



<http://www.dnaindia.com/>

Compounds in non-stick cookware linked to elevated cholesterol in kids, teens

ANI / Tuesday, September 7, 2010 13:48 IST

A new study has suggested that children and teens with higher blood levels of chemicals used in the production of non-stick cookware and waterproof fabrics are prone to elevated total and LDL cholesterol levels.

Humans are exposed to the man-made compounds known as perfluoroalkyl acids-including perfluorooctanoic acid (PFOA) and perfluorooctane Sulfonate (PFOS)-through drinking water, dust, food packaging, breast milk, cord blood, microwave popcorn, air and occupational exposure.

Animal studies have identified the liver as the primary organ affected by perfluoroalkyl acid exposure, with potential effects in human including alterations in cholesterol levels.

Stephanie J Frisbee of West Virginia University School of Medicine and colleagues assessed serum lipid levels in 12,476 children and adolescents (average age 11.1).

After enrolling in 2005 or 2006, the children and teens submitted blood samples; their average PFOA concentration was 69.2 nanograms per millilitre and average PFOS concentration was 22.7 nanograms per millilitre.

Among 12- to 19-year old participants, PFOA concentrations were higher than those detected in a nationally representative survey (29.3 nanograms per millilitre vs. 3.9 nanograms per millilitre), but PFOS concentrations were similar (19.1 nanograms per millilitre vs. 19.3 nanograms per millilitre).

On average, the one-fifth of children and teens with the highest PFOA levels had total cholesterol levels 4.6 milligrams per decilitre higher and LDL cholesterol levels 3.8 milligrams per decilitre higher than the one-fifth with the lowest PFOA levels.

In addition, there was an average difference of 8.5 milligrams per decilitre in total cholesterol levels and 5.8 milligrams per decilitre in LDL cholesterol levels between the one-fifth of participants with the highest and lowest PFOS levels.

"The non-linear nature of the observed associations, particularly for PFOA, suggests a possible saturation point in an underlying physiologic mechanism," the authors wrote.

"PFOA and PFOS specifically, and possibly perfluoroalkyl acids as a general class, appear to be associated with serum lipids, and the association seems to exist at levels of PFOA and PFOS exposure that are in the range characterized by nationally representative studies," they added.

The findings were published in the Archives of Pediatrics & Adolescent Medicine, one of the JAMA/Archives journals.

URL of the article: http://www.dnaindia.com/health/report_compounds-in-non-stick-cookware-linked-to-elevated-cholesterol-in-kids-teens_1434632-all

Permission to reprint or copy this article or photo must be obtained from www.3dsyndication.com