

WEST GLOUCESTERSHIRE PRIMARY CARE TRUST

This document supports the Trust Health and Safety Policy as it applies to

MERCURY.

Details of the arrangements for implementation are set out in the Health and Safety Policy.

Harmful Effects

Mercury is a toxic metal. Its acute effects include nausea, abdominal pain, vomiting and diarrhoea. Chronic effects from continued exposure to much smaller concentrations are severe nervous disturbance, tremor, irritability, depression and kidney damage. Routes of exposure are by inhalation of the vapour and by permeation through the skin.

The Occupational Exposure Standard for the vapour is: 0.025 mg/m³ (8 hour average).

Exposure Risks

Mercury is in common use in thermometers and sphygmomanometers. Exposures arise when these instruments are broken. If it is not removed, the mercury will evaporate slowly and anyone in the area will inhale the vapour. They may also contaminate their clothing and absorb mercury by skin contact. Mercury exposures from broken thermometers or sphygmomanometers are usually very low except when adverse factors combine: for example, a large quantity spilled in a small unventilated room occupied continuously by the same individuals.

Procedure

Non-mercury thermometers and sphygmomanometers are recommended for future purchases. Existing equipment will continue in use, however, and breakages will occur. Sphygmomanometers, in particular, contain a large quantity of mercury and require careful handling to minimise the risk of mercury spills.

The following is an outline mercury spillage procedure. It should be implemented promptly avoiding contamination of skin or clothing.

1. Make an on-the-spot assessment of the severity of the spill in the light of this guidance. If you foresee particular difficulties contact the Health and Safety Adviser for assistance.
2. Fetch mercury spillage kit*. **Wear the gloves provided.** Collect as much mercury as possible using a 5 or 10 ml syringe. Experimentation will be necessary to find the optimum angle to draw the heavy mercury into the tube. Use the plastic scoop to gather together tiny globules of mercury into larger ones

which can be more easily captured in the syringe. Small pieces of broken glass which are **uncontaminated** by mercury are best disposed of in a sharps disposal box.

3. Deposit the mercury globules captured in the syringe into the sealable container provided. If the mercury has spilled onto a surface which prevents its complete removal with the syringe, use the alloy 'wool' in the spillage kit. Press a ball of this on to the affected area to soak up the mercury. This operation produces relatively high concentrations of mercury vapour – maximise ventilation and deposit the used wool in the sealed container as soon as the removal is complete. Then label the container and place it in double plastic disposal bags along with the broken instrument which may still contain mercury. Protect any sharp edges by wrapping in sticky tape to avoid tearing holes in the bags. Tie the bags securely at the neck. **Do not** use a vacuum cleaner on residual mercury; this can produce high vapour concentrations and is ineffective following the procedure described. **Do not** dispose of mercury in a sharps box, nor as domestic waste, nor into the drains: any of these would lead to atmospheric or ground-water contamination.
4. Telephone the Health and Safety Adviser to arrange disposal as 'special waste'. The Health and Safety Adviser may also visit the department and check on the clean-up, and may take measurements of mercury vapour. If you encounter particular difficulties in a mercury spillage, such as an unusually large quantity, difficult access to the spilled metal, etc. contact the Health and Safety Adviser or the Estates Department for further advice.

*Spillage kit suppliers:

Mercury Safety Products – Tel 0115 9213833

Morok – Tel 0800 223344

Fisons – Tel 01509 231166

Whatman – Tel 01622 674821

Philip Harris – Tel 01222 735330

Useful components: sealable disposal container, syringe, absorbent alloy wool, protective gloves, plastic scoop

Review

This document will be subject to review every 12 months, or if circumstances indicate it may no longer be valid.

The document will be amended in the light of review.

Date: April 2003