

## Fact Sheet

**Phthalates** are a group of chemicals used to make plastics more flexible and harder to break. They are often called plasticizers. Some phthalates are used as solvents (dissolving agents) for other materials. They are used in hundreds of products, such as vinyl flooring, adhesives, detergents, lubricating oils, automotive plastics, plastic clothes (raincoats), and personal-care products (soaps, shampoos, hair sprays, and nail polishes). Phthalates are used widely in polyvinyl chloride plastics, which are used to make products such as plastic packaging film and sheets, garden hoses, inflatable toys, blood-storage containers, medical tubing, and some children's toys. People are exposed to phthalates by eating and drinking foods that have been in contact with containers and products containing phthalates. To a lesser extent exposure can occur from breathing in air that contains phthalate vapors or dust contaminated with phthalate particles. Young children may have a greater risk of being exposed to phthalate particles in dust than adults because of their hand-to-mouth behaviors. Once phthalates enter a person's body, they are converted into breakdown products (metabolites) that pass out quickly in urine.

### Possible Health Concerns from Exposures:

Human health effects from exposure to low levels of phthalates are unknown. Some types of phthalates have affected the reproductive system of laboratory animals. More research is needed to assess the human health effects of exposure to phthalates.

### Biomonitoring:

Finding a detectable amount of phthalate metabolites in urine does not imply that the levels of one or more will cause an adverse health effect. Biomonitoring studies on levels of phthalate metabolites provide physicians and public health officials with reference values so that they can determine whether people have been exposed to higher levels of these chemicals than are found in the general population. Biomonitoring data can also help scientists plan and conduct research on exposure and health effects.