

Consumer Factsheet on: ENDRIN

[List of Contaminants](#)

As part of the Drinking Water and Health pages, this fact sheet is part of a larger publication:
National Primary Drinking Water Regulations

This is a factsheet about a chemical that may be found in some public or private drinking water supplies. It may cause health problems if found in amounts greater than the health standard set by the United States Environmental Protection Agency (EPA).

What is Endrin and how is it used?

Endrin is an organic solid of odorless white crystals. Endrin is an insecticide which has been used mainly on field crops such as cotton, maize, sugarcane, rice, cereals, ornamentals, and other crops. It has also been used for grasshoppers in non-cropland and to control voles and mice in orchards. Once widely used in the US, most uses were canceled in 1980.

The list of trade names given below may help you find out whether you are using this chemical at home or work.

Trade Names and Synonyms:

Nendrin
EN 57
Endrex
Endricol
Hexadrin
Mendrin
Oktanex
Compound 269

Why is Endrin being Regulated?

In 1974, Congress passed the Safe Drinking Water Act. This law requires EPA to determine safe levels of chemicals in drinking water which do or may cause health problems. These non-enforceable levels, based solely on possible health risks and exposure, are called Maximum Contaminant Level Goals.

The MCLG for endrin has been set at 2 parts per billion (ppb) because EPA believes this level of protection would not cause any of the potential health problems described below.

Based on this MCLG, EPA has set an enforceable standard called a Maximum Contaminant Level (MCL). MCLs are set as close to the MCLGs as possible, considering the ability of public water systems to detect and remove contaminants using suitable treatment technologies.

The MCL has been set at 2 ppb because EPA believes, given present technology and resources, this is the lowest level to which water systems can reasonably be required to remove this contaminant should it occur in drinking water.

These drinking water standards and the regulations for ensuring these standards are met, are called National Primary Drinking Water Regulations. All public water supplies must abide by these regulations.

What are the Health Effects?

Short-term: EPA has found endrin to potentially cause the following health effects when people are exposed to it at levels above the MCL for relatively short periods of time: tremors, labored breathing, mental confusion, convulsions.

Long-term: Endrin has the potential to cause the following effects from a lifetime exposure at levels above the MCL: convulsions and damage to liver tissue.

How much Endrin is produced and released to the environment?

Production in 1980 was reported to be 100,000 lbs. Endrin's former source in the environment is from use as an insect, bird and rat-killer. It has been used on agricultural crops, cotton seeds, control of birds on buildings and mice in orchards. Its major use has been on cotton crops. The EPA presently considers the pesticide canceled.

What happens to Endrin when it is released to the environment?

Endrin is very persistent, but it is known to be broken down by sunlight. Endrin released to soils will persist for up to 14 years or more. Its strong adsorption to soil makes leaching into groundwater unlikely. However, the detection of endrin in certain groundwater samples suggest that leaching may be possible in some soils. Endrin released to water systems will also persist, mainly in sediments.

It has a very high potential to accumulate in fish and shellfish.

How will Endrin be Detected in and Removed from My Drinking Water?

The regulation for endrin became effective in 1992. Between 1993 and 1995, EPA required your water supplier to collect water samples every 3 months for one year and analyze them to find out if endrin is present above 0.01 ppb. If it is present above this level, the system must continue to monitor this contaminant.

If contaminant levels are found to be consistently above the MCL, your water supplier must take steps to reduce the amount of endrin so that it is consistently below that level. The following treatment methods have been approved by EPA for removing endrin: Granular activated charcoal.

How will I know if Endrin is in my drinking water?

If the levels of endrin exceed the MCL, 2 ppb, the system must notify the public via newspapers, radio, TV and other means. Additional actions, such as providing alternative drinking water supplies, may be required to prevent serious risks to public health.

Drinking Water Standards:

Mclg: 2 ppb

Mcl: 2 ppb

Learn more about your drinking water!

EPA strongly encourages people to learn more about their drinking water, and to support local efforts to protect and upgrade the supply of safe drinking water. Your water bill or telephone book's government listings are a good starting point.

Your local water supplier can give you a list of the chemicals they test for in your water, as well as how your water is treated.

Your state Department of Health/Environment is also a valuable source of information.

For help in locating these agencies or for information on drinking water in general, call: EPA's Safe Drinking Water Hotline: (800) 426-4791.

For additional information on the uses and releases of chemicals in your state, contact the: Community Right-to-Know Hotline: (800) 424-9346