

Patterns and Prevalence of Adult Food Allergy

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Background

There are many types of adverse reactions to food. These include food intolerance, coeliac disease and food allergy. Although in many patients an allergy is mild, some experience more severe reactions which may result in hospital admission and, in rare instances, can be fatal. The burden of food allergy in the UK adult population is not well described in the literature and for this reason the Food Standards Agency (FSA) commissioned the Patterns and Prevalence of Adult Food Allergy (PAFA) study to investigate this further.

Objectives and approach

The main objectives were:

1. to determine the prevalence of IgE-mediated food allergy in adulthood
2. to describe the different trajectories of food allergy across the life course
3. to describe adverse reactions to foods that are not mediated by IgE in adults

The study involved a community survey undertaken in Manchester and two cohort studies, the Manchester Asthma and Allergy Study (MAAS) and the Isle of Wight 1989. Participants were randomly selected to represent the UK adult population, in terms of age, gender, index of deprivation and ethnicity based on data from the 2011 Census.

Results

Prevalence of IgE-mediated food allergy in adulthood

During the first stage of the PAFA study, more than 30% of adults reported some types of adverse reactions. When this was investigated further through a clinical assessment, it was found that around 6% of the UK adult population are estimated to have a clinically confirmed food

allergy.

The PAFA study also found that for UK adults:

- foods such as peanuts and tree nuts like hazelnuts, walnuts and almonds, are most likely to cause an allergic reaction
- many individuals also had allergies to fresh fruits such as apple, peach and kiwi fruit - these were associated with allergies to birch pollen, also known as pollen-food allergy syndrome or oral allergy syndrome
- other foods currently on Annex II of the food information for consumers regulation, such as soybean, celery, mustard, fish, shellfish and lupin, rarely caused IgE-mediated food allergy

The trajectories of food allergy across the life course

The combination of the community survey and cohort follow up also allowed the PAFA study to demonstrate that:

- childhood food allergies persist into early adulthood and then further increase with around half of food allergies developing in later adulthood
- key risk factors for childhood onset food allergy were early onset eczema, co-existing asthma or hayfever

Adverse reactions to foods that are not mediated by IgE

Based on data from the study, it was clear that there is a significant burden of adverse reactions to foods affecting around 7% of the adult population that are not mediated by IgE. The majority of reactions reported were associated with irritable bowel syndrome (IBS) due to milk and cereals containing gluten, together with legumes such as chickpeas and lentils.