

Health & Fit

Ojai Valley News

Saturday, January 26, 1991

Broken thermometer can bring trouble to your home and kids

Special to the News

Dear Dr. Meinig:

Today, instead of answering one of your letters, this article is about a question that I am directing to each one of you. My question: Have you ever broken a mercury body temperature thermometer or, should that ever happen, would you know how to clean up the mercury spill in order to prevent the toxic exposure that can result?

Frankly, even my close familiarity with the toxic dangers of mercury from the almost daily use of it in my practice did not prepare me for what can happen when a mercury thermometer is broken. It was the shock of learning about the serious mercury poisoning that occurred to three young children that led me to believe that you would like to be told about this possible danger.

This is the story. It was reported in Britain's leading medical journal, *The Lancet*, December 22-29, 1990 issue. A 33-month-old girl was the first of three German children that were admitted to a hospital. During the previous four months she had become ill-tempered, anorexic, lost weight, had eczema, widespread severe itching, and pink, sweaty, scaling of the palms of her hands.

Technically called acrodynia, this is primarily a disease of mercury accumulation in the bodies of infants and young children. Adults in this type of situation would not be expected to develop severe symptoms, but the absorption of any amounts of mercury can produce a variety of



toxic changes in body tissues at any age.

The girls' 20-month-old sister had skin eruptions, eczema, skin infections and she, too, became anorexic. Her brother was the least affected, but he did have generalized itching, skin eruptions, and was afflicted with nervousness.

During hospitalization of the children, it was learned that a thermometer had been broken in the children's room some eight months earlier. The mercury spilled onto the carpet and was felt to be irretrievable. A floor heater in the poorly ventilated room complicated the situation by providing more direct heat to enhance the vaporization of the mercury droplets.

It is somewhat difficult to imagine this liquid metal can gradually release gaseous fumes of mercury into the air, but as it vaporizes, small amounts are inhaled into the lungs, where it is quickly absorbed into the blood stream. In addition, fumes can be absorbed through the skin and mucous membranes of the mouth.

Chelation therapy started to reduce the symptoms in two weeks and they were all gone af-

ter four months, as was the excretion of mercury in the children's urine.

Even if there are no small children in the home, this is what should be done if a thermometer is broken, or mercury from any other source is spilled.

Any droplets that are visible on hard surfaces can be gently teased together using a card or fine brush. The pool of mercury can then be picked up with an eye dropper or pipette. Tiny droplets may be retrieved with the sticky side of adhesive tape.

If the mercury spill was on a carpet, mark the spot and immediately start its removal. Attempt to pick up any obvious drops with an eye dropper and, after that, vacuum the carpet thoroughly. Then obtain some flour of sulphur and thoroughly brush it into the carpet spill area. Leave the sulphur in the carpet for at least a day — several days would be better.

Keep the heat off in that room for a couple of weeks and thoroughly air it out each day.

Take the vacuum cleaner outside in the open air. Remove the bag and completely clean all its parts. Let the vacuum run for awhile outdoors before and after putting in the new filter bag.

When a mercury thermometer is going to be used a number of times, do not lay it on a table or bed, but always replace it in its holder. Digital thermometers that do not use mercury are available.

* * *

Everyone has a question about nutrition. Send yours to Dr. George E. Meinig, c/o Ojai Valley News, Box 277, Ojai, CA 93024.