

## More dangers of mercury

By **Gilbert Woolley**/ Special To The Tab

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**M**ercury, even in very small amounts, is a potent neurotoxin (poison) for the rapidly developing nervous systems of young children and the fetus in the womb. In a previous article we warned that mercury can be ingested by eating some seafoods.<sup>1</sup>

Another direct route into the body is from dental amalgam used to fill our teeth. Often referred to as "silver," 50 percent of amalgam is actually mercury. Saliva gradually erodes the amalgam so that mercury is absorbed into the bloodstream. Also, mercury vapor is emitted from amalgam and inhaled. Mercury from amalgam is suspected of causing certain neurological conditions.

For many years polymeric (non-metallic) compounds have been used widely and successfully to replace amalgam. If you are thinking of having your amalgam fillings removed, this must be done with extreme care, in order to limit the amount of mercury entering your body. Make sure that your dentist knows about this. Women who are pregnant or anticipate becoming pregnant should not have amalgam fillings removed.

### Mercury in the environment

Mercury enters the environment in several ways. Dental amalgam is a major source. It is estimated that forty tons of mercury are used every year in the US in dental amalgam and much of that will eventually be removed when fillings are replaced and either flushed into sewers or disposed of in the trash.

Some uses of mercury are dangerous to people and the environment only when they break or are disposed of after the end of useful life. A common example is the mercury in glass thermometer, often disposed of in regular trash and, as it is in Newton, incinerated. Mercury vapor from the incinerator condenses and falls on gardens, fields, lakes and streams. Alcohol (in glass) thermometers and electronic thermometers are widely available and offer inexpensive replacements.

Many older fluorescent light tubes and some other types of bulbs contain mercury and should be recycled and not disposed of as solid waste.

Another use of mercury is as an electrical contact. It is the only metal that is liquid at room temperature and is also a good conductor of electricity. It is the switching element in the familiar thermostat on the wall of your house and also in "tilt switches" such as those that let a driver know that the trunk lid is open. Mercury for these switches is also enclosed in a glass tube and is no danger to the user. However, unless the switches are removed from a device or appliance when it is no longer in use it is very likely that the glass tube will be broken and the mercury released into the ground - or, worse, in vapor from a trash incinerator.

Temperature controllers in homes mostly last as long as the house is standing, but automobiles have a short life and are usually crushed and turned into scrap metal. It is safe to assume that mercury switches are not commonly removed before crushing, so that mercury vapor is released in the smokestack of the steel furnace. Today, solid state switches can replace mercury in almost all applications, and often at a lower cost.

## Recycling

Mercury is very costly and is easily recycled, but in many applications, the quantity used is minuscule and the cost of recapturing it far exceeds its value.

A precautionary approach suggests that mercury should be used only if it can be positively shown that there is no substitute. If this principle were followed, there would be very little mercury in the waste stream. Requiring manufacturers to take back components containing mercury at end of a product's useful life is probably the most effective way to get them to use the many available replacement materials for this environmental toxin and it would stimulate discovery of new replacement materials.

To learn more about this subject, try Google.

<sup>1</sup>A recent Harvard School of Public Health study claims that the 2004 FDA/EPA advisory warning pregnant women and young children not to eat certain fish species and to limit their consumption of albacore tuna, may have done more harm than good, by discouraging people who are not at risk from eating all kinds of seafood. However, the advisory clearly warns against only a few fish species and specifically targets pregnant women and young children. Some of us have questioned the part of the advisory that recommends eating as much as 6 oz of albacore a week. We also feel that the advisory is not well written and takes too long to get to the point, so it is confusing, and suspect that it has not always been reported accurately in the media.

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