

Mirex and Chlordecone - ToxFAQs™

What are mirex and chlordecone?

Mirex and chlordecone are two separate but similar chemicals that are manufactured insecticides (insect killing) that are not found naturally in the environment.

Mirex is a white crystalline solid, and chlordecone is a tan to white crystalline solid. Both chemicals have no odor. Mirex and chlordecone have not been manufactured or used in the United States since the late 1970s.

Mirex was used to control fire ants, and as a flame retardant in plastics, rubber, paint, paper, and electrical goods from 1959 to 1972. Chlordecone (also known as Kepone) was used as an insecticide on tobacco, ornamental shrubs, bananas, and citrus trees, and in ant and roach traps. Mirex was sold as a flame retardant under the trade name Dechlorane.



How can I be exposed to mirex and chlordecone?

Most people are not likely to be exposed to mirex or chlordecone today since their use has been banned in the United States since the late 1970s. The most likely way you could be exposed to very small amounts of mirex and chlordecone is from contaminated food grown or caught near hazardous waste sites. The Food and Drug Administration (FDA) has not found mirex or chlordecone in U.S.-wide studies of food conducted after 1992. You are unlikely to be exposed to these chemicals from drinking water. If you live near a hazardous waste site you might be exposed to mirex and chlordecone from contaminated dirt or if you eat wildlife (fish and game) living near hazardous waste sites.

How can mirex and chlordecone affect my health?

Workers in plants that made these chemicals and may have been exposed to high levels of chlordecone over a long period of time (several years) sometimes had harmful effects on the nervous system, skin, liver, and male reproductive system. The workers were exposed to much higher levels than found in the environment.

Studies in animals with chlordecone have shown similar effects as those seen in workers. Kidney effects, effects on very young animals, and problems with reproduction in females have also been observed in animals.

Animal studies have shown that eating or swallowing high levels of mirex can harm the liver, kidneys, eyes, thyroid, nervous system, and reproductive systems.

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Can mirex and chlordecone cause cancer?

Liver cancer has been seen in animals exposed to high doses of mirex or chlordecone.

The Department of Health and Human Services considers mirex and chlordecone to be reasonably anticipated to be human carcinogens (causing cancer). EPA considers that chlordecone is likely to be carcinogenic to humans.

Can I get a medical test to check for mirex and chlordecone?

Mirex and chlordecone can be measured in blood and several other body fluids. Mirex and chlordecone can be measured in your blood for several years after you have been exposed. These tests may show low, moderate, or high exposure to these compounds, but they cannot tell the exact amount you were exposed to or predict whether you will have health problems. **Doctor's offices do not routinely offer these tests. If you think you have been exposed to either of these chemicals, call your doctor, nurse, or poison control center.**

How can I protect myself and my family from mirex and chlordecone?

Most people don't need to take any special steps to avoid mirex and chlordecone in their daily lives.

Children should avoid playing in the dirt near hazardous waste sites to avoid coming in contact with mirex and chlordecone.

Follow health advisories that tell you about consumption of fish and wildlife caught in contaminated areas.

For more information:

Call **CDC-INFO** at 1-800-232-4636, or submit your question online at

<https://wwwn.cdc.gov/dcs/ContactUs/Form>

Go to ATSDR's Toxicological Profile for Mirex and Chlordecone:

<https://www.atsdr.cdc.gov/ToxProfiles/tp.asp?id=1190&tid=276>

Go to ATSDR's Toxic Substances Portal: <http://www.atsdr.cdc.gov/substances/index.asp>

Find & contact your ATSDR Regional Representative at http://www.atsdr.cdc.gov/DRO/dro_org.html

