# Circulatory emergencies

# First Aid/ External Bleeding

# Introduction

## Bleeding is a common reason for the application of first aid measures and can be internal or external. The principle difference is whether the blood leaves the body - external bleeding can be seen, whereas in internal bleeding, no blood can be seen.

## There are many causes of external bleeding, which fall in to six main categories, which are:

## • Abrasion - Also called a graze, this is caused by transverse action of a foreign object against the skin, and usually does not penetrate below the epidermis

## • Excoriation - In common with Abrasion, this is caused by mechanical destruction of the skin, although it usually has an underlying medical cause

## • Laceration - Irregular wound caused by blunt impact to soft tissue overlying hard tissue or tearing such as in childbirth

## • Incision - A clean 'surgical' wound, caused by a sharp object, such as a knife

## • Puncture Wound - Caused by an object penetrated the skin and underlying layers, such as a nail, needle or knife

## • Contusion - Also known as a bruise, this is a blunt trauma damaging tissue under the surface of the skin

## • Gunshot wounds - Caused by a projectile weapon, this may include two external wounds (entry and exit) and a contiguous wound between the two

# Recognition

## Recognizing external bleeding is usually easy, as the presence of blood should alert you to it. It should however be remembered that blood may be underneath or behind a victim. It may be difficult to find the source of bleeding, especially with large wounds or (even quite small) wounds with large amounts of bleeding. If there is more than 5 cups of bleeding, then the situation is life-threatening.

# Caution

## Put gloves on before coming into contact with any blood or body fluids.

# Treatment

## As with all first aid situations, the priority is to protect yourself, so put on protective gloves before approaching the victim.

## All external bleeding is treated using three key techniques, which allow the body's natural repair process to start. These can be remembered using the acronym mnemonic 'RED':

## Rest

## Elevation

## Direct pressure

# Rest

## In all cases, the less movement the wound undergoes, the easier the healing process will be, so rest is advised.

# Elevation

## Direct pressure is usually enough to stop most minor bleeds, but for larger bleeds, it may be necessary to elevate the wound above the level of the heart (whilst maintaining direct pressure the whole time). This decreases the blood flow to the affected area, slowing the blood flow, and assisting clotting.

## Elevation only works on the peripheries of the body (limbs and head) and is not appropriate for body wounds. You should ask the victim to hold their wound as high as possible. You should assist them to do this if necessary, and use furniture or surrounding items to help support them in this position. If it is the legs affected, you should lie them on their back (supine), and raise their legs.

# Direct Pressure

## The most important of these three is direct pressure. This is simply placing pressure on the wound in order to stem the flow of blood. This is best done using a dressing, such as a sterile gauze pad (although in an emergency, any material is suitable).

## If the blood starts to come through the dressing you are using, add additional dressings to the top, to a maximum of three. If you reach three dressings, you should remove all but the one in contact with the wound itself (as this may cause it to reopen) and continue to add pads on top. Repeat this again when you reach three dressings. The reason for not simply adding more dressings is that it becomes harder to apply the direct pressure which is clearly needed if this much blood is produced.

# Dressing

## Once the bleeding is slowed or stopped, or in some cases, to assist the slowing of the blood flow you should consider dressing the wound properly.

## To dress a wound, use a sterile low-adherent pad, which will not stick to the wound, but will absorb the blood coming from it. Once this is in place, wrap a crepe or conforming bandage around firmly. It should be tight enough to apply some direct pressure, but should not be so tight as to cut blood flow off below the bandage. A simple check for the bandage being too tight on a limb wound is a capillary refill check; to do this, hold the hand or foot (dependent on what limb is injured) above the level of the heart and firmly pinch the nail. If it takes more than 2 seconds for the pink color to return under the nail, then the bandage is likely to be too tight.

## If the blood starts to come through the dressing you have applied, add another on top, to a maximum of three. If these are all saturated, remove the top two, leaving the closest dressing to the wound in place. This ensures that any blood clots that have formed are not disturbed; otherwise, the wound would be opened anew.

# Special cases

# Nosebleeds (epistaxis)

## If a person has nosebleed, have them pinch the soft part of the nose firmly between thumb and forefinger, just below the end of the bone. If necessary, do this yourself, but it is preferable to have them do it themselves if they are able to do it effectively.

## The victim should lean their head slightly forward and breathe through their mouth. You can also leave the head in a neutral position, but never tilt the head back. Tilting the head forward ensures that blood isn't ingested (as it can cause vomiting) or inhaled (choking hazard).

## If you are unsuccessful at stopping the bleeding after 10 minutes of direct pressure, you should assess the blood flow. If the blood flow is minor, you could consider using an ice pack on the bridge of the nose to help stem the flow.

## If the nose continues to bleed with a fast flow, you should seek medical assistance, probably from the ambulance.

# Embedded Objects

## If there is something embedded in the wound, do not remove it. Instead, apply pressure around the object using sterile gauze as described above. Rolled bandages are perfect for this. Be careful not to disturb the object, as moving it may exacerbate the bleeding. This doesn't apply to superficial splinters and such.

# Stab, puncture or gunshot wounds to the body

## These wounds are life threatening, and after assessing the ABCs of the victim, you should immediately summon an ambulance. As always, you should check that you are not in danger when approaching these victims (from someone with a knife or gun, for instance). As with all embedded objects, ensure you do not remove the item from the body.

## If possible, you should sit the victim up (as blood in the body will go to the lowest point, allowing the heart and lungs to work as efficiently as possible). You should also lean them to the injured side, keeping the healthy side free from incursion by blood.

## Assess the victim for open chest wounds or abdominal injuries, and treat accordingly.

# Amputations

## If a body part has been amputated, immediately summon ambulance assistance, and treat the bleeding as above. Cover the amputated part with a moist dressing and get it into a clean plastic bag, and place this bag into a bag of ice and water, sending it with the victim to the hospital. (label date & time, what body part it is ie:Right finger) You should avoid putting the part in direct contact with ice, as this can cause irreparable damage, meaning that surgeons are unable to reattach it.

## If the body part is partially amputated, do not detach.

# First Aid/ Internal Bleeding

# Introduction

## Internal bleeding is bleeding which occurs inside the body. Sometimes the blood will leak from inside the body through natural openings. Other times the blood stays inside the body, causing pain and shock, even though you cannot see the blood loss.

# Causes

## Internal bleeding can be caused numerous ways. Any time someone could have internal bleeding, you will do no harm by treating them for internal bleeding, but not treating the victim could lead to death.

## Some causes include:

## • Falls

## • Car Accidents

## • Motorcycle Accidents

## • Pedestrians Struck by a Vehicle

## • Gun Shot Wounds

## • Injures from Explosions

## • Impaled Objects

## • Stab Wounds

## • Surgery

# Recognition

## A person may be bleeding internally if one of these things happens:

## • Blood comes out of the nose or mouth (occurs from severe head trauma)

## • Blood or clear fluid comes out of the ear (occurs from severe head trauma)

## • Blood is in the stool

## • Blood is in the urine

## • Bright red blood, or blood like 'coffee-grounds', is in the vomit

## • Blood comes from a woman's birth canal after an injury or during pregnancy • Bruising over the abdominal or chest area

## • Pain over vital organs

## • Fractured femur

## But remember, a person may be bleeding inside the body, even though you cannot see the bleeding. If you see the signs of shock and no apparent injuries, always suspect internal bleeding. Check the skin color changes. In cases of internal bleeding the skin may become pale and cold, and cyanosis may be present.

# Treatment

## As with any victim, before treating, put on disposable gloves and take other necessary body substance isolation precautions.

## • Check the victim's ABCs.

## • If the victim has ABC complications, treat those first - ABCs always take priority.

# • Call an ambulance

## • Treat for shock

## • Assist the victim into the most comfortable position

## • Monitor ABCs and vitals until the ambulance arrives

## 