

Chemical found in Teflon is linked to higher risk of allergic reaction

A chemical found in Teflon non-stick coatings could raise the risk of allergies, researchers have said.

The scientists claim the product may prime the immune system to overreact to allergy triggers, or allergens, such as dust mites or animal hair.

Lab mice given the chemical - perfluoro-octanoic acid - before being exposed to an allergen suffered more trouble breathing than those exposed to the allergen alone.

The results suggest a possible explanation for the rising incidence of childhood asthma.

The acid is also used to make all weather clothing and stain-resistant fabrics and carpets.

The researchers at the National Institute for Occupational Safety and Health in West Virginia examined the immune responses of mice subjected to an allergen. They found that those exposed to the acid first were more likely to have a reaction.

The doses of the chemical given to the mice were considerably higher, however, than the levels humans are likely to be exposed to.

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Perfluoro-octanoic acid has become so widespread over the years that almost everyone has it in their body, including newborns.

Although the concentrations in human blood are relatively low there are fears about the potential health effects. The acid can contribute to thyroid problems, immune changes and testicular, liver and pancreatic cancer in laboratory animals.

Dr Robert Rickard - of U.S. chemicals firm DuPont, which makes Teflon - said perfluoro-octanoic acid was unlikely to cause allergy-related problems in humans.

He admitted however that no studies had previously looked at the issue. DuPont has found very small amounts of the chemical in treated carpets and upholstery.

Heat-resistant Teflon was discovered by accident by DuPont chemist Roy Plunkett in 1938.

In 1960 the U.S. Food and Drug Administration approved it for use in cookware.

When it is heated to exceptionally high temperatures the coating can break down and release perfluoro-octanoic acids.

In 2004, the company agreed an out-of-court settlement in a lawsuit brought by about 50,000 residents who lived near its West Virginia plant.

They claimed the company had contaminated their water supplies with the acid.

They alleged the chemical was linked to birth defects and other health hazards. DuPont did not accept liability and has maintained that perfluoro-octanoic acid does not pose a danger to the public.

An estimated one in eight children suffers from asthma while one in five people are diagnosed with the condition at some stage in their lives.

Significant risk factors include obesity, genetic inheritance, smoking, low birth weight, air pollution and

allergens such as exhaust particles, smoke and household dust mites.

The West Virginia research was published in the journal Toxicological Sciences.

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