

Appendix 4

CHEMICAL-INDUCED DISTURBANCES OF CONSCIOUSNESS

Some chemicals, particularly if inhaled, can act rapidly on the brain to cause either depression of consciousness (coma) or toxic mental confusion (see **table 6**). Prolonged skin contact or accidental ingestion can cause similar effects, though they are more gradual in onset.

Symptoms will usually resolve very quickly when the casualty is removed from the polluted atmosphere.

Other causes of unconsciousness include:

- Serious traumatic injury
- Fits
- Diabetes
- Stroke.

Immediate danger to life is from failure of, or obstruction to, breathing.

Diagnosis

Symptoms and signs include:

- No reactions to rousing stimuli;
- Weak or irregular pulse in serious cases;
- Breathing is often slow and shallow;
- If pupils are large and do not react to light, **LIFE IS IN DANGER.**

Watch for any signs of difficulty in breathing, which may be due to:

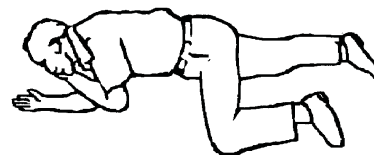
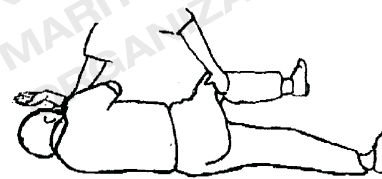
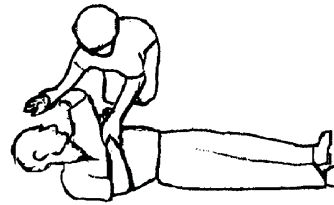
- Suffocation (asphyxia)
- Chemical irritation or infection of the lungs
- Heart failure.

DO NOT GIVE ALCOHOL OR INJECT MORPHINE OR ANY STIMULANT.

The unconscious position

Turn casualty face down, head to one side; no pillows should be used under the head.

- Place the arm nearest to you out at right angles to his body, elbow bent with the hand palm uppermost.
- Bring the far arm across the chest and place the hand, palm down, on the shoulder nearest to you.
- Grasp the far leg just above the knee and pull it up, keeping the foot on the ground.
- With your other hand on the far shoulder, pull on the leg to roll the casualty towards you onto his side.
- Adjust the upper leg so that both the hip and knee are bent at right angles.
- Tilt the head back to make sure the airway remains open.



*Guidelines for resuscitation,
European Resuscitation Council, 1996*

Unconscious casualties

- Must have a clear air passage.
- Must have their loose dentures removed.
- Must have any vomit removed from the mouth and back of the throat.
- Should have a Guedel airway inserted, if possible.
- Should be kept in the unconscious position.
- Must not be left alone or unwatched in case vomiting or a fit occur, or they fall out of their bunk.
- Should be turned from one side to the other at least every 3 hours to prevent bedsores. Turn the casualty gently and roll him smoothly from one side to the other.
- When being turned, should always have their heads kept back with a chin-up position. At no time must their heads be allowed to bend forwards with the chin sagging.
- Should have their breathing checked. Ensure that the Guedel airway is securely in place after the casualty has been turned.
- Make sure that all limb joints are neither fully straight nor fully bent. Ideally they should all be kept in mid-position. Place pillows under and between the bent knees and between the feet and ankles.

- Use a bed-cage (a large stiff cardboard box will make a good improvised cage) to keep the bedclothes from pressing on the feet and ankles.
- Check that elbows, wrists and fingers are in a relaxed mid-position after turning. Do not pull, strain or stretch any joint at any time.
- Make quite sure that the eyelids are closed and that they remain closed at all times, otherwise preventable damage to the eyeball can easily occur.
- Moisten the eyes every 2 hours with saline (sodium chloride 0.9%) by opening the lids slightly and dripping some saline solution gently into the corner of each eye in such a way that the saline will run across each eye and drain from the inner to outer corner. If available, use a 1 L bag of sodium chloride 0.9% with a drip set to irrigate the eyes (a saline solution can be made by dissolving one teaspoonful of salt in half a litre (one pint) of boiled water which has been allowed to cool).

After 12 hours of unconsciousness, further problems will arise:

- Unconscious casualties must be given nothing by mouth in case it chokes them and they suffer from obstructed breathing. However, after 12 hours of unconsciousness fluid will have to be given per rectum (see **appendix 13**), particularly in hot climates and/or if the casualty is obviously sweating.
- The mouth, cheeks, tongue and teeth should be moistened every 3 hours, using a small swab moistened with water. Carry out mouth care every time the casualty is turned.

After 48 hours of unconsciousness, move the limb joints at least once a day:

- All the joints in all the limbs should be moved very gently in such a way as to put each joint through a **full range** of movements, provided that other considerations such as fracture do not prevent this. Watch that the exercise of the arms does not interfere unduly with the casualty's breathing;
- Do the job systematically. Begin on the side of the casualty which is most accessible. Start with the fingers and thumb, then move the wrist, the elbow and the shoulder. Now move the toes, the foot and the ankle. Then bend the knee and move the hip round;
- Next, turn the casualty, if necessary with the help of another person, and move the joints on the other side;
- Remember that unconscious casualties may be very relaxed and floppy – so do not let go of their limbs until you have placed the limbs safely back on the bed. Hold the limbs firmly but not tightly and do everything slowly and with the utmost gentleness. Take your time in moving each joint fully before going on to the next.