

Mercury Spills

A Protocol for Local Authorities and Hospitals



Mercury is highly toxic, causing damage to the nervous system at even low levels of exposure. It is concentrated through the food chain - especially in fish - collects in humans and wildlife, and is particularly harmful to the development of unborn and small children.

Mercury also travels long distances through the atmosphere, across national boundaries, and has contaminated global food supplies at levels that pose a significant risk.

Because of these problems, it is very important that mercury spills be dealt with in a controlled manner.

KEY POINTS

The many forms of mercury can be classified as elemental, inorganic (e.g. inorganic mercury salts), and organic; the following only concerns elemental mercury.

- * Elemental mercury is a silvery, heavy liquid which is volatile at room temperature
- * It is toxic both acutely and chronically by inhalation
- * The vapour of elemental mercury may result in CNS and renal damage
- * Due to the volatile nature of mercury, spills should be cleared up as promptly and thoroughly as possible.

In the event that somebody is poisoned by mercury or any other toxic substance, call the South African Poisons Information Services

Bloemfontein

Poisons Information Centre
Department of Pharmacology
University of the Free State
P.O. Box 339 (G6), Bloemfontein 9301
Telephone: +27 51 405 3090
Emergency telephone: +27 51 444 2134
Fax: +27 51 444 1523
E-mail: waluboa@med.uovs.ac.za

Cape Town

Poisons Information Centre,
Dept. of Paediatrics
Red Cross War Memorial Children's Hospital
Klipfontein Road, Rondebosch
Cape Town 7700
Telephone: +27 21 6585308
Emergency telephone: +27 21 6895227
Fax: +27 21 6891287
E-mail: pic@ich.uct.ac.za

Tygerberg

Tygerberg Pharmacology and Toxicology Consultation Centre,
Department of Pharmacology
University of Stellenbosch Medical School
P.O. Box 19063, Tygerberg 7505 Cape Town
Director: Dr G.J. Muller
Telephone: +27 21 938 9596 or 938 6084 (office h)
Emergency telephone: +27 21 931 6129 (24 hrs)
Fax: +27 21 931 7810
E-mail: gmul@sun.ac.za

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About groundWork, the organisation

MISSION STATEMENT

groundWork is a non-profit environmental justice service and development organisation working primarily in South Africa and increasingly in Southern Africa.

groundWork seeks to improve the quality of life of vulnerable people in South Africa and Southern Africa through assisting civil society to have a greater impact on environmental governance.

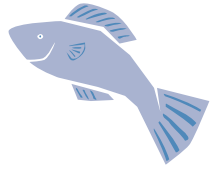
groundWork places particular emphasis on assisting vulnerable and previously disadvantaged people who are most affected by environmental injustices.

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WHY SHOULD WE WORRY ABOUT MERCURY?

Mercury (Hg) exists in many forms, and occurs naturally in many places. For example, mercury is found in coal, and is released whenever coal is burned. As time goes by, mercury has accumulated in vast amounts in the environment. As it is concentrated through the food chain, which means that as larger fish and animals eat smaller prey that has eaten mercury, the concentration of mercury in the larger animals becomes higher.



In some places in the world the concentration of mercury in fish has become dangerous and is considered a threat to human health, especially to unborn and small babies.

Because mercury is volatile, which means that it can evaporate easily when it is spilled, it can become dangerous over a wide area. It is therefore important that places, such as hospitals and industry, where mercury spills are likely, have a proper procedure in place to deal with these spills.

The problem of mercury has been considered so serious in many parts of the world, including in South Africa, that policies phasing out mercury-containing equipment have been put in place.

HOW TO HANDLE SMALL PUBLIC MERCURY SPILLS

In South Africa mercury spills that will require specialist attention may arise in the following scenarios:

- * Hospitals and health care setting spills
- * Industrial accidents
- * School laboratory spills
- * Small-scale artisanal gold mining sites
- * Ports, during import and export
- * Mercury recyclers or scrap dealers
- * Homes and offices where mercury containing measuring devices have broken

Major things to remember when cleaning spills:

No matter where a spill takes place, it is very important to follow these basic steps:

1. Remove everyone from the area
2. Take off all jewellery and wear old clothes or overalls. Wear gloves
3. Carefully pick up any broken or sharp objects
4. Locate visible mercury beads
5. Collect the beads
6. Place all materials that were used, including the gloves, in a waste bag. Place the mercury in the bag as well, and seal the bag and label it.
7. Remember to keep the area well ventilated to the outside for at least 24 hours.

Please refer to the inside of this pamphlet for further information.

DISPOSAL OPTIONS IN SOUTH AFRICA

Unfortunately, all we can do right now is contain the mercury. There is no program yet in the country for its ultimate long term safe disposal. However, identify your provincial health technology unit to address this issue of temporary storage and ultimate disposal of collected mercury. In 2006 the KZN Health Technology Section Medical Equipment issued a circular/directive which orders all hospitals (including private hospitals) to phase out mercury containing equipment from hospitals in KZN. All mercury equipment being replaced is first stockpiled at provincial health technology unit's for storage and eventual disposal.

Ask your provincial Health Technology Section Medical Equipment to advise on how to safely store or dispose of obsolete mercury equipment. Hazardous waste landfill might still be the best option!

Mercury storage areas

All hospital units should check storage areas for old, damaged or outdated equipment. Mercury-containing products not in use must be stored in unbreakable containers with tight-fitting lids. The containers must be clearly labeled as to their contents. Rooms where mercury-containing items are stored should be tested periodically using a mercury vapor monitor. Health care facilities should keep a permanent record of all materials brought in and out of the mercury temporary storage area.