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Fluorescent Light Dangers

The compact fluorescent might be an energy-saver, but it's also a health hazard. All fluorescent lights emit hazardous microwave radiation and contain toxic mercury.

Fluorescent Lights Radiation & Health Effects

Now that **compact fluorescents** are being sold as eco-friendly, people are buying them for their home in an effort to cut energy costs and to help the environment.

The truth is, *fluorescent lights* emit microwave radiation as well as small amounts of mercury vapor and should be avoided whenever possible.

Exposure to microwave radiation has been linked to *cancer, childhood leukemia, autism, ADD and birth defects*, while the toxic effects of mercury have been linked to *alzheimers* and *brain damage*.

Some common symptoms associated with **fluorescent light exposure** are:

- dizziness
- headaches
- blurred vision
- eyestrain
- floaters
- skin rashes
- sinus problems
- fatigue
- nausea
- sleep disturbances
- mood swings
- irritability

Fluorescent Light Radiation & Flicker

The quality of lighting that we expose our bodies to is just as important as the quality of air we breathe or the water we drink.

Spending time under *fluorescent lighting* puts the body in a state of stress. This is due to both the high levels of radiation the bulbs emit as well as their continuous flicker.

The radiation weakens the body's immunity and leaves it functioning at sub-optimal levels. The flicker, although imperceptible to the seeing eye, is a continuous stressor to the nervous system and has been known to induce anxiety and attacks of vertigo.

Fluorescent Lighting & Mercury

According to the 2007 California Assembly Bill 1109 , "Most **fluorescent lighting** products contain hazardous levels of mercury...." All *fluorescent light bulbs*, including energy saving *compact fluorescents*, contain mercury. Mercury is a known toxin linked to many health and environmental problems.

Please take a look as well at the Mercury: Basic Facts flyer from EMB and DENR.

MERCURY: SOME BASIC FACTS AND ITS EFFECT ON HUMAN HEALTH

What is mercury?

Elemental mercury is liquid at room temperature, and is also called quicksilver or liquid silver because of its appearance.

Mercury has several forms. The metallic mercury is a shiny, silver-white, odorless liquid that when heated, becomes a colorless, odorless gas. This is usually used in thermometers, dental fillings and batteries.

Other forms of mercury include the organic mercury compounds such as methyl mercury, which builds up in tissues of fish, and inorganic mercury, which combines with other elements, such as chlorine, sulfur, or oxygen, to form "salts." This white solid powder or crystal is occasionally used in skin lightening creams and as antiseptic creams and ointments.

What are the uses of mercury?

Elemental mercury is used in barometers, thermometers and gauges. Inorganic mercury has been used in cosmetics, dyes, mirrors, jewelry and medications while mercuric salts are used in gold, silver and bronze-plating processes. Mercury is also found in electronic equipment such as batteries, switches and mercury vapor lamps. Inorganic mercury, on the other hand, is used in photography, antiseptics, tanning processes, embalming and as a preservative of wood.

How are we exposed to mercury?

Exposure to mercury occurs from absorption, ingestion or inhalation. Exposure to metallic mercury can occur when an item such as a thermometer breaks. If proper clean-up procedures are not followed, mercury that is vaporized can be inhaled, and mercury that is handled without gloves can be absorbed directly through the skin. On the other hand, exposure to methyl mercury results from eating fish or shellfish that comes from mercury-contaminated waters.

Another way to be exposed to mercury is to breathe in vapors in the air from spills of metallic mercury. You can breathe mercury-contaminated air through spills, incinerators and industries that use mercury in their operations.

How can mercury affect my health?

The nervous system is very sensitive to all forms of mercury. Methyl mercury and metallic mercury vapors are the most harmful forms because of their capability to reach the brain. Exposures to high levels of mercury can permanently damage the brain, the kidneys or the developing fetus. The effects of mercury on brain functioning may result in irritability, shyness, tremors, changes in vision or hearing, and memory problems.



Short-term exposure to high levels of metallic mercury vapors may cause effects including lung damage, nausea, vomiting, diarrhea, increases in blood pressure or heart rate, skin rashes, and eye irritation. Exposure to organic mercury is more dangerous for young children than for adults, because more of it passes into children's brains where it interferes with normal development.

How can individuals and families reduce the risk of exposure to mercury?

Carefully handle and dispose of products that contain mercury, such as thermometers and fluorescent light bulbs or expired medicines. Teach children not to play with mercury. Also, never attempt to burn mercury or mercury - containing wastes. This will release harmful vapors in the air thus increasing one's exposure to the chemical.

What can individuals do in case of small mercury spills?

In case of a spill, you can help clean it up in your homes, schools or in the workplace. Here are some things to remember when handling the spill:

- 1) Evacuate the spill area. Keep everyone else, especially children and pets, out of the spill area to prevent the mercury from spreading.
- 2) Lower the temperature by turning down the thermostat. The cooler the temperature, the less mercury vapors will be released into the air.
- 3) Turn off central ventilating or air conditioning systems that could circulate air from the spill area to other parts of the home or building.
- 4) Ventilate the room with the spill to the outdoors by opening windows and any exterior doors.
- 5) Before cleaning up spilled mercury, remove all jewelry from hands and wrists so the mercury does not bond to the metals. Change into old clothes and shoes that can be safely discarded if they become contaminated. Put on rubber gloves and goggles.
- 6) Contain the spill by making use of masking tape or duct tape to make a vertical "fence" around the mercury droplets and confine them to a limited area for clean up.
- 7) Pick up all visible mercury droplets by using two pieces of stiff paper to push the mercury beads together and then scoop them up. You can also use an eyedropper to pick up the beads you can't get with the cardboard.
- 8) Place the broken product and all materials used to clean up the mercury in plastic containers or zip lock bags. Properly seal these containers.
- 9) After you have cleaned up the spill, continue ventilating the room or spill zone with outside air for a minimum of two days.

If a large amount of mercury has been spilled, contact your nearest local health department or the Environmental Management Bureau regional office for assistance.

For further inquiries, please contact:

The Chemicals Management Section

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