PATIENT INFORMATION LEAFLET

FOOD ALLERGY AND ECZEMA

IN CHILDREN AND YOUNG PEOPLE

WHAT ARE THE AIMS OF THIS LEAFLET?

This leaflet has been written to help children, young people and families understand more about the links between eczema and food allergies and to answer some of the most commonly asked questions about eczema and food allergies.

WHAT IS ECZEMA?

Eczema, or atopic dermatitis, is a condition that affects the skin causing redness, dryness, itching and scaly rashes. It is very common and affects one in five children in the UK. Eczema may improve in some people, but for many they may always have sensitive skin and risk of eczema flares throughout life. Most children affected by eczema only have mild symptoms, but even mild eczema can severely affect quality of life.

WHAT IS A FOOD ALLERGY?

An allergy is the response of the body's immune system to normally harmless substances. A food allergy is when the body reacts unusually to specific foods.

HOW CAN ECZEMA LEAD TO A FOOD ALLERGY?

Our skin has a protective barrier that is made up of cells, water and an oily substance (sebum). People affected by eczema have an altered skin barrier, which can break easily. When this barrier breaks down, tiny particles made of food particles, aeroallergens (for example, pollens and house dust mite), and infective organisms can enter the skin more easily. The immune system in eczema is more active than in normal skin and can overreact to these substances. The overreaction includes triggering special molecules called immunoglobulin E (IgE) to target the external substances. This can then result in an allergic reaction.

WHAT ARE THE LINKS BETWEEN ECZEMA AND FOOD ALLERGIES?

The link between food allergies and eczema has always been recognised, but only recently has research shown that eczema comes before food allergies. This means that, although people with atopic dermatitis (eczema) can have food allergies, the allergies do NOT cause the eczema.

Children who develop eczema as babies are at the highest risk of developing a food allergy. We also know that the more severe their eczema, the more likely they are to have a food allergy. Food allergies most commonly develop in early childhood and are much less common to develop in older children or adults.

Although we do not know how to prevent eczema, we do know that it is important to control it as well as possible with moisturisers (emollients) and other topical (applied to the skin) treatments that reduce inflammation in the skin (most commonly these are topical corticosteroids).

The good news is that recent research shows that we can prevent some food allergies by managing eczema well and by introducing foods most likely to cause a food allergy, such as eggs and peanuts, into a baby's diet as early as the age of four months.

The British Society for Allergy and Clinical Immunology guideline recommends the introduction of allergenic foods from the age of four months without prior testing.

There are three types of food allergic reactions:

1. IgE, or immediate allergy.

IgE-mediated reactions happen within minutes of eating, and up to a few hours afterwards. The most common features are:

- urticaria or hives, an itchy swelling resembling nettle-rash,
- lip and tongue swelling,
- an uncomfortable feeling in the mouth and throat,
- vomiting,
- difficulty breathing and potentially collapsing.

The extreme version of an IgE-mediated reaction is anaphylaxis. Anaphylaxis develops very rapidly; it involves the respiratory (breathing) and central nervous (brain) systems. Anaphylaxis can be life-threatening. Although anaphylaxis is common, the incidence of fatal food anaphylaxis is lower than the risk of accidental death in Europe. Further information is available on the NHS website: https://www.nhs.uk/conditions/anaphylaxis/

In the UK, the most common Ig-E mediated allergies are to milk, eggs and peanuts, followed by tree nuts, sesame, wheat, fish and shellfish.

If a child has an immediate reaction to any food, they need to see an allergy specialist and have allergy tests to find out which foods need to be avoided and if an EpiPen may be required.

An EpiPen is an automatic injection device containing adrenaline used to administer life-saving medicine to someone suffering a severe allergic reaction. People at risk of anaphylaxis must carry their EpiPen at all times. Many IgE-mediated reactions can be managed with non-sedating antihistamines such as cetirizine or fexofenadine alone.

2. Delayed reactions.

These reactions happen within a day or two of eating the food and can last for a few days. As well as experiencing eczema flares, children can have abdominal symptoms such as pain, constipation, or diarrhoea. This is most common in children with delayed (or non-IgE) mediated allergy to cow's milk, eggs, or wheat.

Delayed reactions are hard to diagnose. Unlike immediate reactions, delayed reactions are not caused by circulating antibodies in the blood; so, tests such as skin prick tests and blood IgE tests are not useful. If you think you or your child have delayed food allergies, a short two-to-four-week trial of an elimination diet can be considered. Please see section below on elimination diets.

3. Mixed reactions.

People can sometimes experience symptoms from both an immediate reaction and a delayed reaction.

WHEN DOES A CHILD NEED ALLERGY TESTING?

If a child has an immediate reaction to a food, they will benefit from seeing an allergy specialist. The only exceptions to this are:

- Mild reactions to eggs (rash or vomiting). Children tend to grow out of this type of allergy and GPs can manage mild egg allergies in primary care.
- Reactions to acidic foods like tomatoes, citrus fruits and berries. Many children develop redness around the mouth after eating these foods; this is due to skin irritation rather than a true allergy. This problem tends to get better as eczema improves.

Many types of allergy-testing kits are available at present. However, only the skin prick tests, and specific immunoglobulin E tests are reliable and validated, and only if interpreted correctly.

WHO SHOULD DO THE ALLERGY TESTS?

These tests are best carried out by allergy specialists as the interpretation of the tests is not straightforward. For example, negative tests (skin prick tests or specific IgEs) can quite reliably rule out immediate allergies. However, positive tests do not mean that the child has a food allergy; both skin prick tests and specific IgEs can be positive even when there is no allergy.

Also, the result of the test does not predict the severity of the reaction; sometimes very high

readings can be associated with mild reactions and low readings can be associated with severe reactions or anaphylaxis.

WHICH ALLERGY TESTS ARE NOT RELIABLE?

Many 'allergy tests' should *never* be used to diagnose or rule out allergies as they are unproven. These include:

York test, hair tests, facial thermography, applied kinesiology-muscle testing, lymphocyte stimulation, gastric juice analysis, endoscopic allergen provocation, provocation neutralization, allergen-specific IgG4, cytotoxicity assays, electrodermal tests and mediator release assays

WHEN IS IT IMPORTANT TO AVOID A FOOD TYPE?

If there is an immediate allergic reaction, you or your child will generally be advised to avoid this food. Some allergies tend to improve over time (for example, dairy and egg); however, others are likely to remain for life. The allergy clinic can advise on how and when to introduce foods.

ARE ELIMINATION DIETS HELPFUL IN ECZEMA?

Overall, there is no scientific evidence to support elimination diets for people with eczema and other skin problems. Elimination diets can be dangerous.

If you suspect a delayed reaction to a particular food, it may be useful to try excluding a food type from the diet. It is recommended that you remove one food type at a time (for example, dairy). If the eczema gets less severe, then it may be helpful to continue excluding that food type or reduce the exposure to this food type.

Although many families try elimination diets by themselves, we recommend they are done under a paediatric dietician's guidance. Many children who follow elimination diets miss out on essential nutrients. Although this may not be clear immediately, this can have a significant adverse impact on their long-term growth and health. When common foods like milk or wheat are excluded, paediatric dieticians can support families to ensure the child receives all the essential nutrients from alternative sources.

Excluding food types without good reason can increase the risk of developing severe immediate (IgE-mediated) reactions to the foods that have been eliminated; these immediate reactions can be dangerous and may be life-long.

WILL AVOIDING CERTAIN FOODS 'CURE' ECZEMA?

No. Atopic eczema is a complex condition but avoiding some foods may reduce eczema symptoms.

WHAT CAUSES ECZEMA FLARES?

There are many reasons why eczema can flare, and it can often happen without a specific trigger. Triggers can vary from person to person. You may already recognise some that are important to you or your child, such as viral illnesses, foods, detergents, changes in weather, pollen and house dust mites.

HOW DO I MANAGE ECZEMA FLARES?

For any flare of eczema the most important approach is to reduce the inflammation and itch with appropriate treatments. These are likely to be topical moisturisers such as creams, gels, ointments to target dryness of skin and creams/ ointments to reduce inflammation such as topical corticosteroids.

WHAT CAN I DO TO PREVENT ECZEMA FLARES?

It is usually impossible to fully prevent flares of eczema. However, it can be helpful to avoid or minimise triggers. It is advisable to use moisturisers for washing, instead of using soaps, bubble bath, shower gels and other detergents. Treat eczema early, the more severe it becomes the harder it is to control.

WHERE CAN I FIND MORE INFORMATION ABOUT FOOD ALLERGY AND ECZEMA?

Patient support groups providing information:

Eczema Outreach Support
Web: https://eos.org.uk/
Tel: 01506 840395

National Eczema Society
Web: www.eczema.org
Tel: 0800 448 0818

Weblinks to other relevant sources:

Early weaning:
https://www.bsaci.org/professional-resources/resources/early-feeding-guidelines/

Food allergy:
https://www.allergyuk.org/

Eczema:
https://eczema.org/
https://bspad.co.uk/eczema/

Jargon Buster:
https://www.skinhealthinfo.org.uk/support-resources/jargon-buster/

Please note that the British Association of Dermatologists (BAD) provides web links to additional resources to help people access a range of information about their treatment or skin condition. The views expressed in these external resources may not be shared by the BAD or its members. The BAD has no control of and does not endorse the content of external links.

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This leaflet aims to provide accurate information about the subject and is a consensus of the views held by representatives of the British Association of Dermatologists and the British Society of Paediatric and Adolescent Dermatology: individual patient circumstances may differ, which might alter both the advice and course of therapy given to you by your doctor.

This leaflet has been assessed for readability by the British Association of Dermatologists' Patient Information Lay Review Panel

BRITISH ASSOCIATION OF DERMATOLOGISTS

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PRODUCED | JUNE 2024
NEXT REVIEW DATE | JUNE 2027