



### Summary of Health Effects

Phenol can damage the gastrointestinal tract of humans if swallowed over time. It can cause heart, kidney and lung damage in animals and can affect how unborn babies develop.

### How is phenol used?

Phenol is used to make plastics and is used in household cleaning disinfection products.<sup>1</sup>

### Toxicity: What are its health effects?

The Environmental Protection Agency (EPA) considers phenol to be toxic to humans via oral exposure.<sup>2</sup> The EPA lists “progressive weight loss, diarrhea, vertigo, salivation, a dark coloration of the urine, and blood and liver effects” in humans after long-term exposure.<sup>2</sup>

Ingestion of products containing concentrated phenol can cause gastrointestinal damage and death.<sup>1</sup> Long-term exposure to phenol has

caused damage to the heart, kidneys, liver and lungs in animal studies.<sup>1</sup>

When pregnant rats were dosed with phenol during gestation, they experienced reduced weight gain throughout the pregnancy.<sup>1</sup> Studies exposing rats to phenol *in utero* documented reduced fetal weight and viability as the most common effect.<sup>3</sup>

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

A person can come in contact with phenol by breathing contaminated air, such as vehicle exhaust and wood or cigarette smoke, drinking contaminated water, eating contaminated food, or from skin contact with consumer products.<sup>1</sup>

The 2014 National Health and Nutrition Examination Survey (NHANES) report did not include data for phenol.

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## References

1. Agency for Toxic Substances and Disease Registry (ATSDR) (2008). *Toxicological profile for phenol*. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Services. Retrieved from [www.atsdr.cdc.gov/toxprofiles/tp.asp?id=148&tid=27](http://www.atsdr.cdc.gov/toxprofiles/tp.asp?id=148&tid=27)
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3. California Environmental Protection Agency, Office of Environmental Health Hazard Assessment (2003). *Evidence on the developmental and reproductive toxicity of phenol*. Retrieved from [oehha.ca.gov/media/downloads/cnrn/phenoldhid.pdf](http://oehha.ca.gov/media/downloads/cnrn/phenoldhid.pdf)