Why kids develop food allergies

OPINION
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New York, Jan 29 (IANS) Many children suffer from food allergies that are significant and their ignorance can cause skin rash to a potentially lethal anaphylactic shock — life threatening allergic reaction.

According to a new study, the good news is that many affected children outgrow their allergy, presumably as the immune system learns to tolerate food initially mistaken as “foreign”.

According to researchers the children, who have more limited exposure to novel foods than adults, are more susceptible to food allergies.

“The immune system evolved to protect us from things that are not ourselves, like viruses or pathogens, yet we consume nutrients, which are themselves foreign,” said a researcher Charles Surh from La Jolla Institute for Allergy and Immunology (LJI) in the US.

“Our work shows food tolerance is acquired and involves specific populations of T cells that develop following its consumption. Without them, we would mount a strong immune response to macromolecules contained in food,” Surh added.

The study is the first to demonstrate that consumption of a normal diet stimulates cells in the gut that suppress rejection of food by the immune system.

The research was published online in issue of Science, explained how food tolerance emerges over time in normal individuals.

Like pathogens, food displays macromolecular markers known as antigens that announce to the immune system that food is “foreign”.

For the study, researchers conducted “antigen-free” mouse models, these animals were not only raised in a germ-free environment.

Antigen-free mice were depleted of Tregs — modulate the immune system — in the small intestine whereas a large number of these Tregs were present in germ-free counterparts, the study found.

Interestingly, germ-free mice are known to be highly susceptible to allergies.The researchers explained that proteins contained in food stimulate Treg development. It also hinted that Tregs present in the gut of normal mice might suppress a potentially disastrous immune response to those proteins.Hence, the presence of both food-and microbe-induced populations of Tregs is required to prevent allergic symptoms.

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