

## Science

# Indoor Air More Polluted

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Ward and colleagues from the Center for Environmental Health Sciences say toluene the most abundant toxicant in indoor air.

Toluene is clear and colorless, though it has a very distinctive odor in its raw form. It is most often found in automobile exhaust, fingernail polish, lacquers, paints, glues, and other products. Rubber, inks, and leather products may also contain toluene... all products commonly found in the home.

Toluene is on the Environmental Protection Agency (EPA) National Priority List for toxic chemicals. The production of toluene in the United States exceeds 1 million pounds annually.

The health effects of toluene range from dizziness, fatigue, confusion, weakness, nausea, and loss of appetite to drunken-like behavior and vision loss. In high or chronic exposures situations, the kidneys may be affected.

A developing fetus may be affected by toluene, which is a recognized developmental toxicant. It is also suspected as a cardiovascular, gastrointestinal, liver, immune, kidney, neurologi-

cal, skin, and respiratory toxicant.

Toluene exposure can be detected in blood and urine up to 12 hours after exposure.

Risk of exposure can be reduced by tightly sealing toluene containing products and storing them out of the main living area, though this creates a challenge when it comes to rubber products and inks, such as that found in books and magazines.

Opening windows increases air exchange. A window fan can be placed in one window blowing out and another can be placed in an opposite window blowing in to ensure constant air exchange.

The use of a whole house air filtration system attached to the HVAC can help during cold months or when it's not practical to open windows. If HVAC is not available, several room air purifiers may be useful.

It is important to consider that most people spend half their day at home and the other half at work/school. These places should be as ventilated and clean as possible

**Reference**

Ward TJ, Underberg H, Jones D, Hamilton RF Jr, Adams E. Indoor/ambient residential air toxics results in rural western Montana. *Environ Monit Assess.* 2009 Jun;153(1-4):119-26. Epub 2008 Jun 12.

