

# Compact Fluorescent Lights Are Safe for Your Home

Compact fluorescent lights, or CFLs, are an energy-efficient lighting alternative to traditional incandescent bulbs. CFLs use just one-quarter the energy of incandescent bulbs, so they last longer, require less electricity, and avoid some of the mercury emissions from dangerous coal-fired power plants.



However, CFLs themselves contain a small amount of mercury, which has led to questions about whether they are safe to use. NRDC has taken a close look at this question and concluded that CFLs are the clear choice for everyone concerned about protecting their health and saving energy.

CFLs are also a better deal for the environment because they cause four times less global warming pollution from power plants than conventional bulbs. Cities, states, utilities, and policy makers are all actively promoting the use of CFLs because of their energy-efficiency benefits, while some major retailers have announced plans to dramatically increase CFL sales. CFLs are a welcome and necessary change from outdated

incandescents because the energy savings in CFLs are dramatic, while the quantity of mercury contained in the bulb, and the opportunity to be exposed to the mercury, is quite small.

### How Much Mercury Is in a CFL?

The amount of mercury in each light is very small—an average of 5 milligrams, roughly equivalent in size to the tip of a ballpoint pen—and it is sealed within the CFL's glass tubing. By comparison, there is up to five times that amount of mercury in the watch battery on your wrist; quite notably, between 60 to 200 times that amount of mercury in a single “silver” dental filling in people's mouths, depending on the size of the amalgam; 100 to 200 times that amount in the old-style thermometers many people still have in their medicine cabinets; 200 times that amount per switch in the light switches of certain freezers; and about 500 times that amount in thermostats on the walls of people's homes.<sup>1</sup>

### How Can I Avoid Exposure to Mercury?

The most important step you can take to reduce mercury exposure is to avoid eating fish contaminated with mercury. Fish contain the most toxic form of mercury, which is absorbed easily into the body. While fish is part of a healthy diet, you should take care to choose the types of fish which contain the least amount of mercury, particularly if you are pregnant or nursing. NRDC's website contains recommendations for choosing fish that contain the least amount of mercury. Visit [www.nrdc.org/mercury](http://www.nrdc.org/mercury) for a printable shopping guide to safe fish.

Mercury contained in household products such as CFLs, thermostats, batteries, and switches pose no threat during use, unless the device is broken. Therefore, these products should always be handled carefully and properly disposed.



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### How Do I Dispose of Used CFLs?

Many municipalities have household hazardous waste programs in place, and some retailers such as Ikea have established collection programs where consumers can bring in old CFLs for recycling.<sup>2</sup> Consumers can also contact their local municipal solid waste agency directly to ask about drop-off points for CFLs, or go to [www.lamprecycle.org](http://www.lamprecycle.org) and click on "State Lamp Recycling Regulations & Contacts" to identify local recycling options. Some CFL recycling programs are also listed on the website [www.earth911.org](http://www.earth911.org).

### How Much Mercury Is in a CFL?

#### Manual thermostats:

500 times more mercury than a CFL

#### Freezer light switch:

200 times more mercury than a CFL

#### Old-style thermometers:

100-200 times more mercury than a CFL

#### Some dental filings:

60-200 times more mercury than a CFL

#### Watch batteries:

5 times more mercury than a CFL

#### CFLs:

5mg of mercury

### What If My CFL Breaks?

If a CFL breaks in your home, there is no need to be alarmed: the small amount of mercury in the bulb is unlikely to cause harm, especially if you take a few simple precautions to ensure safe cleanup of the broken bulb. The U.S. Environmental Protection Agency provides detailed cleaning recommendations.<sup>3</sup> Below is a summary of what to do with a broken CFL:

#### ■ Before Clean-up

Open a window. Turn off forced air heating or air conditioning.

#### ■ Clean-up

Scoop up the glass fragments and powder rather than sweeping or vacuuming, which can spread the mercury around. Use sticky tape to pick up remaining glass fragments or powder. Wipe area clean with damp paper towel or wet wipes.

#### ■ Disposal of Clean-up Materials

Dispose of the broken bulb through your local household hazardous waste program or recycling program. Where such programs are not available, place all cleanup materials outside the building in a trash container area for the next normal trash pickup, then wash your hands.

#### ■ Future Cleaning of Carpeting or Rug:

##### Vent the Room During and After Vacuuming

If vacuuming is needed after all visible materials are removed, vacuum the area and remove the vacuum bag, disposing of it in a sealed plastic bag.

For at least the next few times you vacuum, shut off the central forced-air heating/air conditioning system and open a window prior to vacuuming.

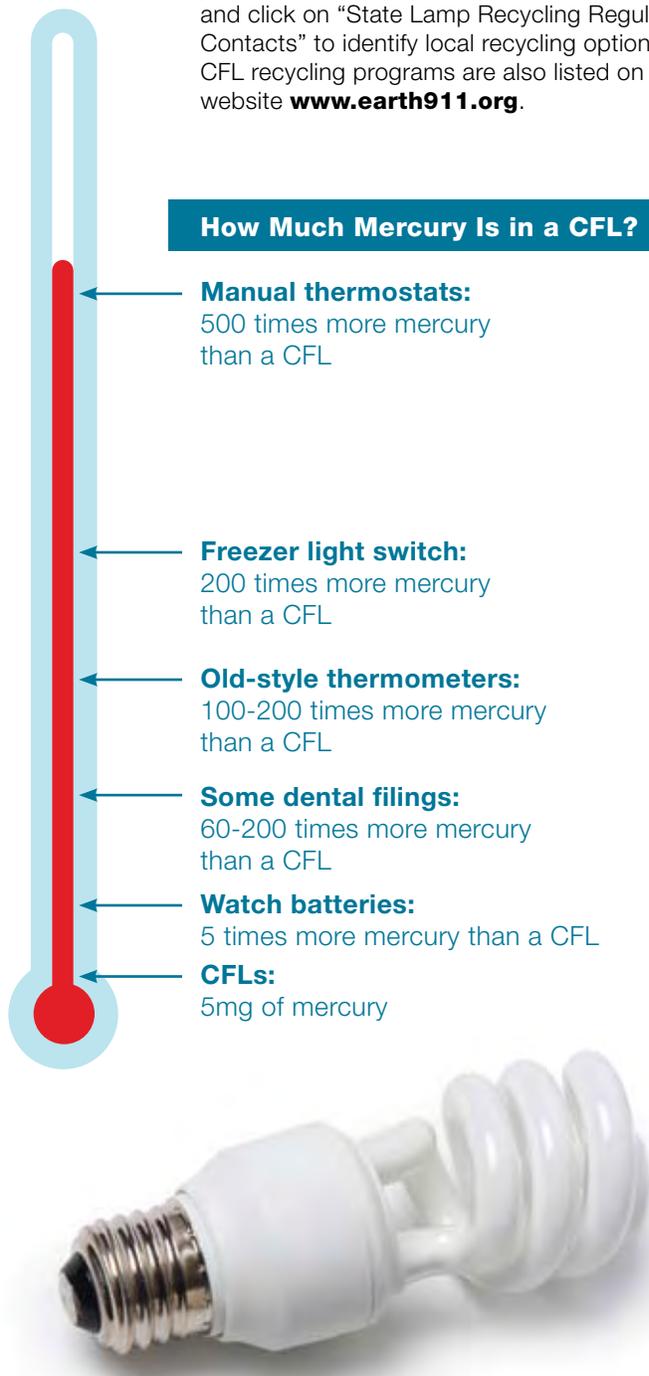
### CFLs Are Cost-Effective and Energy-Efficient

CFLs are much more energy-efficient than incandescent bulbs, meaning that they require less energy to provide the same amount of light. This energy-efficiency also leads to lower electric bills—replacing just five incandescent bulbs with CFLs can save you \$200 or more over the over the lifetime of the CFLs.

If every household replaces just one conventional light bulb with an Energy Star CFL, we could:

- Save enough energy to light more than 3 million homes for a year
- Save more than \$600 million in annual energy costs, and
- Prevent greenhouse gases equivalent to the emissions of more than 800,000 cars.

Source: [www.energystar.gov](http://www.energystar.gov)



<sup>1</sup> <http://www.newmoa.org/prevention/topichub/subsection.cfm?hub=22&subsec=19&nav=19&CFID=18579360&CFTOKEN=75552376>

<sup>2</sup> [http://www.ikea.com/ms/en\\_US/about\\_ikea/social\\_environmental/environment.html](http://www.ikea.com/ms/en_US/about_ikea/social_environmental/environment.html)

<sup>3</sup> [http://www.energystar.gov/ia/partners/promotions/change\\_light/downloads/Fact\\_Sheet\\_Mercury.pdf](http://www.energystar.gov/ia/partners/promotions/change_light/downloads/Fact_Sheet_Mercury.pdf)