

Use of baby personal care products associated with higher levels of phthalates

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Babies recently treated with infant personal care products such as lotion, shampoo, and powder, were more likely to have manmade chemicals called phthalates in their urine than other babies, according to University of Washington and Seattle Children's Hospital Research Institute study appearing in the February issue of the journal *Pediatrics*.

Phthalates (pronounced "tah-lates") are added to many personal care and cosmetic products, as well many common household plastic and vinyl products, and some studies suggest they may affect reproductive development in humans.

Animal-based studies of phthalates have found that the synthetic chemicals can harm reproductive system development, and studies in humans have found that prenatal exposure or exposure through breast milk can alter hormone concentrations. Early-childhood exposure has not been extensively studied, so additional research is needed to determine if phthalate exposure can indeed cause reproductive development problems or other adverse effects in infants.

In this study, the researchers set out to see if use of personal care products was associated with urine phthalate concentrations. To accomplish this, they collected urine samples from 163 infants aged 2 months to 28 months, and measured the levels of nine different phthalates in those urine samples. They also had the babies' mothers fill out questionnaires on their use of infant personal care products in the past 24 hours.

When they cross-referenced the data, they found that the use of baby powder, lotion, and shampoo were each strongly associated with higher phthalate levels in the urine. The use of baby wipes and diaper cream were not strongly associated with increased levels of phthalates. The scientists also found that every baby had detectable levels of at least one phthalate in their urine, and about 81 percent of the infants had detectable levels of seven or more phthalates. Babies who were 8 months old or younger had stronger associations between product use and phthalate concentrations, as did babies whose mothers used more infant personal care products.

"We found that infant exposure to phthalates is widespread, and that exposure to personal care products applied onto the skin may be an important source," said the study's lead author, Sheela Sathyanarayana, an acting assistant professor of pediatrics at the UW School of Medicine and a researcher with Seattle Children's Hospital Research Institute. "This is troubling, because phthalate exposure in early childhood has been associated with altered hormone concentrations as well as increased allergies, runny nose, and eczema. Babies may be more at risk than children or adults because their reproductive, endocrine, and immune systems are still developing."

Parents who want to decrease their baby's exposure to phthalates should limit the amount of baby care products used on the infant, and apply lotions or powders only if medically indicated. Since phthalates are also found in many household plastic products, like plastic food containers, parents can also stop putting plastics in the microwave oven and use glass alternatives whenever possible. Phthalate-free cosmetics and personal care products are also available.

Source: University of Washington

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