



Therapy Guide

Allergy

GKA.



The GKA Difference

Allergy is a complex area for research due to high levels of self diagnosis often leading to exaggerated rates of allergy incidence. However in recent years, GKA have used their expertise to successfully conduct research projects on allergies, including infant feeding and nutrition, recruiting across a range of methodologies: focus groups, online, telephone and online focus groups. GKA's close links to healthcare professionals and long lasting relationships with allergy specialists means our respondent types range from Chest Physicians, Paediatricians, Dermatologists, Paediatric Dietitians, Dietitians, Nutrition Specialists, Health Visitors and Midwives, as well as patients using a range of infant products.



The Lowdown

An allergy is the reaction produced by the body's immune system when it encounters a particular food or substance in the environment. Whilst most of these substances (allergens) are not harmful to people who are not allergic, when someone suffers an allergy, the body's immune system reacts as if the allergen is a threat and produces antibodies to fight it off.

Allergies are either IgE or non-IgE mediated. In IgE mediated allergies, the immune system produces a large amount of IgE antibodies that are specific to the particular allergens. These antibodies bind to the surface cells (mast cells) of the body in the skin, nose, eyes, throat, stomach or gut, and the next time the allergen is encountered the mast cells produce chemicals such as histamine that result in swelling, inflammation and itching of the surrounding tissues – also known as an allergy. It is also possible for the immune system to respond to allergens without the production of the IgE antibody, but these allergies are less well researched and understood.

Some facts about Allergies



21 million
adults in the UK have at least
one allergy



5% increase
in allergy sufferers every year



1 in 4
people will suffer an allergy at
some point in their life



50% of children
will suffer with one or more
allergies

Allergies range from mild to severe and in some cases can lead to anaphylactic shock, which can be fatal. The majority of allergic reactions occur in a particular part of the body such as the nose, eyes or skin – however in anaphylaxis, the allergic reaction affects the whole body and happens within minutes of coming into contact with the allergen. Some of the most common allergens include grass and tree pollen, dust mites, animal dander, food such as shellfish, nuts, eggs and dairy, mould, wasps, bees and pets.

Understanding Allergies

Incidence



Allergies are very common, with one in four people suffering from an allergy at some point in their lives⁶. The number of people suffering with allergies is also increasing, possibly due to rise in pollution or as a result of living in a cleaner environment, therefore reducing the number of germs our immune system comes into contact with and causing it to overreact when it comes into contact with harmless substances.

People are more likely to develop an allergy if it runs in their family. Boys are more likely than girls to develop an inherited allergy, as well as babies with a low birth rate. If both parents have allergies, a child's risk of developing an allergy increases to 60-80%⁷. Exposure to allergens when the body's defences are weak, such as after illness or during pregnancy, can also have an effect in the development of allergies. Environmental factors such as living with smokers, exposure to house dust mites and pets as well as the use of antibiotics can also play a part in the development of allergic disorders. Anaphylaxis can affect anyone, but people with other allergic conditions such as allergic asthma or atopic eczema are most at risk. Despite the life threatening nature of the condition, fatalities are rare and account for just 20 deaths a year in the UK⁸.

In a number of cases, the most effective way of managing an allergy is to avoid all contact with the allergen or control the symptoms with anti-allergen medication. It is also possible for people to outgrow allergies, especially food allergies such as cow's milk. CMA is estimated to affect 2-6% of infants and young children, whilst in adulthood the incidence drops to just 0.1-0.5%. The prognosis of CMA is good, with remission rates of about 45-50% at one year of age, 60-75% at two years and 85-90% at three years – meaning that nine of out 10 sufferers will grow out of the allergy by the age of three.

References

- 1 - Mintel, 2010
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- 3 - <https://www.allergyuk.org/why-is-allergy-increasing/why-is-allergy-increasing>
- 4 - National Institute for Health and Clinical Excellence, 2011
- 5 - <https://www.allergyuk.org/allergy-statistics/allergy-statistics>
- 6 - <http://www.nhs.uk/conditions/Allergies/Pages/Introduction.aspx>
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- 8 - <http://www.nhs.uk/conditions/Anaphylaxis/Pages/Introduction.aspx>



Causes and Symptoms

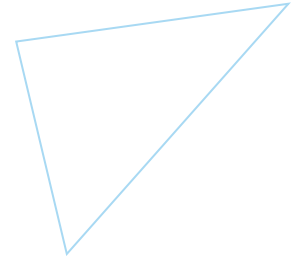


An allergy occurs when the immune system reacts to an allergen as if it is a threat, producing antibodies to fight it off in a reaction known as the immune response. The next time a person comes into contact with a specific allergen, the body remembers and thinks it is once again under attack, producing more antibodies and releasing chemicals that lead to an allergic reaction.

The symptoms of an allergy vary depending on what the body is allergic to. If a person is allergic to substances in the air such as pollen or dust mites, symptoms might include rhinitis or allergic asthma. If a person is allergic to food or medication, their symptoms can include swelling of the lips, tongue, eyes and face, abdominal pain, vomiting, diarrhea, hives and atopic eczema where the skin becomes dry, red and cracked. People can also be allergic to a substance that comes into direct contact with their skin, which causes a type of eczema known as contact dermatitis.

The symptoms of anaphylactic shock are more severe and can include swelling of the throat and mouth, difficulty breathing, speaking or swallowing, a rash all over the body, itchy skin, nausea, vomiting, a fall in blood pressure, collapsing and even becoming unconscious. In such situations, emergency treatment is available in the form of an injection of adrenaline.

Diagnosing and Treating Allergies



Diagnosis of an allergy is often difficult due to the range of symptoms that may occur, but a successful diagnosis is possible through a variety of tests:

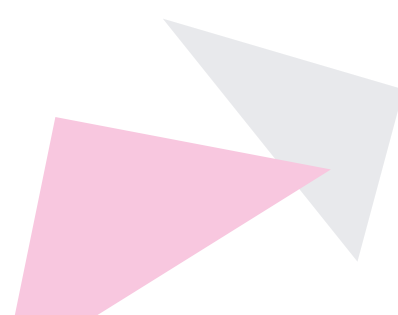
Skin Prick Testing: Skin prick testing is used to diagnose and investigate allergies to food, airborne substances, insect venom and medication. A diluted drop of liquid allergen is placed on the patient's forearm, followed by a pinprick through the drop. A red, itchy bump (wheal) will appear within 15 minutes if the patient has a positive reaction.

Intradermal testing: Intradermal testing is more painful and carries a higher risk of an allergic reaction than skin prick testing. Involving injecting a watered down allergen below the skin surface, it is more sensitive than a skin prick test and will often be carried out when a suspected allergen does not cause a reaction in a skin prick test. However, due to the sensitivity it can sometimes produce false-positive results.

Patch testing: Patch tests are used to investigate contact dermatitis and involve a small amount of the suspected allergen being added to metal discs that are taped to the patient's skin and monitored for 48 hours. These type of tests measure non-IgE responses and can be of value to patients with skin problems resulting in the handling of a particular allergen.

Blood testing: Blood tests may be offered to patients with severe skin conditions, poorly controlled asthma, heart conditions or a history of anaphylaxis. The RAST (radioallergosorbent) test involves binding the allergen onto an allergosorbent surface, which is then incubated with a sample of the patient's blood serum to allow any IgE antibodies to bind to it. After several washings, the radioactivity bound to the allergosorbent is measured and the amount of allergosorbent-bound IgE present can be estimated. Despite being the best-known laboratory test for detecting IgE antibodies, RAST tests are expensive, can give false positive results and cannot identify individual food triggers in non-IgE mediated food intolerances. A patient with a history of reactions to a food can also not be assessed for intolerance to related foods.

Food challenge: Conducted under medical supervision, all suspect foods are eliminated from the patient's diet for approximately two weeks prior to a dietary challenge. If the patient's symptoms disappear during the elimination period, the suspect foods are re-added to the diet in small amounts, increasing the dose every day and supervising their reaction.



In a number of cases, the most effective way to manage an allergy is to avoid all contact with the allergen – however, if necessary, medication can also be used to manage the symptoms. Antihistamines can be taken in tablet, cream or liquid form to block the action of the chemical histamine, and decongestants and steroid sprays can also be used to help relieve a blocked nose. Leukotriene receptor antagonists – tablets which block the effect of the chemical leukotriene that causes airways to become inflamed – can be used to manage symptoms, and are also often used to treat allergic asthma when other treatments have failed.

Immunotherapy is another option for

patients suffering with severe rhinitis that cannot be medically controlled. Immunotherapy lasts for three years and involves a course of vaccines containing the allergen that reduces the severity of a reaction and the amount of medication needed to control symptoms. The vaccine can be given as an injection, drops, or in tablet form. In the case of anaphylaxis, the patient is treated with a shot of adrenalin, which reduces swelling and relieves breathing difficulties by opening the airways. Often if a patient has an allergy that could cause an anaphylactic shock they will be given an auto-injection kit of adrenalin and carry a syringe such as an EpiPen or Anapen in case of emergency.





We are GKA.

If you have been asked to carry out a healthcare market research study surrounding Allergies or one of the related conditions, why not give us a call today?

+44 (0)1242 220420
quotes@gilliankenny.com
gilliankenny.com

