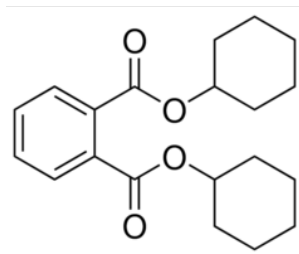


Dicyclohexyl phthalate (DCHP)

C₂₀H₂₆O₄



Summary of Health Effects

DCHP may cause changes in the reproductive system and development based on animal studies that showed lowered hormone levels, growth and body and organ weight.

How is DCHP used?

DCHP is a plasticizer used in consumer products. DCHP has been detected in some pharmaceuticals and consumer products, including soap, perfume, pajamas and modeling clay.¹⁻⁴

Toxicity: What are its health effects?

The European Union lists DCHP as a Category 1 endocrine disruptor⁵ and listed DCHP as a Substance of Very High Concern in 2018 due to endocrine disrupting properties and reproductive toxicity.⁶ DCHP is characterized as a reproductive toxicant by the U.S. Consumer Product Safety Commission (CPSC) based on the Chronic Hazard Advisory Panel determination that exposure to DCHP contributes to a cumulative antiandrogenic effect with other phthalates and should be permanently banned in children's toys and childcare items at levels greater than 0.1 percent.⁷ Therefore, in 2017 the CPSC permanently banned DCHP in children's toys and childcare items at levels above 0.1 percent.⁸

Prepubertal rats fed DCHP showed significantly increased blood serum testosterone levels and decreased testis weights.⁹ Reduced testicular testosterone levels occurred in male rats after *in utero* exposure.¹⁰ Offspring of rats fed DCHP for 15 days had decreased growth, significantly decreased fetal weight, hindered ossification, and increased incidence of skeletal variants. In all doses, male fetuses showed a significant dose-related reduction in anogenital distance.¹¹

A second study showed a significant reduction in anogenital distance in the male offspring of rats fed DCHP for 10 weeks. Male offspring also developed areolae, homogenization-resistant spermatids in the testes, decreased prostatic weight and diffuse or focal atrophy of testicular seminiferous tubules, an increased number of hyaline droplets in the renal proximal tubular epithelium and significantly increased liver and thyroid weights.¹²

Exposure: How can a person come in contact with it?

A person can come in contact with DCHP by breathing in contaminated air or dust, eating contaminated food or from contact with consumer products containing DCHP.

DCHP has been detected in indoor air and dust in Japan and Norway.^{13,14} Levels of monocyclohexyl phthalate (MCHP), a

metabolite of DCHP, was biomonitored by the State of California, and nationally in the U.S. and Canada and was

detected in American adults through by the 1999–2010 National Health and Examination Survey.¹⁵⁻¹⁹

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