



Chlordane and Heptachlor

Chlordane and heptachlor are pesticides that were used in agriculture in the United States from the 1950's until the 1980's. Chlordane was used in homes and for termite control. Heptachlor was used as a soil and seed treatment and for termite control. Since 1992, the use of heptachlor has been limited to treatment of fire ants near utility equipment.

Both pesticides can remain in treated soils, in agricultural runoff water, and near factories where they were manufactured. Chlordane and heptachlor can be found in the air and dust of buildings long after treatment for termites or insects was performed.

How People Are Exposed to Chlordane and Heptachlor

People are usually exposed to these chemicals by eating foods high in fat, such as meat, fish, and dairy products. Pregnant women may pass these chemicals to the fetus, and after birth, chlordane and heptachlor may be passed to infants through breast milk. Chlordane and heptachlor are converted in the body into chemicals called metabolites. These chemicals leave the body slowly over a period of months to years.

How Chlordane and Heptachlor Affect People's Health

The human health effects from low environmental exposures to these chemicals are unknown. Short-term large exposures to either chlordane or heptachlor can cause seizures and injure the liver. Both chlordane and heptachlor are considered possible cancer-causing chemicals in humans.

Levels of Chlordane and Heptachlor Metabolites in the U.S. Population

In the *Fourth National Report on Human Exposure to Environmental Chemicals (Fourth Report)*, CDC scientists measured the metabolites of chlordane and heptachlor in the blood serum (the clear part of blood) of 1,955 participants aged 12 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 the metabolites of chlordane and heptachlor in serum, scientists can estimate the amounts of these chemicals that have entered people's bodies.

- The *Fourth Report* shows that the U.S. population continues to have measureable amounts of chlordane and heptachlor metabolites in their bodies.

Finding measurable amounts of the metabolites of chlordane and heptachlor in serum does not mean that the levels cause an adverse health effect. Biomonitoring studies on levels of the metabolites of chlordane and heptachlor can provide physicians and public health officials with

reference ranges so that they can determine whether people have been exposed to higher levels of heptachlor and chlordane 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 Chlordane
<http://www.atsdr.cdc.gov/toxprofiles/phs31.html>
- Agency for Toxic Substances and Disease Registry
Public Health Statement for Heptachlor/Heptachlor Epoxide
<http://www.atsdr.cdc.gov/toxprofiles/phs12.html>
- Environmental Protection Agency
Technology Transfer Network Air Toxics Web Site: Chlordane
<http://www.epa.gov/ttn/atw/hlthef/chlordan.html>

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