



# Concerned about Mercury in Energy Saving Lamps?



Mercury is a hazardous and closely regulated substance. We can for instance be exposed to this heavy metal when eating contaminated fish or using products that contain mercury. Accidentally inhaling or swallowing large quantities of mercury can lead to severe health effects.

## → WHAT ARE COMPACT FLUORESCENT LIGHT BULBS?

Energy-efficient compact fluorescent light bulbs, in short CFLs, are a compact version of the familiar long fluorescent ("neon") tubes. They consume about 5 times less electricity than incandescent light bulbs, thereby reducing emissions from power plants, but they contain some mercury – a hazardous metal.

## → CAN THE MERCURY THEY CONTAIN HARM ME?

The mercury contained in CFLs cannot escape from the bulbs, except if they break. This is why old CFLs must be carefully disposed of with hazardous waste for special handling and not discarded with unsorted household waste.

When a CFL breaks, a small amount of mercury vapour is released and can be breathed in by someone in the room. Concentrations in the air can be briefly relatively high, but fall rapidly as the vapour turns to small liquid droplets. If the room is not ventilated sufficiently and cleaned thoroughly, this mercury may stick to surfaces or dust for some time.

**In view of the small amount of mercury and the exceptional nature of this event, it is very unlikely that such a breakage would pose any health risks to adults. The risk to a fetus exposed through its mother is negligible.** There are no specific data on potential risks to children, but risks are also expected to be negligible. As a matter of precaution, in case children play in a room where a CFL has been broken, it is best to aerate the room and to perform a thorough cleaning to avoid them swallowing small amounts of mercury when putting fingers and objects with contaminated dust in their mouth.

## → ARE ENERGY-SAVING LAMPS INCREASING MERCURY POLLUTION?

Over their entire life, and compared to incandescent light bulbs, compact fluorescent lamps save significant amounts of energy. As a result, they lead to a reduction of mercury emissions linked to power generation. Overall, this saving in mercury emissions exceeds the amount of mercury they contain and that they could release if broken or inadequately discarded with unsorted waste.

Indeed, producing electricity in coal-fired power plants leads to the release of mercury to the environment. Since close to a third of Europe's electricity is produced from coal, using any type of light bulb contributes to mercury emissions, even if the lamp itself contains no mercury.

It is very unlikely that the use and disposal of compact fluorescent lamps poses

any risk to the environment. However, facilities that collect and recycle them could pose a local, environmental risk if they do not deal appropriately with potential mercury releases.

Therefore the opinion of the EC Scientific Committee on Health and Environmental Risks (SCHER) is that **compact fluorescent lamps offer a net environmental benefit compared to incandescent and halogen light bulbs, even when mercury content is taken into account.**

## → WHAT CAN I DO?

- ▷ **Use energy saving lamps and recycle them to reduce mercury pollution.** Switching from inefficient bulbs to compact fluorescent lamps saves energy and reduces overall mercury emissions even if the bulbs are not recycled eventually. Bringing these bulbs to collection points for recycling at the end of their useful life, rather than throwing them away with unsorted waste allows the mercury to be recovered and reduces emissions even further.
- ▷ **Limit exposure if a compact fluorescent lamp breaks accidentally** by airing the room before cleaning the lamp with a wet cloth, avoid skin contact with debris and do not use a vacuum cleaner.
- ▷ **Read more** on energy saving light bulbs, the phase-out of inefficient lamp types and what European legislation is already in place at [www.e-lumen.eu](http://www.e-lumen.eu)

This fact sheet is based on the scientific opinion "Mercury in Certain Energy-saving Light Bulbs", an opinion adopted on 18 May 2010 by the **European Scientific Committee on Health and Environmental Risks (SCHER)** of the **European Commission**.

## Scientific Committees

- on consumer safety
- on health and environmental risks
- on emerging and newly identified health risks

The detailed and nuanced view of SCHER on this issue is available at:

[http://ec.europa.eu/health/scientific\\_committees/environmental\\_risks/docs/scher\\_o\\_124.pdf](http://ec.europa.eu/health/scientific_committees/environmental_risks/docs/scher_o_124.pdf)



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