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FIRST AID

WOUNDS AND BLEEDING

CONTENTS

1. GENERAL

1.01 An open wound is a break in the skin or in the mucous membrane lining one of the body cavities.

1.02 Wounds are subject to two dangers, serious bleeding or hemorrhage and infection.

1.03 Wounds may be divided into four kinds:

(1) Abrasions - Wounds made by rubbing or scraping off the skin or mucous membrane. These are very easily infected.

(2) Incised Wounds - These are made by any sharp cutting instrument, e.g., a knife, broken glass, or razor. They tend to bleed freely as the blood vessels are cleanly cut across.

(3) Lacerated or Torn - Injuries by blunt instruments produce this type wound. The danger of infection is great, due to dirt frequently being ground into the tissues, to lack of bleeding, and to destruction of body tissues forming the edges of the wound.

(4) Puncture Wounds and Stabs - These may be caused by any penetrating instrument. Common causes are nails, ends of wire, bullets, etc.

(a) Puncture wounds usually do not bleed freely, so the cleansing given by bleeding is not present.

(b) They are very difficult to clean out. Even the physician often has difficulty in removing dirt and foreign bodies.

(c) It is difficult to apply an antiseptic well down into the wound.

(d) Air cannot get to the wound. Lack of air favors greatly the growth of certain germs, particularly the one causing tetanus or lock-jaw.

2. WOUNDS IN WHICH BLEEDING IS NOT SEVERE

2.01 Remember, no matter how small the wound may be, it is always large enough for thousands of germs to enter. The only safe thing to do is to take proper care of each wound, regardless of how small it is, as soon as it occurs.

2.02 Do not touch the wound with the hand, mouth, clothing or any unclean material. Only sterile gauze should be used. If the wound is reasonably slight, it should be cleaned with soap and clean water, when practicable; not by vigorous scrubbing, but by gentle sponging. If a serious wound is obviously dirty and cannot be taken immediately to a doctor, it should be washed before applying iodine and the dressing. Clean water, preferably running from a tap may be used for washing dirt from wounds if soap is not available.

2.03 If the wound has been washed, allow it to dry before applying iodine. Apply mild tincture of iodine well down into the wound, then on the skin around the wound for a distance of from one-half to one inch. Let the iodine dry.

2.04 Apply a steril dressing or compress and bandage snugly in place.

3. WOUNDS WITH SEVERE BLEEDING

3.01 Severe bleeding must be stopped at once as the loss of blood may prove fatal.

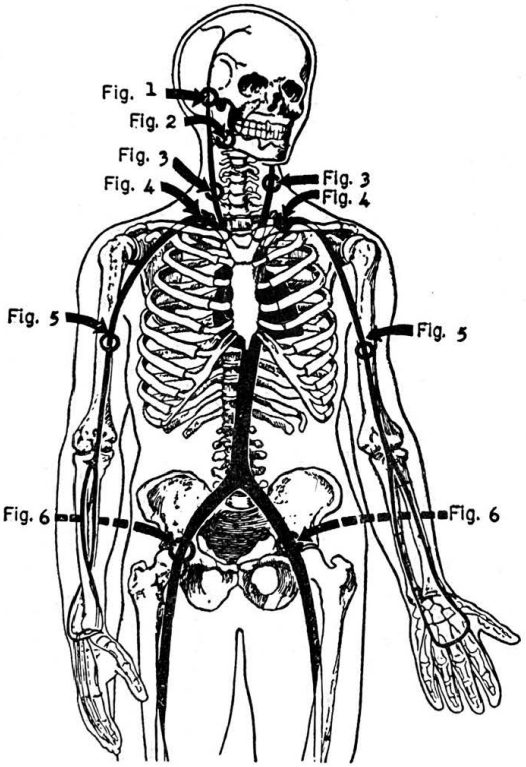
3.02 The most commonly used way to stop bleeding is by direct pressure with the hand or a cloth thrust against the wound and held firmly in place.

3.03 Always remove enough clothing so that the wound may be clearly seen.

3.04 To stop arterial bleeding which usually comes in spurts, immediately apply pressure between the cut and the heart at the proper one of the six points, illustrated in Figures 1 to 6.

3.05 Pressure points.

PRESSURE POINTS



(1) For bleeding from arteries in the temple region, the scalp and the forehead, apply pressure just in front of the ear.

Figure 1 - Applying digital pressure at ear.

(2) For bleeding from wounds of the face below the level of the eye, apply pressure along the jaw bone.

Figure 2 - Applying digital pressure to jaw

(3) For bleeding from a cut throat, place the ends of the fingers against side of the windpipe (not over it) and carry the thumb on around the back of the neck. Now apply pressure between the ends of the fingers and the thumb pressing the cut blood vessel against the spinal column.

Figure 3 - Applying digital pressure to throat

(4) For bleeding from the extreme upper part of the arm, the armpit or shoulder, apply pressure in the hollow behind the inner third of the collar bone down against the first rib.

Figure 4 - Applying digital pressure at shoulder

(5) For bleeding in the hand, forearm and the upper arm, grasp the arm about half way between the shoulder and elbow, fingers well up on the inside of the arm and thumb to the outside. Apply pressure from the fingers to the thumb thus pressing the artery against the bone in the arm.

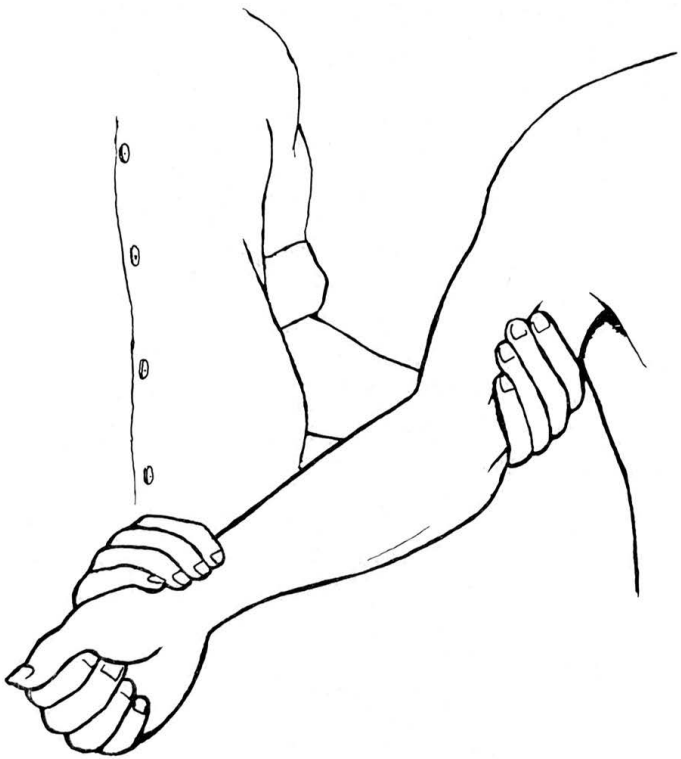


Figure 5 - Applying digital pressure to arm

(6) For bleeding in the thigh, leg, or foot, apply pressure in the middle of the groin with the heel of the hand. This presses the artery against the pelvis bone.

Figure 6 - Applying pressure in the groin

3.04 Whether one next applies a compress over the wound or a tourniquet to take the place of hand pressure, must be determined in each case.

4. USE OF TOURNIQUET

4.01 First aiders should recognize that the application of a tourniquet to a limb is a serious step, but it may also save a life. The dangers:

(1) If the tourniquet is left on too long, the limb may be lost.

(2) If it is removed before blood volume can be replaced, the additional bleeding may prove fatal.

(3) If it is removed after a long period of application, it may increase shock, even though no further bleeding occurs. This condition, called "tourniquet shock," may be irreversible despite multiple transfusions.

4.02 IN VIEW OF THE ABOVE, A TOURNIQUET SHOULD BE USED ONLY FOR SEVERE LIFE-THREATENING HEMORRHAGE, WHICH CANNOT BE CONTROLLED BY OTHER MEANS. Actually, the use of a tourniquet is seldom required. Crushing wounds or large lacerations, where large arteries are severed, or in cases of partial or complete severance of a body part are the only instances where application of a tourniquet may be justified.

4.03 The present procedure for the use of the tourniquet will be as follows:

(1) Place the tourniquet close to the wound, but not at the wound edge. There should be unbroken skin between the tourniquet and the wound. If the wound is near a joint, obviously the wrap will be made at the nearest point above the joint.

(2) Make sure it is applied tightly enough to stop bleeding. Improperly applied, it may increase bleeding and hasten death.

(3) Once the tourniquet is applied, it should not be released, no matter how long it has been in place, except by a physician. Physicians are prepared to control hemorrhage and replace blood volume adequately.

(4) A notation should always be made and attached to the victim, giving the location and the hour of application.

(5) Improvised tourniquets should be made of flat material about two inches wide (a cravat bandage, stockings, or a belt, for example). Don't use rope, wire or sash cord; they may cause injuries to the underlying tissues and blood vessels.

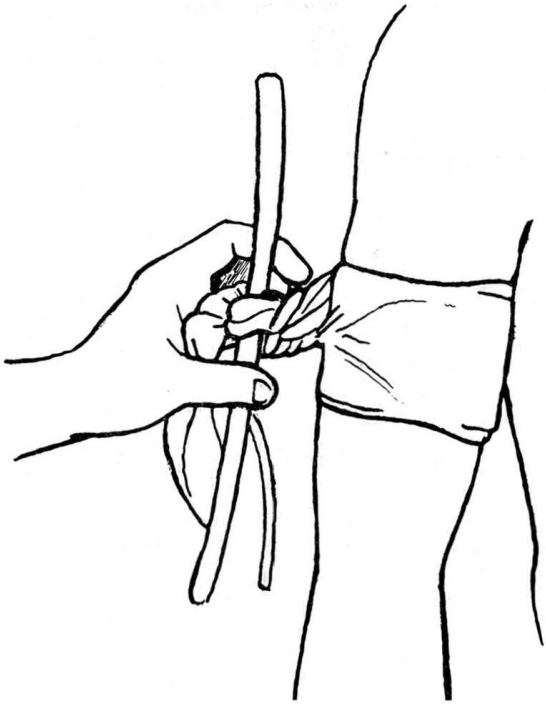
4.04 Application of tourniquets -

(1) The two most convenient places for correctly applying a tourniquet to control bleeding are:

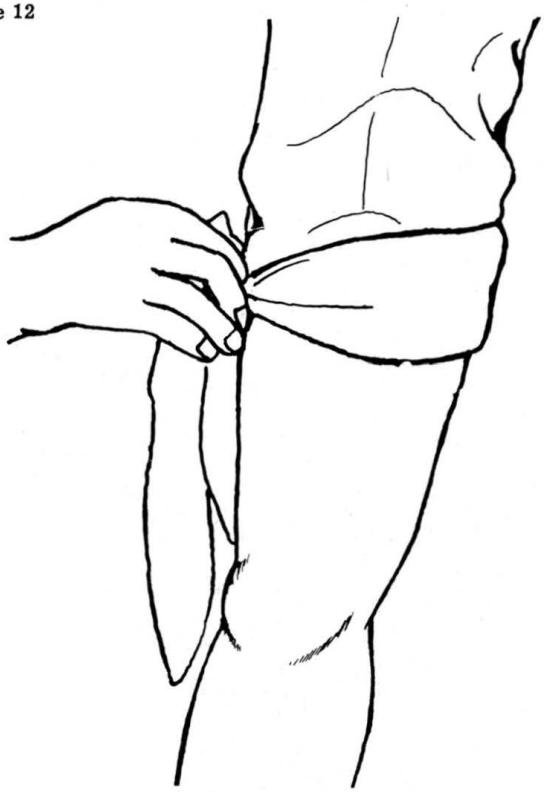
(a) Around the upper arm about a hand's breadth below the armpit.

(b) Around the thigh about the same distance below the groin.

(2) Wrap the material twice around the limb if at all possible and tie a half knot. Place a short stick or similar article, on the half knot and tie a square knot over it. Twist the stick rapidly to tighten the tourniquet thereby pressing on the artery and stopping the flow of blood as illustrated.



Applying tourniquet to arm



Applying tourniquet to thigh.

5. VENOUS BLEEDING

5.01 Bleeding from veins comes in a steady stream and is under much lower pressure than from an artery. Because of this lower pressure it is much easier to control.

(1) Always have the victim lying with the bleeding part elevated if the bleeding is at all serious, except in case of a fractured limb.

(2) Tight clothing such as garters or collar, should be removed from the heart side of the wound.

(3) Apply pressure with the fingers along the edge of the wound, particularly on the edge away from the heart, until one can obtain material for a compress.

(4) Usually, bleeding from a vein can be controlled by placing a compress over the wound and bandaging snugly. Then if needed, apply firm pressure with the hand directly over this until a clot forms.

(5) Remember always, if bleeding is very severe and not readily controlled by pressure over the wound, one can always apply digital pressure at the proper one of the six pressure points, thus cutting off the blood flowing through the artery to the part of the body supplied by it.

(6) After severe bleeding has been controlled by pressure, the pressure shall be released slowly at 15 to 20 minute intervals to see if the bleeding has stopped. If it recurs, reapply pressure. Where a compress has been applied to assist in controlling bleeding, leave compress in place.

5.02 Pressure Bandages -

(1) Bleeding from wounds of the scalp and face can be controlled by placing a compress over the wound and bandaging tightly. If a bandage is not immediately available, use hand pressure directly over the compress.

(2) It is usually only where a large artery or vein is cut that other methods need be used. If the hand pressure is difficult to keep up and the bleeding is from one of the limbs, a tourniquet should usually be applied.

6. INTERNAL BLEEDING

6.01 It is most likely to come from the stomach, lungs, or bowels. The First Aid care is the same in all three cases:

(1) Keep victim lying on his back. Turn the head to one side.

(2) Keep him quiet and do not move him unless absolutely necessary.

(3) Keep him warm - treat for shock.

(4) Do not give stimulants.

(5) Call a doctor.

(6) In bleeding from the lungs it may be desirable to elevate the head and chest.