

HOW **MERCURY** IN YOUR HOME CAN AFFECT YOU



**AND WHAT YOU
CAN DO ABOUT IT**



You can be exposed to
mercury in your home by...

- 1) Eating fish that contain mercury
- 2) Breaking mercury-containing products, such as thermometers or energy-saving compact fluorescent light bulbs (CFLs)



You can also increase your risk
of mercury exposure by...

improperly disposing of mercury-containing products as part of your household waste.

Mercury is released into the environment when these products are broken or crushed at the landfill or burned at the incinerator. The mercury then travels through the atmosphere to lakes, rivers and streams, where it accumulates in the bodies of small organisms and moves up through the food chain. The mercury is then passed back to us when we eat contaminated fish.

Why is Mercury a concern for my household?

Mercury is highly toxic, and interferes with the development of both the brain and the nervous system. Impacts on individuals will vary depending on their age group:

1) *Even at low levels of mercury, exposure to developing fetuses in pregnant women, babies and young children can cause:*

- *Reduced attention span*
- *Reduced fine-motor function*
- *Reduced language skills*
- *Reduced visual-spatial abilities (such as drawing)*
- *Reduced verbal memory*

2) *Exposure to adults can cause:*

- *Numbness and tingling*
- *Vision abnormality*
- *Memory problems*



It takes only 1 gram or 1000 milligrams of mercury (a little more than is found in a single thermometer) to contaminate an eight-hectare lake to the point where the fish are unsafe to eat for a year.

Unfortunately, even relatively low concentrations of mercury in the environment can result in dangerous concentrations in organisms.

What can I do about
mercury in my home?

Read the inside panels to learn more about what you can do in your kitchen, bathroom, bedroom, hallway and living room to avoid mercury exposure for you and your family.

This booklet describes mercury-free alternatives, proper disposal choices and how to handle mercury-containing products when they break.



What can I do about mercury in my kitchen?

Purchase a variety of fish.

Carefully choose your fish diet to avoid species with high concentrations of mercury especially if you are pregnant, breastfeeding, anticipating pregnancy or when feeding your children.

If you are a frequent fish eater choose fish that are considered very low or low in mercury.



Why?

Mercury contamination levels vary among fish species.

Canned tuna is a staple in many diets. When buying canned tuna, you should look for the “light” canned tuna. It has lower mercury levels than “white” albacore tuna.

How?

- *When eating fish caught in lakes and streams, consult local fish advisories.
www.ec.gc.ca/MERCURY/EN/fc.cfm*
- *Consult the chart on the following page for guidance on how to choose fish for you and your family.*

Fish is an excellent source of omega-3 fats that are an important part of any diet. These fats help prevent heart disease in adults and help in the development of the brain, eyes and nervous system in fetuses and young children.

Because of this, fish is an important food for pregnant women and breastfeeding mothers.

Eat a Variety of Fish

Safe to Eat Every Day (Very Low Mercury)

- 1 serving* a day for children
- 2 servings* a day for women who are pregnant, breastfeeding or who could become pregnant, including teenage girls
- Unlimited servings* for men, teenage boys and women 50+

Basa	Pollock
Capelin	♥ Salmon, Canned
Kamaboko (Fish Cake, Processed White Fish)	♥ Salmon (Chum, Coho, Pink, Wild Pacific)
Milkfish	Sea Urchin
Octopus	Silver Pomfret
Oysters	Tilapia

Safe to Eat Often (Low Mercury)

- 2 servings* a week for children
- 4 servings* a week for women who are pregnant, breastfeeding or who could become pregnant, including teenage girls
- Unlimited servings* for men, teenage boys and women 50+

♥ Anchovies (Fresh/Frozen)	♥ Sardines
♥ Arctic Char	Sea Cucumber
♥ Atlantic Mackerel	Shiner
Clams	Smelt (Atlantic, Lake)
Grass Carp	Sole (Dover, Petrale)
♥ Herring	Squid
Mussels (Blue)	♥ Trout, Rainbow
Porgie	Tuna, Canned Light (Skipjack, Tongol, Yellowfin)
♥ Salmon (Chinook, Sockeye, Steelhead)	

! Eco Unfriendly

Atlantic Cod	♥ Salmon (Atlantic, Farmed)
Flounder	Scallops
Haddock	Shrimp/Prawns

Safe to Eat Sometimes (Medium Mercury)

- 1-2 servings* a month for children
- 2-4 servings* a month for women who are pregnant, breastfeeding or who could become pregnant, including teenage girls
- 4 servings* a week for men, teenage boys and women 50+

Black Pomfret

Catfish

Halibut

Jackfish



Kingfish (King Mackerel,
Spanish Mackerel)

Lake Whitefish

Mahi Mahi (Dolphin Fish)

Perch

Redfish

Sablefish (Black Cod)

Skate

Snapper (Various Species)



Trout (Lake, Various Species)

Tuna steak (Skipjack,
Southern Yellowfin)

Tuna, Canned White (Albacore)

Whiting



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Atlantic Halibut

Bluefin Tuna Steak

Grouper

Red Snapper

Avoid or Eat Rarely (High Mercury)

- Less than 1 serving* a month for children
- Less than 1 serving* a month for women who are pregnant, breastfeeding or who could become pregnant, including teenage girls
- No more than 1 serving* a week for men, teenage boys and women 50+

Barracuda



Buffalo



Escolar (Snake Mackerel)

Marlin



Pickerel (Pike, Sauger,
Walleye, Yellow Pickerel,
Zander)

Tilefish

Tuna steak (Various Species, Bigeye)



Eco Unfriendly

Orange Roughy

Sea Bass

Shark

Swordfish

SYMBOLS

* A serving size may not be the same size as the portion you eat in a meal. One Canada's Food Guide Serving is 75 grams or 2.5 ounces or about half a cup.

♥ High omega-3 fats (Good for your heart)

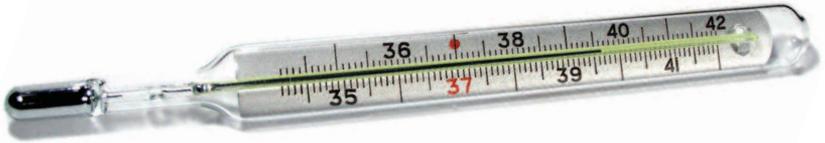
▼ Fish that may be caught or farmed in a way that is harmful to the environment (www.seachoice.org)

✂ Not high in mercury but high in PCBs

What can I do about **mercury in my bathroom?**

Replace *mercury-containing thermometers* with alternatives and properly dispose of the old thermometers with your local household hazardous waste collection program.

Familiarize yourself with proper cleanup methods for broken thermometers described at the end of this booklet.



Why?

- *A typical mercury-containing fever thermometer contains approximately 700 milligrams of mercury. Larger thermometers can contain as much as 3000 milligrams of mercury.*
- *Proper disposal limits the amount of mercury entering landfills, which in turn prevents its release into the environment.*
- *Removing mercury-containing thermometers from your home limits your family's risk of being exposed to mercury through broken thermometers.*

How?

- *Replace thermometers with mercury-free alternatives available at your local drugstore. Look for digital electronic thermometers or 'mercury free' labels on packaging.*
- *Properly dispose of thermometers using the options described at the end of this booklet.*

What can I do about mercury in my bedroom?

Dispose of *button cell batteries*, along with other batteries, with your local household hazardous waste collection program.

Why?

- *Each button cell battery can contain between 5 and 25 milligrams of mercury.*
- *Proper disposal limits the amount of mercury entering landfills, which in turn prevents its release into the environment.*

How?

- *Unfortunately, no mercury-free alternatives for button cell batteries currently exist; however, North American manufacturers have committed to developing mercury-free alternatives by June 2011.*
- *Properly dispose of batteries using the options described at the end of this booklet.*

Many batteries in your home contain hazardous materials, including mercury. The type of battery most likely to contain mercury in your home is button cell batteries, which are commonly found in items like **wrist watches**, **hearing aids** and **calculators**.



What can I do about mercury in my hallway?

Dispose of burned-out *energy-saving compact fluorescent light bulbs (CFLs)* through your local household hazardous waste collection program.

To reduce the risk of exposure from broken bulbs familiarize yourself with proper cleanup methods at the end of this booklet and avoid use in areas where bulbs could easily break (e.g. crawl space).



Why?

- CFLs contain a small amount (1 to 25 milligrams) of mercury in vapour form.
- Proper disposal limits the amount of mercury entering landfills, which in turn prevents its release into the environment.

How?

- Purchase CFLs with the lowest mercury content by looking for the ENERGY STAR® logo on the packaging.
- Consult Project Porchlight listing for special CFL collection depots including retail “take-back” programs. **www.projectporchlight.com/content/cfl-recyclers**.
- Properly dispose of CFL bulbs using the options described at the end of this booklet.

Compact Fluorescent Light bulbs (CFLs) are energy efficient and last up to ten times longer than incandescent bulbs.

ENERGY STAR® bulbs must meet stringent standards for mercury content and performance.

What can I do about mercury in my living room?

Replace old *mercury-containing thermostats* with energy-efficient thermostats. Always dispose of your old thermostats through your local household hazardous waste collection programs.

Why?

- *Mercury-containing thermostats contain 2,500 to 10,000 milligrams of mercury.*
- *Proper disposal limits the amount of mercury entering land-fills, which in turn prevents its release into the environment.*
- *Mercury-containing thermostats are not programmable.*

How?

- *Consult Switch-the-Stat at www.switchthestat.ca to learn more about their thermostat replacement and collection program.*
- *Properly dispose of mercury-containing thermostats using the options described at the back of booklet.*

Energy-saving measures not only help to cut costs, they also reduce our reliance on coal-fired power plants (a major source of mercury).

When used properly, programmable thermostats can result in significant energy savings and will help you save money by:

- a) Improving accuracy of home temperature
- b) Allowing you to program lower temperatures when away from your home or during peak hours.



What do I do if **a thermometer breaks?**

PREPARATION

1. Remove children and pets from the room.
2. Open windows to ventilate the area (if possible, leave open for two days after clean up, due to the high concentration of mercury found in thermometers).
3. Turn off any heaters and turn up any air conditioners.
4. Assemble supplies - rubber gloves, eyedropper, two stiff pieces of paper or cardboard, two plastic bags, a large tray or box, duct tape or packing tape, a flashlight and a wide-mouth container.
5. Remove all jewellery and watches (mercury will bond with the metal) and wear rubber gloves.
6. Use the flashlight to locate mercury (light will reflect off mercury beads).
7. Never use a vacuum or a broom as this could disperse mercury into the air.



MERCURY CLEAN UP

On a hard surface:

1. Use stiff paper to push beads of mercury together.
2. Use eyedropper to suction beads of mercury.
3. Use stiff paper to collect mercury.
4. Place mercury in wide mouth container.
5. Use sticky tape to pick up remaining beads.
6. Place all contaminated materials in plastic bag
7. Place bag and container in second bag and label mercury waste.
8. Throw out bag with hazardous waste.*

On carpet:

1. Cut mercury contaminated section out of carpet.
2. Place mercury-contaminated section in plastic bag.
3. Place bag and container in second bag and label mercury waste.
4. Throw out bag with hazardous waste.*

*Properly dispose of mercury-containing clean-up materials using the options described at the back of booklet.

Adapted from:

Health Care Without Harm - Mercury thermometers and Your Family's Health:
www.noharm.org/lib/downloads/mercury/Mercury_Thermometers.pdf

What do I do if **a CFL bulb breaks?**

PREPARATION

1. Remove children and pets from the room.
2. Open windows to ventilate the room (keep open for at least 15 minutes).
3. Wear rubber gloves and scoop or sweep up the debris with a stiff paper or cardboard, and then place the debris in a sealed plastic bag.
4. Do not vacuum up the broken bulb, as this could disperse mercury into the air.

MERCURY CLEAN UP

On a hard surface:

1. Use sticky tape (such as duct tape) to pick up any small pieces of glass or fine particles.
2. Wipe the area with a damp paper towel, cloth or disposable wet wipe to remove any residual particles.
3. Put clean-up materials in a glass container with a tight fitting lid and place in plastic bag, to further minimize release.
4. Throw out bag with hazardous waste.*

On a carpet:

1. Use sticky tape (such as duct tape) to pick up any small pieces of glass or fine particles.
2. Wipe the area with a damp paper towel, cloth or disposable wet wipe to remove any residual particles.
3. Put clean-up materials in a glass container with a tight fitting lid and place in plastic bag, to further minimize release.
4. Throw out bag with hazardous waste.*



FUTURE CLEANING

For Carpet or Rug:

1. If rug is removable, take it outside, shake and air it out for as long as practical.
2. Close room to the rest of the house, and ventilate to the outside.
3. The next several times you vacuum, shut off the central forced-air heating/air conditioning system and open a window before vacuuming. If forced-air is not used, the heating system can remain on.
4. Dispose of the vacuum bag with hazardous waste.
5. In the case of a canister vacuum, wipe the canister out with a paper towel.
6. Place paper towel in a plastic bag and dispose with hazardous waste.
7. After vacuuming, keep the central heating/air conditioning system shut off and the window open for at least 15 minutes.

*Properly dispose of mercury-containing clean up materials using the options described at the back of booklet.

Adapted from Health Canada:
www.hc-sc.gc.ca/hl-vs/iyh-vsv/prod/cfl-afc-eng.php

PROPER DISPOSAL OF MERCURY-CONTAINING PRODUCTS

Mercury-Containing Products	Municipal Hazardous Waste Collection Programs*	Ontario Municipal Hazardous or Special Waste (MHSW) Program** www.dowhatyoucan.ca
<i>Thermostat</i>	<input checked="" type="checkbox"/>	<i>Starting July 2010</i>
<i>Compact Fluorescent Light Bulbs (CFLs)</i>	<input checked="" type="checkbox"/>	<i>Starting July 2010</i>
<i>Batteries</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Thermometers</i>	<input checked="" type="checkbox"/>	<i>Starting July 2010</i>

*Check your local municipality's website for details on *Municipal Hazardous Waste Collection Programs*. For example, in the City of Toronto, you can:

1. Drop off waste at one of the city's six Solid Waste drop-off depots
www.toronto.ca/garbage/depots.htm
2. Use Toronto's "Toxic Taxi" service if you have between 10-50 litres of household hazardous waste (dial 311).
3. Bring hazardous waste to local community environment day events.
www.toronto.ca/environment_days/activities.htm

**Ontario Municipal Hazardous or Special Waste (MHSW) Program is a provincially-regulated program requiring the manufacturers or importers of mercury-containing products to pay for and/or operate collection and recycling programs.



Pollution Probe would like to acknowledge and thank the **Ontario Trillium Foundation**, an agency of the **Government of Ontario**, for its generous support of our work on mercury.