Phenol Exposure: First Aid Guidance

Introduction
Phenol is extremely poisonous and corrosive. It can be absorbed across intact skin. Since phenol has a local anaesthetic effect, it may cause extensive tissue damage before the casualty feels any pain. As such, prompt treatment of individuals exposed to phenol is essential.

Details of first aid guidance for the treatment of phenol exposure vary considerably. Methods involve the irrigation of skin with water (as used for other chemical burns), the use of Polyethylene Glycol 300 (PEG), or a combination of water irrigation and PEG. The following represents a method involving the use of PEG (if available) as a secondary treatment after rinsing with copious amounts of water.

Skin Exposure

THE FOLLOWING TREATMENT IS RECOMMENDED IF PHENOL IS SPLASHED ON THE SKIN:

- Wearing protective gloves, remove contaminated clothing, avoiding contamination of unaffected areas
- Flush the affected skin area with copious amounts of water (preferably warm) and soap for a minimum of 10 - 15 minutes to remove any phenol which may be lying on the surface of the skin (not yet absorbed)
- After the initial irrigation with water, swab / wipe affected area repeatedly with a solution of Polyethylene Glycol 300 (PEG) for 30 minutes, frequently changing the swab for a fresh swab soaked with PEG
- Cover lightly with sterile dressing
- Arrange urgent transfer to hospital if considered necessary (N.B.: a copy of this guidance for phenol exposure should accompany the casualty)
- Double-bag any contaminated clothing / swabs, label ‘Hazardous Waste: Phenol Contamination’ prior to disposal via Biology Supplies

NOTE: PHENOL DECONTAMINATING FLUID (POLYETHYLENE GLYCOL (PEG) 300) SHOULD BE AVAILABLE IN ALL LABS WHERE PHENOL IS USED

Eye Exposure

IF phenol comes into contact with eyes:

- Immediately hold the eyelids open if possible and flush continuously for 20 minutes with fresh running water
- Ensure complete irrigation of the eye by keeping eyelids apart and away from the eye.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Arrange urgent transfer to hospital (N.B.: a copy of this guidance for phenol exposure should accompany the casualty).

**Ingestion**

- If swallowed wash to mouth out with plenty of water and give the casualty water to drink.

**Notes for Ambulance Staff / Hospital Staff**

- **NOTE: Do not touch affected tissue with bare hands**
- Patients with corneal ulceration should be referred immediately for an ophthalmological examination / assessment.
- Phenol is absorbed through intact skin and this may cause symptoms similar to those observed from inhalation and ingestion of phenol.
- Polyethylene glycol molecular weight 300 inactivates any phenol absorbed.
- Inhalation of phenol may cause breathlessness and pulmonary oedema for which positive pressure ventilation should be used. Remove any casualty suspected of exposure to fresh air and refer to A & E.
- Possible complications of phenol absorption include hyperpyrexia, gut perforation and renal failure.