

## **INSTRUCTION ON PROVIDING FIRST AID TO THE INJURED**

1. In the event of accident resulting in employees' injury immediately inform the direct supervisor, summon for first aid crew and inspect the causes of the accident.
2. Provide first aid for the injured pending the arrival of the first aid crew.

### **First aid in case of injury**

3. Microbes present on the object that had caused injury, injured skin, in dust, soil, on the hands of the person providing first aid and not sterile bandages may easily get into the wound.
4. Special attention shall be paid to wounds polluted with soil to avoid tetanus (a lethal illness in most cases). Immediately address the doctor and get an injection of anti-tetanus serum.
5. To prevent contamination of the wound the person providing first-aid shall thoroughly wash his/her hands with soap or iodize the fingers if there is no possibility to wash hands. Do not attempt to touch the wound even with clean hands.
6. The following rules shall be observed while providing first aid:
  - 6.1. do not wash the wound with water and medicine, do not powder or oil because all these substances prevent the wound from healing and transfer impurities from the surface into the wound. This may cause suppuration;
  - 6.2. do not attempt to clean sand, soil etc. from the wound because instead of removing the pollutants you will rub them deeper into the wound and poison it. Only the doctor can clean the wound;
  - 6.3. do not attempt to remove blood clots from the wound because you may cause severe bleeding;
  - 6.4. covering the wound with adhesive tape is prohibited.
7. First of all take a sterile dressing from the first-aid kit and cover the wound.
8. If for some reason the sterile dressing is not available, you may use a clean handkerchief or a clean cloth. Pour a few drops of iodine on the cloth and put it on so that the iodine stain shall cover the wound. This method is especially recommended for polluted wounds.

### **First aid in case of bleeding**

9. The bleeding may be arterial or venous. Arterial bleeding is characterized by spurts with each beat of the heart, is bright red in colour and is usually severe and hard to control. Venous bleeding is characterized by a steady flow and the blood is dark, almost maroon in shade. Venous bleeding is easier to control than arterial bleeding.
  - 9.1. To control bleeding:
    - 9.1.1. Raise the injured limb;
    - 9.1.2. Cover the wound with a dressing or gauze, press the gauze to the wound and keep it for 4 - 5 minutes. If the bleeding continues, put another dressing or a piece of cotton and bandage the wound;
    - 9.1.3. If the bandage does not stop the bleeding, in case of arterial bleeding apply a tourniquet on the joint above the bleeding wound. If the bleeding is severe, immediately call the doctor.

## 9.2. Bleeding control by pressure:

9.2.1. arterial bleeding can be stopped by pressing the bleeding vessel with fingers to the bone above the wound;

9.2.2. bleeding from the lower part of the face may be stopped by pressing the cheek-bone artery to the lower edge of the cheek-bone;

9.2.3. bleeding from temples and forehead is stopped by pressing the artery at the front of the ear.

9.2.4. For wounds of the arms or hands, pressure points are located on the inside of the wrist or on the inside of the upper arm. For wounds of the legs, the pressure point is at the crease in the groin

## 9.3. Arterial bleeding is stopped by applying a tourniquet.

10. If it is impossible to bend the limb at the joint (fractured bone of the limb) severe arterial bleeding should be stopped by applying a tourniquet; the time of tourniquet application shall be recorded. Use an elastic cloth, rubber band or shoulder straps. Before applying a tourniquet raise the limb and cover it with a cloth or a piece of clothing.

## **First aid in case of burns**

11. The degree of burns indicates the degree of damage to the tissues. There are four degrees of burns from light glow of the skin to the destruction of deeper tissues.

12. Remove quickly from the body anything of constricting nature like rings, bangles, belt and boots. Do not touch the burnt skin with hands. Do not apply ointments, grease or any other material over the wound. Treat the burn area as any other wound: cover it with sterile cloth, do not apply cotton wool directly over the burnt area.

13. In case of eye burns caused by electric arc apply gauzes soaked in cold boric acid.

14. In case of burns caused by sulphuric, nitrogen or hydrochloric acid wash off the chemical with a large quantity of water by using a shower or hose if available as quickly as possible. Immediately address the doctor for all types of burns.

## **First aid in case of hypothermia**

15. Rubbing of frostbitten spots with snow is not recommended. Rub the frostbitten spots with dry warm gloves or woollen cloth. If it is possible to get indoors the frostbitten limb may be soaked into water of room temperature. Gradually the water temperature may be increased up to the body temperature (37°C). When the frostbitten spots regain the pink colour, they may be treated with grease (vegetable oil, fat, boric ointment) and wrapped in warm cloth. Keep the wrapped hand or leg raised as the pain is less in such a position.

## **First aid in case of fractures, sprains and dislocations**

16. The aims of first aid in the event of fractures, sprains and dislocations are to prevent further damage, to reduce pain and to make the patient feel comfortable. Therefore the limb must be immobilized. Immobilization not only reduces the pain but also prevents the surrounding tissues from damage. Fractured or dislocated limb may be immobilized by a splint, piece of wood, cardboard or a stick.

17. In the case of strains apply cold, tight bandage and keep the limb still.

### **First aid in case of heat stroke and poisoning**

18. If there is a headache, dizziness, nausea, vomiting and occasionally abdominal cramps the patient shall be laid down with slightly upraised feet. Give him a piece of ammonia soaked cotton to smell. Do not put cold cloth or ice on the head. The same actions shall be applied if the patient is unconscious.

19. The victim should be moved to a cool area (indoors, or at least in the shade) and clothing removed to promote heat loss (passive cooling).

20. If the patient stops breathing or his breath is irregular, loosen the clothing at the chest neck and waist, turn the patient into the required posture and start artificial respiration. Continue cooling the patient with wet blankets or applying ice.

21. Symptoms of poisoning with gas or carbon black, acetylene, natural gas or petrol vapour etc. are headache, tinnitus, dizziness, nausea or vomiting, occasionally unconsciousness, breathing disorders, expanded eye pupils. If such symptoms occur, move the patient into fresh air, give oxygen and remove the patient to the hospital or a doctor as quickly as possible.

### **First aid in case of poisoning with gas**

22. If the person has symptoms of poisoning with gas (agitation, weakness, dizziness, vomiting etc.) move him to fresh air immediately. If you must rescue the person from a contaminated area, wear an airline respirator or self-contained breathing apparatus; use of filtering masks in such cases is prohibited.

23. In case of working in gas line or cable-line manholes the standby persons shall fasten the patient to the safety belt and help him out from the manhole.

24. After the patient is removed from the poisoned environment, loosen his clothing at the chest neck and waist to ease the breathing.

25. When the patient recovers consciousness, summon the ambulance and deliver him to the hospital as quickly as possible. If after being removed from the poisoned environment the patient remains unconscious or his breathing is weak or uneven, start artificial respiration without waiting for the rescue team. Stop artificial respiration when the patient starts breathing.

### **First aid in case of foreign bodies (splinters)**

26. Do not attempt to remove foreign bodies from under the skin or nail unless you are sure it will be easily removed; however it is advisable to address medical personnel. Paint the area around the wound with iodine and bandage the injured place.

27. Foreign bodies from eyes, laryngeal cavity or oesophagus shall be only removed by the professional physician.

### **Release from the contact of electric current**

28. The contact with circuit containing objects results in convulsive muscular contractions. Therefore, fingers may have such a strong grip on the wire that it is impossible to release them. If the injured person still has contact with the electric current, he has to be removed from it.

Touching the person in contact with electric current without special precautions is dangerous. Turn off the source of electricity if possible.

29. If the injured person is above the ground, he may fall after the power is turned off and he is released from the circuit, therefore safe fall precautions shall be taken.

30. The illumination may be turned off together with the source of electricity, therefore ensure there is sufficient light from alternative sources.

31. If turning off the source of electricity is impossible, use special measures to separate the injured from the circuit he is in contact with.

### **First aid in case of electric shock**

32. The danger from an electric shock depends on how high the voltage is, how the current travelled through the body, the person's overall health, and how quickly the person is treated. The following measures shall be applied immediately :

32.1. lay the person on his back on a stiff surface;

32.2. check for signs of breathing;

32.3. check for the pulse;

32.4. examine the eye-pupils (narrow or broad). Broad eye-pupils indicate deteriorated delivery of blood to the brain.

33. Call for the doctor in all cases.

34. Start artificial breathing and external heart massage immediately after the injured person is released from the circuit.

### **Casualty handling**

35. Avoid disturbing or causing additional pain to the injured during handling and transportation. Protect him from shaking, keeping in inconvenient or dangerous position, move him using stretchers. Take and put the patient on the stretchers from the safe side. If he/she has fractured bones, support the place of fracture.

36. During transportation of severe casualties put a soft blanket on the stretchers, drive carefully, and avoid shaking.

37. Artificial breathing shall be applied only in those cases when the patient does not breathe or his breath is uneven or gradually deteriorates.

38. Before starting artificial breathing:

38.1. loosen the clothing at the chest neck and waist;

38.2. remove foreign objects from the patient's mouth;

38.3. open the mouth if it is tightly closed.

39. Artificial breathing is to be carried out at released breathing passages. Watch if the patient's tongue is not locked-on.

40. Release breathing passages by bending the head backward and putting the jaw up. Use one hand to bend the head of the injured person and stretch the neck. Direct the artificial breathing tube into the breathing passage and press the injured person's nose tightly with fingers. Watch if the inspired air gets into the lungs, not into the abdomen. You will see whether the chest or the abdomen inflates. If the air gets into the abdomen, release the air by pressing the abdomen under the diaphragm and reinstall the breathing tube.

41. If the breathing tube is not available, put a napkin, a handkerchief or a clean cloth and

surround the mouth of the injured person by your own mouth.

42. Check the blood circulation, i.e. pulse. If you cannot feel the pulse, apply external heart massage accompanied with artificial breathing .