People Who Eat Out Likely Have Higher Levels of Hormone-Disrupting Phthalates, Says Study

Eating out makes significant contributions to the obesity epidemic worldwide, and a new study has found eating restaurant meals also leaves you more open to phthalate exposure. What are phthalates and why does this matter?

Phthalates are a chemical added to plastics to make them flexible. They are commonly found in shower curtains, moisturizer, perfumes, hard packaging, and various plastic containers, but testing has also found them in milk and spices. They've been linked to cancer, obesity, type 2 diabetes and endocrine disruption. They've been banned in children's products in the U.S., and the Centers for Disease Control has issued recommendations for further study of the chemicals. This new study found that people who regularly ate at restaurants, fast food places, and cafeterias had levels of phthalates 35 percent higher than those who only consumed food at home. Senior author Ami Zota, an assistant professor of environmental and occupational health at Milken Institute School of Public Health (Milken Institute SPH) at the George Washington University says,

> *This study suggests food prepared at home is less likely to contain high levels of phthalates, chemicals linked to fertility problems, pregnancy complications and other health issues…Our findings suggest that dining out may be an important and previously under-recognized source of exposure to phthalates for the U.S. population."*

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Phthalates and Food

Researchers from George Washington University and the University of California Berkeley and San Francisco examined data collected from 10, 253 people during 2005 to 2014 from the National Health and Nutrition Examination Survey. While findings indicated there was an increase in phthalate levels overall in those who routinely ate out, the study identified teenagers as particularly vulnerable. Adolescents who consumed most of their food outside of the house experienced phthalate levels 55 percent higher than peers who ate at home. That dramatic increase may have long-reaching effects, as adolescents are one of a few populations particularly susceptible to hormone disruptors, as lead author of the study Dr. Julia Varshavsky, of the University of California, Berkeley, School of Public Health notes.

> *Pregnant women, children, and teens are more vulnerable to the toxic effects of hormone-disrupting chemicals, so it's important to find ways to limit their exposures…"*

Phthalates do not bond to the plastics they make flexible, so they are especially problematic when paired with hot food, as heat is one way to remove them from the plastics. Some phthalates are also fat-soluble, leaving milk and other lipid-rich foods a likely source of them.

Phthalates have been banned for specific uses, and government reports, like the Chronic Hazard Advisory Panel (Chap) on Phthalates have actually made it clear that they are harmful to human health. Yet they are still in a large variety of products, especially those that are absorbed into the body through digestion or the skin. There are other alternatives available, like natural polymers or bio-plasticizers based on

vegetable oils, though these other options are expensive. It’s unlikely that dining establishments, especially those focused more on profit margins, will be willing to make the switch without significant pressure.

Sources

- *Dietary sources of cumulative phthalates exposure among the U.S. general population in NHANES 2005–2014* – Environment International
- *What Are Phthalates? Dining Out ‘Raises Level Of Chemicals Linked To Cancer’* – Newsweek
- *Phthalates are everywhere, and the health risks are worrying. How bad are they really?* – The Guardian