How unravelling the mystery of food allergies could benefit millions

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A study supported by two EU-funded projects has found that mothers predisposed towards developing certain allergic reactions (a condition known as atopy) and high fat mass in newly born babies are key factors that increase the risk of atopic dermatitis in infants.

Atopic dermatitis (AD), also known as atopic eczema, is an inflammation of the skin that results in itchy, red, swollen, and cracked skin. Many people with atopic dermatitis develop hay fever or asthma later in life. The researchers say that they hope early identification of those at risk could lead to the more rapid implementation of preventative measures.

Researchers working on the study – which was recently published in the

Journal of Allergy and Clinical Immunology – were supported by the ODIN (Food-based solutions for Optimal vitamin D Nutrition and health through the life cycle) and IFAAM (Integrated Approaches to Food Allergen and Allergy Risk Management) projects. Since 2013, both of these EU-funded initiatives have sought to advance scientific knowledge linking nutrition and health.

The IFAAM project therefore set out to develop new evidence-based approaches and tools to better manage allergens in food and deliver effective food allergy management plans and dietary advice. Achieving a better understanding of risk factors in newly born babies and children has been central to the initiative. To begin with, data on allergic reactions to various food ingredients such as milk powder, egg white powder, walnut, hazelnut and peanut flours was analysed and compared. This enabled the team to identify possible key risk factors.

The project next intends to produce a standardised management process to help companies involved in food manufacturing ensure that their products are as allergen free as possible. The results will also help policy makers develop effective pan-European food safety regulations to minimise consumer risk, which in turn will also boost European food industry competitiveness.

In order to fully exploit all data, the project will establish the 'Allerg-e-lab', an online informatics platform to share research findings, data and clinically validated risk assessments.

The ODIN project meanwhile has been working on developing a safe and effective public health strategy to prevent vitamin D deficiency. People without access to sunlight or those who suffer from milk allergies or adhere to a strict vegan diet may be at risk.

Four individual randomised clinical trials in pregnant women, children,

teenagers and immigrant groups will be carried out to assess vitamin D deficiency levels and needs. Innovative food-based solutions to increase vitamin D in the food supply chain via the combination of bio-fortification of meat, fish, eggs, cheese, mushrooms and bakery yeast will then be developed. Finally, the efficacy and safety of these novel foods will be tested to ensure they meet the strictest EU standards.

Both IFAAM and ODIN are scheduled for completion in 2017.

More information: www.odin-vitd.eu/

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