



Styrene

Styrene is a chemical used to make latex, synthetic rubber, and polystyrene resins. These resins are used to make plastic packaging, disposable cups and containers, insulation, and other products. Styrene is also produced naturally in some plants.

How People Are Exposed to Styrene

People may be exposed to styrene by breathing it in the air. Styrene is often detected in urban air. It can be found indoors as a result of operating photocopiers and laser printers, and from cigarette smoke. Small amounts may be eaten when styrene migrates into foods from packaging made of polystyrene.

How Styrene Affects People's Health

The human health effects from exposure to low environmental levels of styrene are unknown. Workers exposed to large amounts of styrene can develop irritation of the eyes and breathing passages. With long-term and large exposures, workers using styrene have had injury to their nervous systems.

Levels of Styrene in the U.S. Population

In the *Fourth National Report on Human Exposure to Environmental Chemicals (Fourth Report)*, CDC scientists measured styrene in the blood of 1,245 participants aged 20–59 years who took part in the National Health and Nutrition Examination Survey (NHANES) during 2003–2004. The prior survey period of 2001–2002 is also included in the *Fourth Report*. By measuring styrene in blood, scientists can estimate the amounts of styrene that have entered people's bodies.

CDC researchers found measurable levels of styrene in less than half of the participants.

Finding measurable amounts of styrene in the blood does not mean that the levels of styrene cause an adverse health effect. Biomonitoring studies on levels of styrene provide physicians and public health officials with reference values so that they can determine whether people have been exposed to higher levels of styrene than are found in the general population. Biomonitoring data can also help scientists plan and conduct research on exposure and health effects.

For More Information

- Agency for Toxic Substances and Disease Registry
Public Health Statement for Styrene
<http://www.atsdr.cdc.gov/toxprofiles/phs53.html>

- Occupational Safety and Health Administration
Safety and Health Topics: Styrene
<http://www.osha.gov/SLTC/styrene/index.html>
- National Institute for Occupational Safety and Health
NIOSH Safety and Health Information
<http://www.cdc.gov/niosh/topics/styrene/>

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