

# Prevalence and incidence of food allergies and food intolerance

Area of research interest: [Food hypersensitivity](#)

Study duration: 2001-07-01

Planned completion: 1 August 2006

Project code: T07023

Conducted by: St Mary's Hospital, Isle of Wight

## Results

### Background

There is currently a lack of reliable data on the actual, as opposed to reported, prevalence of food allergies and intolerances in the UK, especially among children. Previous attempts to establish prevalence have not been representative of the whole population, or have been based on reported symptoms without a clear objective diagnosis.

Most have been based on adults rather than children. There is some (but not definitive) evidence that the prevalence of food allergies may be increasing in line with the general increase in allergic diseases such as asthma and eczema. The aim of this study was to generate robust data on the current prevalence of hypersensitivities to food (food allergy and food intolerance), in UK children, and to use this data to compare with previous estimates to see if the prevalence of food hypersensitivity in the UK is changing over time. The data would also form a benchmark against which to compare future UK food allergy and intolerance prevalence data.

### Research approach

A whole population cohort of children on the Isle of Wight were followed from birth to 3 years of age and data on the reported and actual prevalence of food allergies and intolerance (food hypersensitivity) was collected using detailed questionnaires, skin prick testing and controlled food challenges to confirm reported food allergies. Sensitisation to food allergens (the precursor to development of food allergy) was also assessed in the study. In addition to the birth cohort, whole population cohorts of older groups of children at ages 6, 11 and 15 years were also recruited and assessed in a similar way to find out prevalence of food hypersensitivity at these ages.

For all the cohorts, the rates of reported food hypersensitivity were significantly higher (by 5-10%) than the actual rates of objectively diagnosed food hypersensitivity (which includes all objectively diagnosed adverse reactions to food.) The researchers present data on the prevalence of sensitisation and on objectively assessed food hypersensitivity (based on a combination of a positive Double Blind Placebo Controlled Food Challenge, a clear history of previous reactions in the presence of a positive skin prick test (SPT) or positive allergen specific IgE, or a doctor's diagnosis) at ages 1, 2, 3, 6, 11 and 15 years.

The researchers found that the actual prevalence of (objectively assessed) food hypersensitivity determined, could vary significantly depending on whether results were derived from open or double-blind food challenges. This is an important finding for future studies. The results from this

project will help us understand which food allergies are most prevalent in childhood, and how the pattern of prevalence changes as children get older and some allergies are outgrown. This information will help us to formulate appropriate and proportionate policies to protect food allergic consumers and to ensure that the advice we give to consumers on individual food allergies is well targeted.

## Published Papers

1. Venter, C., Pereira, B., Voigt, K., Grundy, J., Clayton, C. B., Higgins, B., Arshad, S. H. and Dean, T. (2009). Factors associated with maternal dietary intake, feeding and weaning practices, and the development of food hypersensitivity in the infant. *Pediatric Allergy and Immunology*. 20: 320-327.
2. Venter, C., Arshad, S. H., Grundy, J., Pereira, B., Clayton, C. B., Voigt, K., Higgins, B. and Dean, T. (2010). Time trends in the prevalence of peanut allergy: three cohorts of children from the same geographical location in the UK. *Allergy*. 65: 103-108.

## Research report

### England, Northern Ireland and Wales

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