

## Helping Practice Nurses Run Food Intolerance Clinics

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**Increasing concerns about food allergies and intolerances suggest a need for community based interventions. Carol Dungu, Specialist Paediatric Dietitian and James Gardner, Paediatric Allergy Clinical Nurse Specialist at the Royal Free Hospital discuss how a nurse led food allergy-intolerance service could provide effective medical advice and evaluation.**

A focussed clinic with dedicated trained staff would deliver a local service, reducing the need for patients to travel, often long distances, to an allergy or gastroenterology centre. As well as being convenient for patients, such a service would be cost-effective for the local GP practice. A recent report looking at nurse led food intolerance clinics seemed to show a majority of patients benefiting from following general healthy eating advice provided at the clinic. This often resulted without need for further input from specialist clinic. Where complex food-related symptoms are found this initial assessment can also lead to a referral to a more specialist service.

### **A food allergy is...**

The result of a specific immune response by the body to a particular protein within the food. These proteins are known as allergens.

This immune response causes antibodies (IgE) to be produced. Binding to specific allergens they initiate a series of immune signalling events from sneezing, itching, swelling or chest-tightness to anaphylaxis (anaphylaxis is a life threatening reaction to a substance involving breathing difficulties and/or a drop in blood pressure). The release of substances such as histamine from immune cells is fundamental to this process. Most allergic reactions occur within two hours of ingesting the particular food.

Food allergies should be managed within an allergy service with professionals trained in the interpretation of allergy tests and in the management of patients with allergic disease.

### **A food intolerance is...**

Complex. The mechanisms are often not well understood. Some aspects of food intolerance can occur through non-immune mechanisms and are often non-life threatening. However food intolerances can confer significant effects on quality of life and nutrition status, due to anxiety and restrictive diets. Symptoms often occur several hours or even days after the food has been consumed. The most common of all food intolerance is lactose intolerance where the body is unable to break down lactose (the sugar found in milk) due to an insufficiency in the lactase enzyme.

The table below highlights the differences between food allergies and intolerances;

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	<b>Allergy</b>	<b>Intolerance</b>
<b>Timing</b>	Rapid onset – symptoms within 2 hours of eating	Delayed onset – hours to days after ingestion
<b>Symptoms</b>	Urticaria/hives Angiodema Red flushes of skin Breathing difficulties Immediate onset stomach symptoms – vomiting / diarrhoea	Stomach pain Bloating Diarrhoea Constipation Headaches Migraine
<b>Family History</b>	Consider allergy – if family history of atopy (eczema, asthma, hayfever, food allergy)	Lactose intolerance????

### Medical diagnosis

An allergy involves a defined IgE mediated immune system response which enables clear diagnostic testing.

#### *Skin prick tests (SPTs)*

The rationale behind SPTs is that often an allergen-specific IgE is present in the skin. The allergen is introduced via a skin prick. A small amount of the diluted allergen is placed onto the skin before being pricked causing a localised reaction. When used in conjunction with a good clinical history, this is the most accurate way of diagnosing IgE-immune mediated food allergy. This test should only be performed under medical supervision as reports of anaphylaxis during testing have been reported. It is important to include a negative (saline) and positive (histamine) control to validate the testing.

#### Blood tests (RAST or allergen specific IgE)

These test the amount of IgE antibodies to the suspected food(s) in the blood. Avoiding a food will not make a test negative. Patient's who have an allergy to a particular food will still produce IgE to the offending food even when avoiding so again a good clinical history must be taken into account by the practitioner when interpreting the results.

There are no validated diagnostic tests available for investigating intolerance as the exact immune or non-immune mechanisms remain undefined. Skin prick tests and specific IgE testing have no value in intolerance but may help reassure the patient of the absence of a primary food allergy.

If you suspect food allergy rather than intolerance the patient should be referred to their local paediatric or adult allergy service for review by a trained doctor, nurse and/or dietitian.

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### **Complementary diagnosis - be wary!**

Something to be wary of especially in primary care is the rise in **non-scientific tests** performed by complimentary practitioners such as:

- **Kinesiology** which looks at muscle response to certain foods
- **Hair analysis** looking at heavy metal contamination causing food allergy
- **Vega testing** in which electromagnetic conductivity is measured alongside suspected foods
- **Pulse test** in which pulse measurements are taken pre and post offending foods.

These tests have no scientific background with most proven in research studies to be no better than luck or chance.

Patients are often left with a long list of foods and chemicals found in every meal that they must avoid. This poses a huge challenge as many patients are fixed on perceived intolerances and are unwilling to follow structured plans to confirm or exclude these perceived intolerances. It is important to consider that other non-food factors can exacerbate symptoms such as hyperventilation, stress and anxiety.

### **Current role of the Dietitian or Specialist Allergy Nurse**

Part of our role is to identify the correct food trigger and to prevent multiple inappropriate food exclusions which can have an impact on the adequacy of a diet and nutritional status of some more vulnerable patients.

Sometimes there are uncertainties;

- you can be unsure whether a particular food is the cause of the problem  
or
- the patient can be adamant that there is a problem with a certain food group but you do not think it is a true allergy.

This is when an exclusion diet can be considered. All exclusion diets should only be undertaken for a fixed period, e.g. 4-6 weeks before reintroducing the food. You will be able to see if the symptoms left or/and returned.

### Tips for running a clinic

1. Ideally patients should come to their first appointment with a 7 day food, symptom and activity diary. This can often help identify patterns to the patient's problems.

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### 2. Checklist of questions to ask

Questions to ask	Rationale
Type of symptoms?	Certain symptoms relate more to allergy than intolerance.
Has there been weight loss? Have they struggled to gain weight?	This can be a sign of malabsorption or allergy or other medical conditions.
Frequency of symptoms?	If the reaction/symptom is not repeated each time the food is eaten it is less likely to be the cause.
Onset of problems?	If it started in childhood there is more likelihood that it could be a true allergy. Some intolerances, such as lactose intolerance commonly present later in life.
Have there been any recent changes in their life? E.g. New job/school, exams, bereavement	Stress in people's lives can often trigger symptoms which are similar to those involved in allergy/intolerance.
Can they eat some foods from the same food group? E.g. yogurt but not milk, or pasta but not bread.	This can point to intolerances rather than an allergy as products made from wheat or cow's milk will all contain the protein which would cause an allergic reaction.
Have they had previous tests?	Often when patients have been for 'non scientific tests' this can cause them to be anxious about a number of foods which were previously tolerated.
What led to a particular food being excluded?	In some infants or children a food may not have ever been introduced due to parental anxiety.

### Vulnerable groups require specialist input

- **Children and babies** whose growth, nutrient intake and weaning progression can be severely hindered if left on restrictive diets for prolonged periods.
- Young children or babies with moderate to severe eczema.
- Those who appear to have **true allergies** where further testing or investigations are needed as well as long term follow up.
- Those where a **full exclusion diet** is necessary as they will need advice on hidden sources and alternative options to ensure the diet is varied and nutritionally balanced.

### Summary

Intolerances and allergies can interfere with daily life so it is important that correct triggers are identified and correct treatment or diets are given. A thorough initial assessment – which is often a fact finding session - is essential. Specialist allergy knowledge is necessary to interpret results of any food allergy tests correctly. Until validated tests for food intolerances become a possibility, the best diagnostic tool is elimination diets followed by reintroduction. People with true food allergy should be seen by dietitians to ensure their diets are varied and include suitable alternatives.

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## References

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## KEY

RAST: Radio-allergosorbent test.

IgE: Immunoglobulin E

## Further resources

[www.bda.uk.com](http://www.bda.uk.com): Web site of the British Dietetic association; containing a useful factsheet on food allergy and intolerance, autistic spectrum & allergy testing amongst others.

[www.bsaci.org](http://www.bsaci.org): British Society of Allergy and Clinical Immunology

[www.food.gov.uk](http://www.food.gov.uk): Government food standards agency Web site

[www.anaphylaxis.org.uk](http://www.anaphylaxis.org.uk): Information for people with severe allergies.

[www.allergyuk.com](http://www.allergyuk.com): Allergy UK official Web site.

[www.itsnutfree.com](http://www.itsnutfree.com): Free from Cakes, biscuits, flapjacks etc.

[www.goodnessdirect.co.uk](http://www.goodnessdirect.co.uk): Web site for special diet foods, nutritional breakdown, ingredients, dietary suitability, photographs, mail possible, catalogue available, next day delivery.

[www.dietaryneedsdirect.co.uk](http://www.dietaryneedsdirect.co.uk): Online and mail order shopping for special diet products