

Patterns and Prevalence of Adult Food Allergy

Research programme [Food allergy and intolerance research --](#)

Study duration November 2018 to December 2021

Project code FS101174

Conducted by The University of Manchester, The University of Southampton and the Amsterdam Academic Medical Centre

Background

A robust evidence base regarding the prevalence of adverse reactions, their patterns and risk factors for their development is required to underpin the development of effective policies seeking to manage, prevent and treat such conditions. Since adult food allergy has not been studied systematically in the UK in recent times, it is not known whether the patterns, prevalence and phenotypes of adverse reactions to foods in adults have changed over the last 20 years in the UK, particularly in relation to IgE-mediated reactions. Studies in longitudinal cohorts can provide new knowledge on the trajectories of food allergies from childhood into adulthood which will help inform the likely impact of such strategies.

The new knowledge arising from the project will facilitate the development of novel approaches and interventions for the prevention and treatment of food allergy in adulthood. The project will provide data which can be used to assess the impact of any public health policies or interventions designed to reduce the incidence and burden of food allergies in the UK in future.

Objectives and approach

The projects main objectives are:

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 project will make use of two complementary epidemiological approaches. Firstly, a cross-sectional study will be used to assess the prevalence of food allergy across the adult population by utilising the diverse demographic of individuals from Manchester, Southampton and the Isle of Wight in urban and rural environments. This will provide a large group of participants, representative of the UK, who can be characterised with regards to adverse reactions to food including those which may not be mediated by IgE. A large community survey of adults aged 20-70 years will be carried out to identify the prevalence of food allergy in the general adult population.

Secondly, longitudinal cohorts whom have now reached adulthood will be revisited which contain high quality data including the factors that are likely to be associated with the development of food allergy in either childhood or adulthood. This will allow the study team to determine the trajectory of food allergy across the life course. Well characterised cohorts, including the Manchester Asthma and Allergy Study (MAAS), Isle of Wight 1989 and FAIR population-based cohorts, will provide information on young adults aged between 20-32.

Clinical confirmation of food allergy (including oral food challenge) will be undertaken in both study populations. The data from the different centres and study populations will be collected, curated and integrated within an innovative e-lab health informatics platform and analysed to provide a robust estimate of the prevalence of food allergy in UK adults, identify the major foods involved and assess the contribution made by persistent childhood food allergy.

The project builds on tried-and-tested inter-disciplinary partnership between the Universities of Manchester, Southampton and the Amsterdam Academic Medical Centre. It integrates clinical and epidemiological research with computer science and data analytics to provide a step change in our knowledge of the true prevalence of IgE mediated food allergy, in addition to prevalence of non-IgE mediated adverse reactions to food.