

# Alachlor and drinking water

## What is alachlor and where does it come from?

Alachlor is an herbicide used on crops such as corn, sorghum and soybeans to control annual grasses and broadleaf weeds. It enters drinking water sources through runoff from agricultural plots where it has been applied.<sup>1</sup>

## How can alachlor affect my health?

Alachlor is a health hazard. Children and the elderly may be particularly susceptible to the health effects of alachlor. Consuming water with high levels of alachlor over a long time can cause health effects such as:

- Eye, liver, kidney, spleen problems
- Anemia
- Increased risk of cancer<sup>1</sup>

## When does alachlor in drinking water become a health concern?

Alachlor is measured in parts per billion (ppb). The federal government has established the safe drinking water standard (also called maximum contaminant level) for alachlor as 2 ppb.

## What can I still use my water for if it is contaminated with alachlor?

Water for drinking, beverage-making or food preparation can be obtained from a known safe source and used on a temporary basis. Other uses of water pose much less hazard, but are not entirely safe if alachlor levels are significantly above the drinking water limit.

## Can I wash my food with alachlor-contaminated water?

If alachlor levels in your water are above 2 ppb, you should use bottled water or water from a safe source to wash, prepare and cook your food.

## Can I irrigate or water my garden with alachlor-contaminated water?

Alachlor breaks down quickly in soil and plants, so water above 2 ppb can be used for irrigating or watering.<sup>2</sup> However, alachlor is an herbicide. Using alachlor-contaminated water to irrigate may slow or stop plant growth.

## What about bathing and showering?

Alachlor does not easily enter the body through the skin, however, repeated exposure can result in sensitive skin.<sup>2</sup> Bathing, swimming and showering with alachlor-contaminated water should be limited and swallowing the water should be avoided. Supervise small children when they are bathing and brushing teeth to ensure they do not swallow the water.

## What about washing dishes, utensils and food preparation areas?

Only a very small amount of water clings to smooth surfaces, such as dishes. Water contaminated with alachlor can be safely used to wash and sanitize dishes, tables and eating utensils.

## What about general cleaning and laundry?

Very little water remains on washed surfaces and in laundered fabrics. Water contaminated with alachlor can be safely used for general cleaning and washing of clothing, bedding and linens.

## What about my pets?

Animals should not drink water with alachlor levels above 2 ppb.

# Learning about alachlor levels in your drinking water

## For people on public water systems:

Public drinking water providers monitor for alachlor to ensure levels remain below the drinking water standard of 2 ppb. Public water system monitoring results are available on the Oregon Drinking Water Services [Data Online](#) website. If your water comes from a community water system (you pay a water bill) your drinking water provider must provide a [Consumer Confidence Report](#) to its customers every year. This report contains the most recent alachlor test results if detected. Contact your drinking water provider to request a copy of the most recent consumer confidence report.

## For private well owners:

If your drinking water comes from your own well, you will have to find an accredited laboratory that does water testing for private property owners. These labs can provide information and instructions for getting your well water tested. For a list of accredited laboratories for drinking water in Oregon refer to the following [link](#).

# Removing alachlor from drinking water

## Don't boil the water!

There is no evidence that boiling removes alachlor.

## For operators of public drinking water systems:

Alachlor can be reduced below 2 ppb in drinking water using granular activated carbon filtration. Work with a professional engineer to determine the best treatment for your system. Not all kinds of treatment are effective, and no single treatment method can remove all contaminants from water. Alternatives to treatment include developing a different water source or connecting to another safe water source in the area. Alachlor contamination can be prevented by avoiding source water that contains agricultural runoff. Treatment has limitations and disadvantages. Before deciding on treatment equipment, contact [Oregon Drinking Water Services](#) for regulatory requirements for public water systems.

## Private well treatment options:

Treatment options are available to remove alachlor from well water. The most commonly used is called granular activated carbon filtration. Options include central treatment (at the well or entry to home) or a point-of-use device (kitchen sink filter).

Check to be sure any treatment system used is certified by a recognized, third-party testing organization that meets strict testing procedures established by the [American National Standards Institute \(ANSI\)](#) and the [National Sanitation Foundation \(NSF\)](#) International. Proof of certification should be available through your manufacturer. Alternatively, NSF certification for various treatment units may be verified through NSF, or the [Water Quality Association](#).

Treatment equipment must be carefully maintained to work properly and might not be effective if alachlor levels are very high. It is recommended that treated water be tested at least once a year. Untreated water should be tested at least every three years.

## For more information

- Private well owners that have health related questions and concerns about alachlor in their water can call 971-673-0440 or email [general.toxicology@state.or.us](mailto:general.toxicology@state.or.us).
- For questions about treatment options for your domestic well, contact the drinking water specialist at your local or county health department. Here is a list of [local and county health departments](#) in Oregon with their contact information.
- [U.S. Environmental Protection Agency](#) – Basic information about alachlor

## References

1. USEPA. Basic Information about Alachlor in Drinking Water, <http://water.epa.gov/drink/contaminants/basicinformation/alachlor.cfm> (2013).
2. USEPA. National Primary Drinking Water Regulations.



This document can be provided upon request in an alternate format for individuals with disabilities or in a language other than English for people with limited English skills. To request this publication in another format or language, contact Drinking Water Services (DWS) at 971-673-0405 or 711 for TTY.