

## What Products Do I Use That Contain Mercury?

Mercury has many useful properties. Because it is a liquid at room temperature, combines easily with other metals, and expands and contracts evenly with temperature changes, mercury has been used in many household, medical, and industrial products. A few examples are:

- ✓ Fluorescent and mercury vapor lamps
- ✓ Thermostats
- ✓ Thermometers
- ✓ Automotive headlamps - blue tint
- ✓ Gas appliances with pilot lights
- ✓ Switches - silent light switches, tilt switches (automotive trunk and hood lights, chest freezer lights, space heaters, sump and bilge pumps and clothes irons)
- ✓ Barometers, manometers, blood pressure and vacuum gauges



## What Are The Human Health Hazards Caused By Mercury?

Although mercury can be taken in through the lungs, mouth or skin, the most likely exposure is by eating mercury contaminated fish. It is the most toxic form, methylmercury, that collects in the flesh of fish.

Mercury affects the human brain, spinal cord, kidneys and liver. It affects the ability to feel, see, taste and move. There can be tingling sensations in the fingers and toes, a numb sensation around the mouth, and tunnel vision. Long-term exposure to mercury can result in symptoms that get progressively worse and lead to personality changes, stupor and coma.

Women who are pregnant should not eat fish with high levels of mercury. Mercury affects fetal development, preventing the brain and nervous system from developing normally. Affected children show lowered intelligence, impaired hearing and poor coordination. Their verbal and motor skills may be delayed.

## How Does Mercury Affect Wildlife?

Eagles, osprey, loons, turtles, mink, otters, and other fish-eating creatures are at risk from eating mercury-contaminated fish. Mercury in their diets can cause early death, weight loss, and problems with their ability to reproduce. Unfortunately, wildlife cannot read fish advisories or change their eating habits in order to avoid mercury contamination.



## How Does Mercury Get Into Fish?

Once in a lake or river, mercury is converted to methylmercury by bacteria and other processes. Fish absorb methylmercury from their food and from water as it passes over their gills. Mercury is tightly bound to proteins in all fish tissue, including muscle. There is no method of cooking or cleaning fish that will reduce the amount of mercury in a meal.

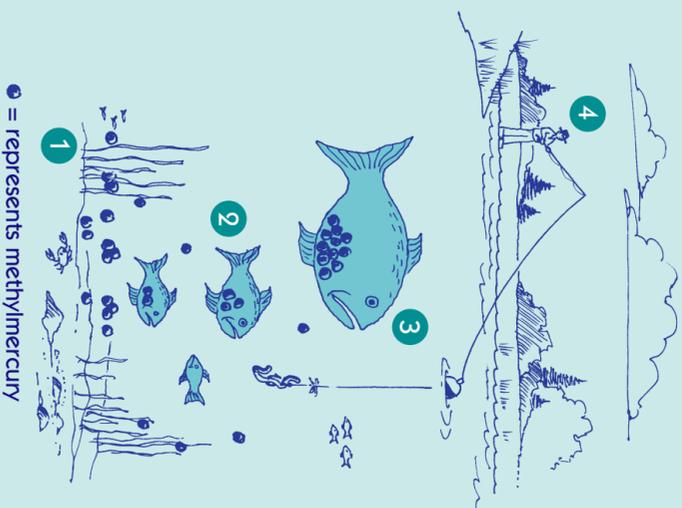
Methylmercury accumulates as you move up the food chain:

1. Methylmercury in the water and sediment is taken up by tiny animals and plants known as plankton.
2. Small fishes eat large quantities of plankton over time.
3. Large predatory fish consume many smaller fish, accumulating methylmercury in their tissues. The older and larger the fish, the greater the potential for high mercury levels in their bodies.
4. Fish are caught and eaten by humans and animals, causing methylmercury to accumulate in their tissues.

The State of Vermont Fish Contaminant Monitoring Program has been monitoring the levels of mercury in fish tissue since 1987. Measurable concentrations have been observed in 95% of the samples collected from lakes and rivers across the state. The Vermont Department of Health has issued a fish consumption advisory which recommends consumption levels based on fish species and special advisories for certain water bodies. The advisory is also more protective of women of childbearing age and children under age 6.

## Remember...

- ✓ Limit consumption of certain types of fish.
- ✓ Stay informed, know where mercury is found.
- ✓ Avoid buying products containing mercury.
- ✓ Dispose of mercury-containing products properly.



## VT DEPARTMENT OF HEALTH FISH CONSUMPTION ADVISORY

[www.healthyvermonters.info](http://www.healthyvermonters.info)  
or call  
800-439-8550

## What Can I Do To Prevent Mercury Pollution?

Mercury is being phased out of many retail products sold in Vermont. As a consumer, educate yourself; do not purchase mercury-containing items if a substitute is available. Look for a label to determine if mercury is in the product. If an item containing mercury is purchased, dispose of it properly when it becomes a waste. Below are some ways that you can reduce mercury pollution.

### Landfill Bans & Labeled Products

Look for labels on products and their packages indicating mercury content. Vermont law requires manufacturers to label mercury-added products. Mercury-added products should not be discarded with regular trash or solid waste. It is against the law to dispose of labeled, mercury-added products in the trash.

- ✓ Bring the following items from your home to a household hazardous waste collection facility or event so they can be recycled or managed properly:
  - ✓ Older button cell, alkaline (pre 1996) and camera batteries
  - ✓ Old oil-based paints (mildew resistant)
  - ✓ Old fungicides for seeds and turf
  - ✓ Thermostats and switches
  - ✓ Fluorescent and HID lamps
  - ✓ Thermometers - fever and larger types
  - ✓ Liquid mercury (quicksilver)
  - ✓ Gas appliances

Household Products That May Contain Mercury	Low Mercury or Mercury-Free Alternatives
Thermometers	Silver bulb Red bulb (alcohol); Digital
Thermostats	All non-electronic models Electronic models
Gas Appliances	Models with pilot lights Electronic ignition models
Fluorescent lights	Standard fluorescents Compact and low-mercury fluorescents
Fillings for your teeth	Dental amalgam Ask your dentist about mercury-free alternatives.
Mercury Switches	Silent switches, clothes irons, chest freezers, and automotive lights Find products without mercury switches

## Contact Your Solid Waste District for More Information About the Proper Disposal of Mercury-Containing Products in Your Area...

ADDISON COUNTY SOLID WASTE DISTRICT (802) 388-9333	BENNINGTON REGIONAL PLANNING COMMISSION (802) 375-9964	CENTRAL VERMONT SOLID WASTE DISTRICT (802) 929-9383	CHITTENDEN SOLID WASTE DISTRICT (802) 872-8111
GREATER UPPER VALLEY SOLID WASTE DISTRICT (802) 296-3688	LAMOILLE REGIONAL SOLID WASTE DISTRICT (802) 888-7317	LONDONDERY GROUP (802) 824-6304	MAD RIVER SOLID WASTE ALLIANCE (802) 244-7373
NE KINGDOM WASTE MANAGEMENT DISTRICT 1-800-734-4602 OR (802) 626-3532	NORTHWEST VERMONT SOLID WASTE DISTRICT (802) 524-5986	RUTLAND COUNTY SOLID WASTE DISTRICT (802) 775-7909 OR 802-773-4083	RUTLAND NON-DISTRICT TOWNS, JMCS/WAC (518) 854-9702
SOUTHERN WINDSOR/ WINDHAM COUNTY SWAD (603) 543-1201	WHITE RIVER ALLIANCE (802) 234-9340	WINDHAM SOLID WASTE DISTRICT (802) 957-0272	Not sure of your town's membership in a district, call us at 1-800-974-9559.

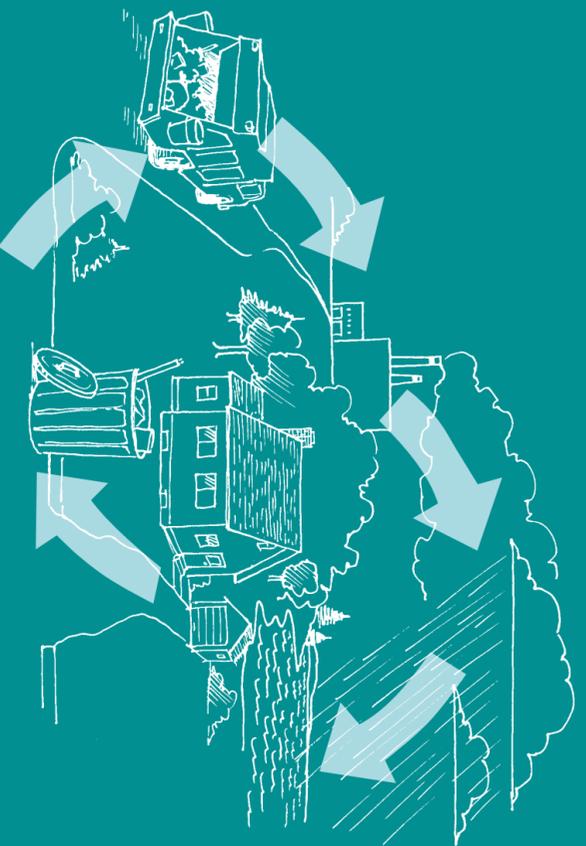
# What is Mercury?

Mercury, also known as quicksilver, is an element that does not break down. It occurs naturally and is found in very small amounts in bodies of water, rocks, and soil. It becomes airborne when rocks break down, volcanoes erupt, and soil decomposes. It then circulates and is redistributed throughout the environment.

Large amounts of mercury also become airborne when coal, oil, wood or natural gas are burned as fuel or when mercury-containing products are thrown in the trash or incinerated. Once in the air, mercury can fall to the ground with rain and snow, landing on soil or in bodies of water, causing contamination.

When lakes and rivers are contaminated, mercury accumulates in the tissue of fish and other organisms and may ultimately reach the dinner table.

Although mercury is a very useful element with many unique properties and applications, it poses a very real health risk. We can minimize this risk by reducing our use of mercury-containing products and properly disposing of mercury-containing waste.



www.mercvt.org  
656-476-0081 or 802-242-1545

Have Questions?

Mercury Education & Reduction Campaign  
Department of Environmental Conservation  
Environmental Assistance Division  
103 South Main Street  
Waterbury, VT 05671-0411



# MERCURY

in the environment...

## A Little Bit



## Is A Lot!

# Mercury



In his 1865 book, *Alice's Adventures in Wonderland*, Lewis Carroll introduced a character he called the Mad Hatter. Although Carroll's Mad Hatter was fictional, the strange and unpredictable behavior he displayed was not uncommon among people employed in the felt hat industry in the 1800s. Mercury nitrate was used in the felting process and constant exposure to the chemical eventually caused the hatters to develop mercury poisoning. The connection between mercury poisoning and the hatter's behavior was not understood at the time, but the term "mad as a hatter" was in common usage. Mercury is no longer used in the felting process and is being phased out of many other industrial uses as well. However, a significant amount of mercury contamination comes from items discarded as solid waste. This brochure has been developed to help you identify household items that contain mercury to ensure that they are disposed of properly. Responsible handling of mercury-containing wastes will help keep mercury out of the environment. Get mad about mercury contamination! By reducing your use of mercury-containing items, recycling what you can, and disposing of ALL mercury waste properly, you can help keep mercury out of the water and the atmosphere, and keep the Mad Hatter in the story books.



The Mercury Education & Reduction Campaign was developed by the Vermont Department of Environmental Conservation. The goal of the M.E.R.C. program is to increase awareness of mercury pollution and to reduce mercury pollution at its source.

