.

Is allergy to anaesthetics hereditary?

No. If you are allergic to an anaesthetic drug, your children are no more likely to have the same allergy than any other person.

Some very rare non-allergic problems with anaesthetic drugs can occur in families, for example 'suxamethonium apnoea' where some muscle relaxant drugs can last longer than usual, and 'malignant hyperthermia' where the body can become very hot. These are NOT allergies.

Is there anything I can do to help avoid serious allergy?

You may already know that you are allergic to certain medicines or substances. When you come into hospital, you will be asked several times if you are allergic to anything. It is very important that you tell the nurse and anaesthetist looking after you if you have an allergy. If so, this will be recorded so that everyone can check what you are allergic to before you are given medicines or have an operation. If your allergy is serious, you may be advised to wear a Hazard Warning bracelet after you leave hospital.

Can I be tested for anaphylaxis before I have my anaesthetic?

Routine skin testing prior to surgery to see if you are allergic to anaesthetic drugs is not useful. It is only recommended for those people who have had a serious allergic reaction during an anaesthetic in the past(3). The reason for this is that skin testing is not completely reliable. A negative test doesn't guarantee that you can safely have the drug, and a positive test does not mean you would definitely have a reaction if you took the drug in the future. The health professionals can only make sense of a skin test after a reaction has already happened, as a guide to which drug may have caused the reaction.

If you have any symptoms of latex allergy – for example, itching or a rash after exposure to latex rubber in children's balloons, rubber gloves or condoms – then you

should be tested for a latex allergy before your surgical operation. There are two types of test: a skin test and a blood test. Which of the tests you have will depend on how your local clinic chooses to do the testing. If you believe you may be allergic to latex you should tell your GP well in advance of going into hospital for surgery.

If I am allergic to an anaesthetic drug, are alternative drugs available?

Yes, there are many different anaesthetic drugs and alternative drugs can almost always be given. If you are allergic to an antibiotic or a skin antiseptic, you will be given a suitable alternative.

What should I do if I think I have had an allergic reaction during an operation in the past?

If you think you might have had an allergic reaction during or after previous surgery, it is important to try to find out what happened and what might have caused it. It may be possible for your GP to find out what the cause of the problem was from your hospital consultant. Your GP may then refer you to an allergy clinic to help to find the cause.

Where can I get more information about anaphylaxis?

- Your GP or your anaesthetist.
- Suspected Anaphylactic Reactions associated with Anaesthesia, published by the Association of Anaesthetists of Great Britain and Ireland and the British Society of Allergy and Clinical Immunology.⁽⁴⁾
- Allergy UK (www.allergyuk.org).

References

1 Mertes PM, Laxenaire MC, Alla F. Anaphylactic and anaphylactoid reactions occurring during anesthesia in France in 1999–2000. *Anesthesiol* 2003;99:536–545.

2 Savic et al. Incidence of suspected perioperative anaphylaxis: A multicentre snapshot study. *J Allergy Clin Immunol: In Practice* 2015;3:454- 455.

3 BSACI Guidelines for the investigation of suspected anaphylaxis during general anaesthesia. *CI Exp All* 2009;40:15–31.

4 Suspected Anaphylactic Reactions Associated with Anaesthesia. AAGBI, London 2009 (<http://bit.ly/2f1KMbu>).

Further information

Anaesthetists are doctors with specialist training who:

- discuss the type or types of anaesthetic that are suitable for your operation. If there are choices available, your anaesthetist will help you choose what is best for you
- discuss the risks of anaesthesia with you
- agree a plan with you for your anaesthetic and pain control
- are responsible for giving your anaesthetic and for your wellbeing and safety throughout your surgery
- manage any blood transfusions you may need
- plan your care, if needed, in the intensive care unit
- make your experience as calm and pain free as possible.

Common terms

General anaesthesia: This is a state of controlled unconsciousness during which you feel nothing and may be described as 'anaesthetised'.

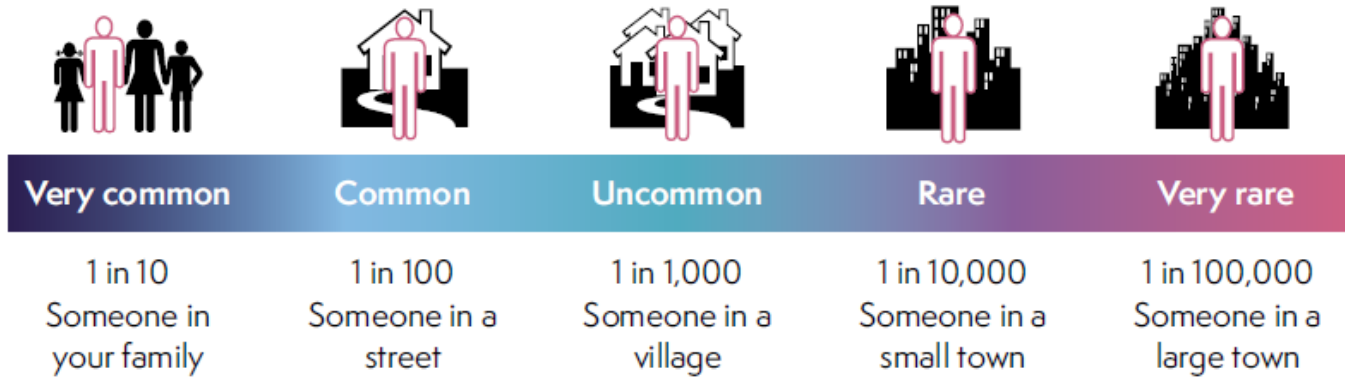
Regional anaesthesia: This involves an injection of local anaesthetic which makes part of your body numb. You stay conscious or maybe sedated, but free from pain in that part of your body. You can find out more about general and regional anaesthesia in the patient information booklet Anaesthesia explained, which is available from the RCoA website via: www.rcoa.ac.uk/document-store/anaesthesia-explained

Risks and probability

In modern anaesthesia, serious problems are uncommon. Risk cannot be removed completely, but modern drugs, equipment and training have made anaesthesia a much safer procedure in recent years.

The way you feel about a risk is very personal to you, and depends on your personality, your own experiences and often your family and cultural background. You may be a 'risk taker', a 'risk avoider', or somewhere in between. You may know someone who has had a risk happen to them, even though that is very unusual. Or you may have read in the newspapers about a risk and be especially worried about it.

People vary in how they interpret words and numbers. This scale is provided to help.



Your anaesthetist will give you more information about any of the risks and the precautions taken to avoid them. You can find more information leaflets on the College website www.rcoa.ac.uk/patientinfo.

© Royal College of Anaesthetists (RCoA)

If you would like any information regarding access to the West Suffolk Hospital and its facilities please visit the website for AccessAble (the new name for DisabledGo) <https://www.accessable.co.uk/organisations/west-suffolk-nhs-foundation-trust>



© West Suffolk NHS Foundation Trust