

“Sexy” research on food allergy

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Why is it important to perform “sexy” research on food allergy?

“Sexy” research, in this context, is research into the differences between men and women when it comes to the incidence and impacts of food allergies.

In theory, researchers distinguish between sex and gender differences. Sex differences are the differences between men and women that exist because of biological differences e.g. that different levels of oestrogens and androgens are present in men and women. Gender differences refer to the social and cultural influences that lead to differences between women and men.

In practice it is difficult to evaluate impacts of sex and gender separately as both may contribute to the differences observed between men and women.

Even today, there remains much to learn about the relationships between food allergies and sex and gender. Researchers need to integrate sex and gender in food allergy research to give us a more complete picture of the differences that exist between men and women. This not only relates to how allergies affect men and women differently, but also how best to communicate information on food allergies specifically to men and women who manage their own (or their child’s) food allergy.

What is known today about sex and gender differences in food allergy?

It is well established that there are differences between men and women in the incidence of allergic diseases. For example, the occurrence of some allergic diseases such as asthma is higher among females than males after puberty. When asked, females will report more often than men that they are allergic towards certain foods. This might be partly explained by the fact that females in general report worse health than men and have more active health seeking behaviour than men. However, recently reported data from a Norwegian national register of severe allergic reactions to food showed a strong dominance of reactions by females (60%) over males (40%). This suggests that there is also a clear biological mechanism. Either females are biologically more susceptible to developing food allergies or have a different pattern of exposure to allergenic foods than men.

A number of biological and cultural hypotheses have been proposed to explain the differences between men and women including:

a. Biological vulnerability

Part of the explanation for sex differences in allergy could be that the female sex hormone oestrogen enhances the production of antibodies, which are involved in allergic diseases.

b. Exposure to health risks

It is not known if the female exposure to allergenic foods differs from the male exposure.

c. Perception of symptoms

Adolescent girls with a chronic disease (e.g. asthma or diabetes) report a lower quality of life compared with boys suffering from the same condition.

To date, 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. In addition, mothers rated their child's quality of life worse than the father, an older sibling, or the allergic child.

d. Evaluation of risk

No studies have investigated if gender differences exist in the perceptions of risk in the area of food allergy. It is, however, likely since males, in particular young males, are more prone to exhibit "optimistic bias". This is a phenomenon in which they believe they are less likely than others to experience negative effects when they run risks.

e. Information processing

Research has found that women process information more comprehensively than men. Men tend to use rules of thumb and miss subtle cues.

f. Role expectations.

Adolescent girls with asthma or diabetes were prepared to inform others and treat themselves in public. Boys tended to play down their illness particularly in public.

All of the above variables probably form part of the explanation for differences in reported impacts of food allergy for men and women. It is not known how much each contributes to the female dominant incidence that has been seen in some studies of food allergy.

Sexy research within EuroPrevall

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, including gender and sex differences. 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.

EuroPrevall will develop and use new questionnaires to investigate the social impact of food allergy for allergic individuals and their families. In this work the researchers will put special emphasis on gender differences. In addition the researchers plan to conduct a workshop on how to perform "sexy" research.

The above writing is based on the paper:

A. DunnGalvin, J. O'B. Hourihane, L. Frewer, R. C. Knibb, J. N. G. Oude Elberink, I. Klinge (2006). Incorporating a gender dimension in food allergy research: a review. *Allergy* 61,1336-1343.