

Salt may cause autoimmune diseases

PARIS, FRANCE: A high-salt diet may be a risk factor for autoimmune diseases like multiple sclerosis (MS), according to three papers published in the journal *Nature* on Wednesday (6 March).

Two of the studies showed that salt can induce the production of aggressive cells involved in autoimmune disease development in mice and humans, while a third indicated that mice on high-salt diets develop a disease similar to human MS.

The international teams of scientists cautioned that these are early results warrant further investigation.

"It's premature to say: 'You shouldn't eat salt because you'll get an autoimmune disease'," said one of the study authors, Aviv Regev from the Massachusetts Institute of Technology.

"We're putting forth an interesting hypothesis, a connection between salt and autoimmunity, that must now be tested through careful epidemiological studies in humans," he said.

In two studies in mice and human cells, scientists showed that salt boosted the development of a type of immune cell known as T helper 17, or Th17, that has been implicated in diseases like MS, psoriasis and rheumatoid arthritis.

Autoimmune diseases develop when the immune system attacks rather than protects the host.

Other researchers found they could induce more severe forms of autoimmune diseases and at higher rates, in mice fed a diet higher in salt than others.

"It's not just salt, of course," said author Vijay Kuchroo, co-director of the Centre for Infection and Immunity at the Brigham and Women's Hospital in Boston.

"We have this genetic architecture, genes that have been linked to various forms of autoimmune diseases and predispose a person to developing autoimmune diseases.

"But we also suspect that environmental factors, infection, smoking and lack of sunlight and Vitamin D may play a role," Kuchroo said in a joint statement.

"Salt could be one more thing on the list of predisposing environmental factors that may promote the development of autoimmunity," said Kuchroo.

In a comment on the three companion papers, John O'Shea of the National Institute of Arthritis and Musculoskeletal and Skin Diseases in Bethesda, Maryland, and Russel Jones of McGill University in Canada, called the findings "exciting and provocative".

But they reiterated it was premature to state that salt could cause autoimmune disease.

"This work should spur investigation of tangible links between diet and autoimmune disease in people," they wrote.

"In doing so, it will be essential to conduct formal, controlled clinical trials. Fortunately, the risks of limited dietary salt intake are not great, so it is likely that several such trials will be starting soon," the researchers said.

Source: *AFP* via I-Net Bridge

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