



Thallium

Thallium is a metal found in small amounts in soil and some minerals. Small amounts of thallium are used to make certain medical agents and electronics. In the past, thallium was used in rodent killers and hair removal products.

How People Are Exposed to Thallium

People may be exposed to thallium from coal-burning and smelting processes that produce fine particles of the metal. The tiny particles can be inhaled from the air or consumed in food or drink.

How Thallium Affects People's Health

The human health effects from exposure to low environmental levels of thallium are unknown. Hair loss and nerve damage have occurred after a person has consumed large amounts of thallium. Other effects of consuming unusually large amounts of thallium include nausea and vomiting followed by the failure of multiple body organs, brain injury, and death.

Levels of Thallium in the U.S. Population

In the *Fourth National Report on Human Exposure to Environmental Chemicals (Fourth Report)*, CDC scientists measured thallium in the urine of 2,558 participants aged six years and older who took part in the National Health and Nutrition Examination Survey (NHANES) during 2003–2004. Prior survey periods of 1999–2000 and 2001–2002 are also included in the *Fourth Report*. By measuring thallium in urine, scientists can estimate the amount of thallium that has entered people's bodies.

- CDC scientists found measurable levels of thallium in the urine in most participants, indicating widespread exposure. The 2003–2004 levels were similar to those in previous survey periods of the *Report*.

Finding measurable amounts of thallium in urine does not mean that the levels of thallium cause an adverse health effect. Biomonitoring studies on levels of thallium provide physicians and public health officials with reference values so that they can determine whether people have been exposed to higher levels of thallium 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 Thallium
<http://www.atsdr.cdc.gov/toxprofiles/phs54.html>
- Environmental Protection Agency
Consumer Factsheet on: Thallium
http://www.epa.gov/OGWDW/contaminants/dw_contamfs/thallium.html

November 2009

The Centers for Disease Control and Prevention (CDC) protects people's health and safety by preventing and controlling diseases and injuries; enhances health decisions by providing credible information on critical health issues; and promotes healthy living through strong partnerships with local, national, and international organizations.