



525-535 West Jefferson Street • Springfield, Illinois 62761-0001 • www.dph.illinois.gov

FACTS ABOUT ILLINOIS' CHLORDANE ADVISORY

This fact sheet answers questions about the public health risks associated with exposure to chlordane in fish. It also explains the health risks of chlordane and how you can reduce exposure to it.

What is chlordane?

Chlordane is a man-made pesticide that was used in the United States from 1948 to 1988. It is a thick liquid that has a mild, irritating smell. In 1983, the U.S. Environmental Protection Agency (USEPA) banned all uses of chlordane except to kill termites because of concern about damage to the environment and harm to human health. In 1988, all uses of chlordane except for fire ant control in power transformers were banned.

How does chlordane get into bodies of water in Illinois?

Chlordane entered the environment when it was used as a pesticide on crops, lawns, and gardens, and to control termites. It enters bodies of water after improper waste disposal or from run-off from treated areas. Chlordane binds strongly to soil and sediments and can stay in the soil for more than 20 years. It breaks down very slowly. Chlordane doesn't dissolve easily in water. It builds up in the tissues of fish, birds, and mammals.

How do fish become contaminated with chlordane?

Chlordane doesn't dissolve easily in water. It builds up in the fatty tissues of fish, birds, and mammals living near contaminated sediment and through eating contaminated food such as smaller fish.

Why does the state issue chlordane advisories?

Advisories are issued to protect the most sensitive populations from adverse health effects. Studies have shown that exposure to chlordane can cause adverse health effects in fetuses, nursing babies, and children younger than 15 years of age. The advisories may be overprotective for women beyond childbearing age and adult men.

What are the potential health effects for people who eat fish contaminated with chlordane?

Laboratory tests in animals have shown that long-term exposure to high doses of chlordane causes adverse health effects including liver damage, reproductive damage, and developmental damage. Chlordane affects the nervous system, the digestive system, and the liver in people and animals. It is not known whether chlordane affects the ability of people to have children or whether it causes birth defects. Animals exposed before birth or while nursing developed behavioral effects later. The USEPA classifies chlordane as a probable human carcinogen

(cancer-causing chemical). This means that chlordane has been shown to cause cancer in laboratory animals, but there is not enough data to determine if chlordane causes cancer in humans.

Is chlordane stored in the human body for long periods of time?

Yes. Chlordane is easily absorbed by the body and is stored in fatty tissue. It is eliminated slowly from the body; complete elimination can take many years. Since chlordane is not eliminated well, it can build up in the kidneys and liver over time.

How can I reduce or prevent exposure to chlordane?

Exposure can be reduced by following IDPH's fish consumption advisories. In addition, people can reduce their intake of chlordane by removing the skin and fatty areas from fish fillets. Do not fry fish. Instead, barbecue, broil, or bake fish on an elevated rack that allows fat to drip away. You also can poach fish if you discard the broth.

What about the fish I buy in the grocery store? Should I be concerned that they may be contaminated with chlordane?

The U.S. Food and Drug Administration (FDA) regulates the fish sold in grocery stores. FDA has a testing program to sample some of the fish that is sold, but not all of the fish are tested. You should follow the advice for preparing and cooking fish to reduce your exposure to chlordane.

Should I be concerned about children swimming in bodies of water in Illinois because of chlordane contamination?

Chlordane stays in the environment for a long time, but it is unlikely to contaminate surface water bodies because it is insoluble in water and quickly binds to soil particles. Therefore, contact with, or accidental swallowing of the water will result in minimal exposure to chlordane.

What is being done to reduce the amount of chlordane entering the environment from man-made sources?

Chlordane is no longer used in the U.S. Other, less toxic, pesticides are being used to kill termites, agricultural pests, and home garden pests. As time passes, less chlordane will be present in the environment.

Where can I get more information?

Illinois Department of Public Health
Division of Environmental Health
525 West Jefferson Street
Springfield, Illinois 62761
(217) 782-5830

TTY (hearing impaired use only) 800-547-0466

www.dph.illinois.gov or www.idph.state.il.us/envhealth/fishadvisory/index.htm