

The impact of food allergy on quality of life

By Pia Nørhede

EuroPrevall will develop and apply new questionnaires, which will provide new insights into the impacts of food allergies and will help governments, the food industry and doctors to identify the most effective strategies to improve the quality of life of food allergic consumers.

Why is it important to measure the impact of food allergy on quality of life?

Individuals with food allergy develop symptoms after eating foods that for the vast majority of the population are part of a healthy diet. The only way for the allergic individual to manage food allergy is to avoid eating the food that causes the allergic reaction. The quality of life of the food allergic individual may be seriously impaired. The impact also extends to the family and friends of the allergic individual, as all have to be vigilant to protect the allergic individual from the foods to which he or she is (or believes to be) allergic.

Approximately 4-6% of children and 1-3% of adults are diagnosed with food allergy. However, up to 22% of the adult population believe that they are allergic towards one or more foods. Whether they are truly allergic or not they will have dietary restrictions, which may have an impact on their quality of life. For that reason, the quality of life of a large part of the population may be affected by food allergy.

A questionnaire that can measure the impact of food allergy on quality of life may serve several purposes. The questionnaire can be used to:

- a. Identify the quality of life problems associated with food allergy and the magnitude of the problem.



It is necessary to identify the quality of life problems in order for governments, the food industry, or health care professionals to take measures, which are as beneficial as possible for the food allergic individual. For example, if many food allergic individuals tend to avoid eating outside the home because of experiences with caterers who do not understand the need to avoid certain foods, then an effective intervention could be more allergy training for caterers.

The impact of food allergy on quality of life may differ according to the number and type of foods to which a particular individual is allergic and the severity of symptoms. If some food allergies have a greater impact on quality of life than others it seems obvious for governments to prioritise those when planning e.g. new labelling rules.

Furthermore, the impact may also be dependent on the amount of food that is needed to trigger an allergic reaction, or the age and gender of the allergic individual. The impact may also differ due to cultural differences. When politicians and health care professionals understand the impacts of food allergies, they can direct health care resources towards the interventions, which do most to improve the quality of life of food allergic people (e.g. proper diagnosis, expert dietary advice, a future treatment).

Researchers may assess the magnitude of the food allergy problem across Europe, when they combine the information from studies on the impact of food allergy on quality of life with data on the number of people with food allergy.

b. Assess the effectiveness of different interventions (including regulatory policies).

As mentioned above, governments, the food industry, and health care professionals all have the power to improve the quality of life for food allergic individuals. However, a questionnaire is needed to measure if different interventions actually improve the quality of life for food allergic individuals.

With a quality of life questionnaire, researchers can measure the quality of life for food allergic individuals before and after specific interventions and determine to what extent the quality of life has improved.

In November 2005 new EU-legislation on food labelling came into force. The idea of the new legislation is to improve the quality of life for food allergic individuals. However, the effect of this legislation has never been assessed. Nor have researchers assessed how to balance the benefits to consumers against the costs to the food industry. Costs to implement more stringent hazard control procedures to avoid contamination with allergenic foods are ultimately passed on to the consumer. With the right questionnaire it is possible to measure if new legislation actually improves the quality of life for food allergic individuals.

What is known today about the impact of food allergy on quality of life?

So far researchers have only to a limited extent investigated the impact of food allergy on quality of life. Specially designed questionnaires can measure people's ability to function in their everyday lives. Scientists call these questionnaires Health-Related Quality of Life (HRQoL) questionnaires. It is important to understand that two food allergic individuals, who from the doctors' point of view are affected to the same degree, may answer the questionnaire very differently. That is because individuals vary in how they cope with sickness and in their tolerance levels. A well-designed questionnaire should measure the problems that the food allergic individuals themselves consider to be important rather than focusing on what is considered important by doctors or other professionals.

General quality of life questionnaires are available that can be used in different diseases. Research using such questionnaires has shown that:

- a. Daily life is more disrupted in peanut allergic individuals than in individuals with a rheumatic disease.
- b. Family activities were limited in families with food allergic children.

- c. Female adolescents with food allergy feel more impaired health-wise and socially than female adolescents with other allergy-like conditions.

Researchers have recently developed and tested the reliability of a questionnaire that is specific for food allergy. This questionnaire was designed to measure the parental burden of having a child with food allergy. In addition, two parent-administered questionnaires have been developed, and are currently being tested on reliability. Answers to one of the questionnaires indicate that food allergy has a significant impact on almost all aspects of daily life.

Research within EuroPrevall on the impact of food allergy on quality of life

EuroPrevall will develop new questionnaires specific for food allergy and use them to investigate the impact of food allergy on quality of life of allergic individuals and their families. Compared to the existing questionnaires, the new questionnaires will cover all ages in childhood and adulthood. The questionnaire will be self-administered by the food allergic patients from the age of 8 years. EuroPrevall will translate the new questionnaires into the languages used in different European countries to allow for cross-cultural comparison.

The researchers in EuroPrevall will put special emphasis on gender differences. Before EuroPrevall, only one study has assessed gender differences in the quality of life of the family members of children with peanut allergy. The results showed that mothers experienced greater anxiety and stress than fathers or sibling(s). In addition, mothers rated their child's quality of life worse than the father, sibling(s), or the allergic child.

EuroPrevall will also investigate how the quality of life for food allergic consumers can be improved. The focus of this research will be on how different ways of labelling food affect the food allergic consumer. The new questionnaires will be able to measure the impact of new information and communication technologies that are able to target information to individual food allergic consumers.

The above writing is based on the paper:

B.M.J. de Blok, B.J. Vlieg-Boerstra, J. N. G. Oude Elberink, E.J. Duiverman, A. DunnGalvin, J. O'B. Hourihane, J.R. Cornelisse-Vermaat, L. Frewer, E.N.C. Mills, A.E.J. Dubois (2007). A framework for measuring the social impact of food allergy across Europe. A EuroPrevall state of the art paper. *Allergy* 62 (7), 733-737.

EuroPrevall is an EU-funded project about food allergy. The primary objective of EuroPrevall is to improve the quality of life for all food allergic consumers. To meet that objective EuroPrevall will conduct research to obtain information that we currently lack. EuroPrevall will also develop the tools necessary to manage food allergies more effectively. The 56 partners from 21 different countries include some of the leading allergy research organisations in Europe as well as clinical, patient, and industrial organisations. Visit www.euoprevall.org for more information on the project.