Mercury Sources in the Environment

Mercury gets into the environment as a result of human uses of mercury in products and in industry, and the combustion of fossil fuels that contain mercury. In addition, natural sources such as the degassing of the earth's crust, forest fires, the evaporation of seawater and volcanos contribute mercury into the environment. An estimated two-thirds of mercury in the environment is the result of human activities.

Mercury contained in medical household, and industrial products gets into the atmosphere when the products are discarded, especially when they are incinerated. As much as 650 metric tons (650,000 kilograms) are put into the environment each year by manmade sources. Mercury is constantly cycling through the environment, evaporating into the atmosphere and returning to the ground as the result of gravity or precipitation. Mercury in the atmosphere can be deposited into lakes and rivers. When mercury hits water, some of it goes through chemical processes that change it into other forms of mercury, most notably methylmercury. Methylmercury is ingested by fish when it gets in the water then it bioaccumulates in fish and can cause many health problems when people eat the fish that are contaminated with mercury.

Keeping Mercury out of Wastewater

When a mercury containing product such as a thermometer is broken over the sink or improperly cleaned up after a spill, the mercury could be flushed down the drain and enter the wastewater stream of a household. Once the mercury enters a wastewater treatment plant, most of it enters biosolids during treatment. One of the forms wastewater treatment plants dispose of the generated solids is by land spreading it. The mercury then enters back into the environment, thus susceptible to being taken up by wildlife and further contamination. Another form of treatment of the biosolids is incineration as discussed above. This could be avoided by properly cleaning up exposed mercury and not allowing mercury spills to be flushed down the drain.