

## INFORMATION SHEET NO. 25 : FIRST AID FOR CYANIDE POISONING

### Cyanide poisoning

Cyanide compounds are very toxic to humans, and inhalation exposure can be rapidly fatal. Cyanide compounds prevent the transfer of oxygen from the blood to body tissues as a result of selective inhibition of respiratory enzymes. The heart and central nervous system are particularly prone to rapid damage. Cyanides can enter the body by inhalation, by contact with the skin or eyes and if swallowed.

Although cyanide poisoning is uncommon, all staff and students working or studying in areas using or storing cyanide must be familiar with the first aid required for cyanide poisoning. The most likely injury is to the person using the material but production of hydrogen cyanide gas in an open laboratory could have serious consequences for all occupants. The critical factor is the speed with which the first aid can be started after exposure.

### Symptoms of cyanide poisoning

Mild or early cyanide poisoning	Severe cyanide poisoning
Irritation of nose, mouth and throat	Gasping for breath
Headache, giddiness, nausea	Lapsing consciousness
Difficulty breathing, sense of suffocation	Convulsions
General weakness, heaviness of limbs	Death

### Rescue and first aid for cyanide poisoning

Speed is essential - first aid must be prompt to be effective:

- Call ambulance on 000
- Call security on 333
- If safe to do so, remove the person from the source of contamination:
  - Rescuers must protect themselves with appropriate PPE
  - As a general rule double gloving is required
  - Self contained breathing apparatus must be worn if cyanide gas/dust is suspected.
- If the patient's skin or clothes are contaminated, handle with care, wearing gloves

### First aid for cyanide poisoning

Where cyanide is used at Monash University, oxygen must be available and first aiders must have completed oxygen therapy training. All oxygen cylinders must be maintained according to procedures for First Aid section 13.2.

#### If patient is conscious

- Give 100% oxygen if available
- Double glove, remove contaminated clothing and place in plastic bag until it can be decontaminated
- Wash all contaminated skin with copious amounts of water.
- Continue treatment until medical assistance arrives

## **If patient is not conscious**

### If breathing:

- Place on side and clear airway
- Give 100% oxygen if available
- Double glove, remove contaminated clothing and place in plastic bag until it can be decontaminated
- Wash all contaminated skin with copious amounts of water
- Continue treatment until medical assistance arrives

### If not breathing

- **Do not use mouth to mouth or mouth to nose resuscitation**  
**A resuscitation mask is necessary**
- Give 100% oxygen if available
- Double glove, remove contaminated clothing (place contaminated clothing in plastic bag until they can be decontaminated)
- If no pulse, begin external cardiac compression
- Continue treatment until medical assistance arrives

In all cases a copy of the MSDS and a copy of National Occupational Health and Safety Commission: *Cyanide poisoning*, (2nd edition) 1993 should accompany the patient to hospital. The affected person's supervisor should be notified immediately.

A first aid injury report and hazard & incident report should be completed and sent to Occupational Health Safety & Environment as soon as possible.

For disposal of contaminated clothing refer to [Using Chemicals at Monash University](#).

## **Emergency module for first aid for cyanide poisoning** (see 12.5 in the [Procedures for first aid](#))

This module should be clearly marked in a separate container and be readily accessible to the area where cyanide is used. It should be located adjacent to the first aid kit and medical oxygen.

### Contents of kit

- Copy of appropriate MSDS
- Gloves (4 pairs)
- A copy of National Occupational Health and Safety Commission: *Cyanide poisoning*, (2nd edition) 1993
- Plastic bags labelled with 'Contaminated with cyanide'
- First aid injury report forms
- Hazard & incident report forms
- Resuscitation mask (eg Laerdal or Ambu )

For further information and advice contact Occupational Health, Safety & Environment by phone on 03 990 51016 or by email on [ohsehelpline@adm.monash.edu.au](mailto:ohsehelpline@adm.monash.edu.au).

## **Poisons Information Centre Victoria: Phone: 131126 (24 hours)**

### Reference:

National Occupational Health and Safety Commission: *Cyanide poisoning*, (2nd edition) 1993  
(<http://www.ascc.gov.au/ascc/healthsafety/hazardssafetyissues/hazardoussubstances/cyanide.htm>)