

# Plastics chemical linked to obesity in kids

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Study suggests phthalates may alter fat metabolism, influence weight

(HealthDay) -- It's hard to imagine a pacifier or a rubber ducky making your child fat.

But new research suggests that chemicals called phthalates, which are found in the plastics that pacifiers and toys are typically made of, may be linked to higher rates of obesity in children.

The chemical, called di-ethylhexyl phthalate (DEHP), is suspected of being able to alter biological functions involved in fat metabolism. In the study, children with the highest DEHP levels had nearly five times the chance of being obese compared with those who had the lowest DEHP levels.

How could a chemical used to soften plastics trigger fat development in a child?

"It may trigger the master regulator of fat creation and [lipid metabolism](#)," explained study co-author Dr. Mi-Jung Park, a pediatric endocrinologist and professor at Inje University College of Medicine, in Seoul, South Korea.

DEHP may do two different things that increase fat development, Park said. It may reduce the effect of androgen -- a [male sex hormone](#) -- which lowers body-mass index (BMI). It may also disrupt [thyroid](#)

[function](#), which plays a role in weight gain.

Interfering with androgen or [thyroid hormones](#) can affect appetite or a person's rate of metabolizing food, she explained.

Other studies have linked phthalates to breast growth in boys, reproductive problems in men and [low birth weight](#).

The researchers measured blood levels of DEHP in 204 children ranging from 6 to 13 years old; 105 were considered obese and 99 were of normal weight.

Children with a higher BMI, a measurement of body fat, had higher DEHP levels. The increased risk of obesity with elevated DEHP levels was not related to the amount of physical activity they got or their [daily calorie intake](#).

The study, scheduled for presentation Saturday at the Endocrine Society's annual meeting in Houston, did not demonstrate a [causal relationship](#) between blood levels of DEHP and obesity.

Park said parents should understand that phthalates are virtually everywhere -- in food, water, plastic bags and packaging wraps, cosmetics, lotions, shampoo and toys. Pregnant women, premature infants and young children may be particularly sensitive to the chemical, she said. "Putting hot water or hot food into a plastic container may be dangerous," she added.

Johanna Congleton, senior scientist and toxicologist at the Environmental Working Group in Washington, D.C., recommends avoiding exposure to phthalates. "It's a good precautionary measure, and consumer product manufacturers should phase out the use of such compounds," she said.

Research presented at medical meetings should be viewed as preliminary until published in a peer-reviewed medical journal.

**More information:** For more on phthalates, go to

the [Environmental Working Group](#).

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