

Food Allergies | Specific Cell Type Explains Dangerous Food Allergies

Food Allergies

New findings released by researchers at Cincinnati Children's Hospital Medical Center report the discovery of a new cell that seems to cause potentially fatal food allergies response and could explain the reason why severe allergic reactions actually occurs in the first place.



How'd They Do That?

Prior to the findings of this study, researchers were unable to pinpoint exactly what was causing the release of large amounts of an inflammatory immune protein (IL-9) that increased anaphylactic shock when exposed to specific foods. However, researchers have now discovered cells that appear to be the source for production of the IL-9 protein; the cells are being called "IL-9-producing mucosal mast cells", or MMC9 cells.

Scientist believes that there needs to be some sort of antibody present to cause an allergic reaction; however, for the reaction to be severe the body must also produce these MMC9 cells.

While the initial thought is that people are genetically predetermined to be susceptible to severe, dangerous allergic reactions, researchers hope these new findings lead to better treatment options for the 8% of children with food allergies that lead to dangerous anaphylactic shock.

What Does This Mean For Me?

Although these findings were concluded based on research conducted on mice, researchers are confident that this will lead to new treatment and diagnostics for food allergies and dangerous anaphylactic shock resulting from the antibody IgE.

Scientists still do not know exactly why some people have such strong allergic responses to certain foods like shellfish and peanuts; however since mice are so similar to humans, they are confident these findings will lead to new treatment and prevention in humans.

Since the release of these findings, researchers have been working on identifying the human version of the MMC9 they identified in mice. Once these cells are identified, researchers are confident that next steps will lead to the development of blood tests that identifies the presence of food allergies and also identifies people who are at risk for the most severe reactions to specific food allergies.

Until then, the best medical advice for food allergies is to completely avoid the foods that cause these severe and dangerous reactions.

Cell type may help explain why some people have dangerous food allergies University of Cincinnati Academic Health Center, 09/23/2015

Researchers have discovered a new cell type that appears to drive life-threatening food allergies and may help explain why some people get severe allergic reactions and others do not. Reporting their study data Sept. 22, 2015, in the journal *Immunity*, scientists at Cincinnati Children's Hospital Medical Center say their findings in mice should also provide insights into new therapeutic strategies and diagnostics for food allergies and anaphylactic shock triggered by the immune antibody IgE. The authors report discovery of what they call "IL-9-producing mucosal mast cells" or (MMC9 cells). The cells produce large amounts of an inflammatory immune protein called interleukin 9 (IL-9), which amplifies anaphylactic shock in response to ingested food. Prior to this study, the primary cellular source of IL-9 was unknown, according to the authors.