SOUTH QUEENSLAND
AUSTRALIAN ARMY CADETS BRIGADE

FIRST AID

FIRST AID

Primary Objectives

a. Preserve life;
b. Protect the unconscious;
c. Prevent a casualty's condition form becoming worse; and
d. Promote the recovery of a casualty.

First Aiders should aim to prevent:

a. Damage to themselves and other uninjured people at the scene of an incident;
b. The casualty's condition from becoming worse;
c. Delays that could affect the casualty's recovery; and
d. Any harmful intervention.

Consent - Before rendering any assistance, a first aid provider must obtain the consent of the casualty.

Communicable Disease - wherever possible, first aid providers should:

a. Wear personal protective equipment such as gloves, boots and goggles;
b. Avoid contact with objects that may be contaminated;
c. Wash their hands thoroughly with soap and water before and after administrating first aid;
d. Cover their own exposed cuts and grazes with waterproof dressing;
e. Avoid eating, drinking and other forms of hand-to-mouth contact whilst administrating first aid;
f. Change gloves before handling different casualties to minimise the possibility of cross-infection between casualties; and
g. Seek medical aid as soon as possible if contamination by infected blood or body fluids occurs.

EMERGENCY ACTION PLAN

SURVEY THE SCENE
▪ Is the scene safe? ▪ What happened? ▪ How many casualties are there? ▪ Are there any bystanders to help?
DETERMINE WHETHER THE SCENE IS SAFE
▪ For yourself. ▪ Bystanders. ▪ Casualty.
PHONE FOR EMERHENCY HELP – CALL TRIPLE ZERO (000)
▪ Listen carefully to the operator. ▪ Give the exact location. ▪ Call back phone number. ▪ Incident details, casualty conditions (consciousness). If possible, send a bystander to make the call. ▪ Remember to hand up last.
ASSESS FOR LIFE THREATENING INJURIES
▪ Response. ▪ Airway. ▪ Breathing. ▪ Severe bleeding.
DO A SECONDARY SURVEY
▪ Question the casualty and bystanders. ▪ Check vital signs. ▪ Examine casualty head to toe.

ASSESS FOR LIFE THREATENING INJURIES

Response

C – Can you hear me?
O – Open your eyes
W – What is your name?
S – squeeze my hands

Airway

A casualty's airway is checked by carefully tilting their head backward and looking in the mouth for foreign bodies such as food, toys, loose dentures or fluid. If the casualty's airway is obstructed by water, blood or other fluid, place the casualty into the lateral (side) position, which results in a sideways, slight downward titling of their face.

Breathing

a. Look – for the rise and fall of the chest;
b. Listen – for the movement of air by placing your ear near the casualty's mouth and nose; and
c. Feel – for the movement of air from the nose and mouth against your cheek, and place your hand carefully on the casualty's diaphragm to feel for the rise and fall of their lower chest.

If the casualty is breathing, and if they are not already on their side, place them in the lateral (side) position and maintain neck stability.

Severe Bleeding

The first aid provider should identify and immediate control any sever bleeding (major haemorrhaging). This implies requires the casualty to be scanned from head-to-toe to detect signs of external bleeding.

LATERAL POSITION

a. Move the casualty's arms (furthest away from you) out to the side of the casualty;

b. Place the casualty's arm (closest to you) over the casualty's chest;

c. Lift the casualty's leg by bending the knee (closest to you) and grasp the casualty's shoulder (closest to you);

d. Gently roll the casualty away from you; and

e. Position the casualty so their head and bended knee supports them in the lateral (side) position.

TREAT COLD INJURIES AND HEAT ILLNESS

OVEREXPOSURE TO COLD

Hypothermia is a condition in which the body's temperature becomes dangerously low. It is generally considered to involve the body temperature of 35°C and below, and it occurs when the heat being generated by the body is insufficient to compensate for that being lost to the environment when a person is exposed to excessively cold temperatures for prolonged periods of time.

Hypothermia is dangerous because of its insidious onset and its fatal end result. Signs and symptoms which may occur without being noticed include:

a. lethargy,
b. feeling cold,
c. irritability,
d. confusion,
e. loss of interest,
f. decrease in concentration,
g. pale and cold skin,
h. irregular slow pulse, and
i. low blood pressure.
j. Collapse and coma usually follow and these may result in cardiac arrest and death.

Treatment

a. Remove the casualty from the cold environment or high altitude to a warm room or shelter.

b. Remove the casualty's wet clothing and replace it with dry clothing. If no dry clothing is available, leave the wet clothes on and cover the casualty with waterproof material and additional insulation, if available.

OVEREXPOSURE TO COLD…CONT

Evacuate for medical care.

If evacuation is delayed for operational or other reasons, apply gentle heat to the casualty by stripping him or her and placing him or her in a sleeping bag with hot water bottles, hot stones wrapped in towels or with another person in the sleeping bag. With unconscious casualties suffering from severe hypothermia, immersion in a bath of water at a temperature of 42 to 44 degrees centigrade is required

Prevention

Prevention can be achieved by prior planning, proper clothing, and relevant training of the cadets, regular inspections and rotation of cadets from areas where exposure to cold and wet weather is continuous or severe.

OVEREXPOSURE TO HEAT

HEAT EXHAUSTION

Heat exhaustion is caused by excessive loss of water and salt from the body. It is prone to occur in hot climates when fluid loss is not sufficiently replaced by fluid intake.

The signs and symptoms of heat exhaustion are:

a. headache,
b. mental confusion,
c. dizziness,
d. extreme weakness,
e. fainting in some cases,
f. below normal oral temperature, and
g. weak and rapid pulse.

OVEREXPOSURE TO HEAT…CONT

Treatment

a. Give water by mouth (small sips).
b. Remove the casualty to a cool place and lay him/her horizontally.
c. Elevate the feet.
d. Loosen or remove the casualty's clothing to help body cooling.

HEATSTROKE

Heatstroke is sometimes referred to incorrectly as sunstroke. Heatstroke is caused by inadequate heat loss from the body with overheating and damage to the brain. It tends to occur in a hot climate where the natural cooling mechanisms in the body are insufficient to get rid of the excess body heat.

Signs and Symptoms

Headache, dizziness, mental confusion, frequent desire to urinate, and diminished or absent sweating. Usually, heatstroke starts with sudden collapse and loss of consciousness leading to coma. The casualty's skin is pale, hot, and dry. There is an absence of sweating. The body temperature is very high (40.5 degrees to 43.3 degrees centigrade).

First aid

a. Remove the casualty's clothes. Immerse him in cold water or in ice water if available. If the water available is not enough for immersion, sprinkle or sluice the casualty thoroughly, and then fan him to quicken cooling by evaporation.
b. Rub the casualty's arms, legs, and trunk to increase circulation to the skin.
c. Evacuate him as soon as possible. Always transport the patient in an opened vehicle, never in a closed ambulance. The passage of air currents through open doors and windows will aid cooling.
d. Continue measures to cool the patient until medical care is reached.

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OVEREXPOSURE TO HEAT…CONT

Prevention

a. Newly arrived cadets must be allowed to acclimatize to the heat before undertaking strenuous activity.
b. When exercising in hot climates, all personnel MUST drink sufficient fluids. Aim for 1L per hour during such activity. Fluid replacement can best be monitored by the urine output, which should be of normal colour and amount.
c. Avoid working during the hottest part of the day, if possible.
d. Work in the shade.
e. Wear appropriate clothing. Never work in the hot sun without wearing a shirt and hat.

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TREAT POISONING

Poisoning, either accidental or deliberate, is not uncommon.

Poisons can enter the body in a number of ways, including:

a. through the mouth, by eating or drinking poisonous substances;
b. through the lungs, by inhaling poisonous gases as in chemical warfare, or chemical vapours or fumes from fires, stoves and engine exhausts;
c. by injection through the skin as the result of bites or injections; or
d. by absorption through the skin on contact with poisonous sprays such as insecticides, pesticides and defoliants.

Signs and Symptoms

The signs and symptoms of poisoning vary with the poisoning agent and the duration of poisoning. When in the body, poisons act in various ways. Once in the bloodstream, some poisons work on the central nervous system, preventing breathing, heart action and other vital life processes.

Treatment for Ingested Poisons (Orally)

The absorption of the poison can be delayed by the following measures:

a. In the case of corrosives, drink a glass of milk.
b. Drinking 70gm activated charcoal in 700ml of water will absorb a large range of common poisons and retard their absorption.

The poison can be removed from the stomach when:

a. the patient is conscious, and
b. the substance swallowed is not a corrosive or petroleum product.

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TREAT POISONING…CONT

Treatment for Inhaled Poisons

a. Remove the casualty from the poison and carry him into fresh air.
b. If breathing has failed or is failing, give artificial respiration.
c. Seek medical aid.

Treatment for Skin Contamination

Skin contamination may be caused by corrosives such as strong acids or alkaline, or by poisons such as carbolic acid (phenol). Irritation and burning of the skin with reddening occurs and perhaps blistering and destruction of the skin. Strong carbolic acid may give the skin a greenish tinge.

Remove the contaminant by flooding with water. If clothing is contaminated, direct a stream of water under the clothing while it is being removed. When the contaminant has been fully removed, treat as for any burn.

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TREAT BITES AND STINGS

THE PRESSURE IMMOBILISATION METHOD

The pressure immobilisation method is used for bites and stings of:

a. snakes, both land and sea;
b. the box jellyfish;
c. the blue-ringed octopus;
d. cone shells;
e. the funnel web spider;
f. bees; and
g. ticks.

Pressure immobilization is not used for bites and stings of:

a. red-back spider, or
b. stone fish and bull ant.

The technique of pressure immobilization is described as follows:

a. Immediately apply a broad, firm bandage around the limb and on the involved area.
b. It should be as tight as the binding used for a sprained ankle. As much of the limb should be bandaged as possible. Crepe bandages are ideal but any flexible material may be used (e.g., clothing or towels torn in strips).
c. Keep the limb as still as possible. Apply a splint.
d. Reassure the casualty and keep him calm and quiet.
e. Bring transport to the victim whenever possible.
f. Leave the bandages and splints on until medical care is reached.

TREAT BITES AND STINGS…CONT

SNAKE BITE

Signs and Symptoms

May take up to 24 hours to become evident, but usually appear from 15 minutes to two hours after the bite.

a. Less than one hour after being bitten, the victim suffers: headache, vomiting, and transient faintness with confusion or unconsciousness.
b. One to three hours after being bitten, the victim suffers: paralysis of the cranial nerves producing drooping eyelids, double vision and difficulty in swallowing; enlarged lymph glands;
c. abdominal pain; dark urine; rapid pulse; and haemorrhage.
d. More than three hours after being bitten, the victim suffers: paralysis in large muscles of limbs, progressive respiratory paralysis, and circulatory failure.

First Aid

a. prompt application of the pressure immobilization method;
b. observation of airway, breathing and circulation, with prompt basic life support techniques if these fail; and
c. transfer to medical aid without delay.

Do Not:

a. cut or excise the bitten area,
b. apply a tourniquet,
c. wash the bitten area (the snake involved may be identified by the detection of venom on the skin).

TREAT BITES AND STINGS…CONT

FUNNEL-WEB SPIDER BITE (ATRAX ROBUSTUS)

Signs and Symptoms

Usually occur within 10 minutes of being bitten but are short-lived and completely reversible if first aid is prompt.

a. muscle twitching,
b. numbness of the mouth,
c. profuse sweating and salivation,
d. rapid heart beat,
e. respiratory difficulty,
f. vomiting, and
g. unconsciousness.

First Aid

The pressure immobilization method should be used. Antivenin should also be used, if available.

BUSH TICK BITES (IXODES HOLOCYCLUS)

Bush ticks occur in the rainforests, open scrub and cleared grasslands of Eastern Australia.

Signs and Symptoms

a. muscular weakness, leading to staggering and falling;
b. difficulty in swallowing;
c. double vision (diplopia);
d. photophobia (pain looking at bright lights);
e. lethargy and loss of appetite; and
f. difficulty in breathing, leading to death.

TREAT BITES AND STINGS…CONT

First Aid

The first aid for tick infestation is to remove the tick as soon as possible. The tick should be extracted with its mouth parts intact. Usually, it can be levered out with an open pair of fine nail scissors slipped under the tick's head. A check should be made for the presence of other ticks. A tick antitoxin is available for treatment of severe cases.

BOX JELLYFISH (SEA WASP) (CHIRONEX FLECKERI)

Signs and Symptoms

a. pain, which increases within the first 15 minutes in mounting waves, despite removal of the tentacles;
b. areas of contact are linear and multiple, showing as purple or brown lines like those made by a whip;
c. weals which occur promptly and massively;
d. respiratory (breathing) distress and failure; and
e. cardiac arrest (heart stoppage).

First Aid

Flood the adherent tentacles with vinegar. Do not rub the area, and do not touch the tentacles till the vinegar is applied. In serious stings, use the pressure immobilization method.

RED-BACK SPIDER BITE (LATRODECTUS MACTANS HASSELTI)

Signs and Symptoms

Red-back venom causes intense pain with sweating over the affected area and a rapid heart rate. Effects develop slowly so there is time to apply ice locally for pain relief and to seek medical aid. Do not use a pressure bandage.

TREAT BITES AND STINGS…CONT

BLUE-RINGED OCTOPUS (HAPALOCHLAENA MACULOSA)

Species of the blue-ringed octopus are found all around the coast of Australia. When it bites, it may inject toxic saliva which causes respiratory paralysis.

Signs and Symptoms

The victim complains of numbness and tingling of the mouth, difficulty in speaking and blurring of vision. This is followed by a rapid and complete paralysis.

First Aid

Immediate pressure immobilization should be instituted. Seek medical help immediately. Artificial respiration maybe required for up to six hours.

SCORPION AND CENTIPEDE STINGS

Scorpion and centipede stings are rare. Australian species are small and the sting causes only local pain and swelling.

Signs and Symptoms

The signs and symptoms of scorpion and centipede stings are local pain and swelling. Generalized effects are rare.

First Aid

a. Immerse the bitten part in hot water.
b. Reassure the casualty and keep him comfortable.

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BURNS

First Aid Treatment of Burns

The objectives of first aid are the same in all burns. They are prevention and treatment of shock, prevention of infection and relief of pain. Treatment of different types of burns is described as follows:

Minor Burns

a. Immediately place the affected part in coldwater to relieve pain and prevent further tissue damage.
b. After two or three minutes, apply a dry, sterile dressing over the burned area.
c. Do not apply ointment, cold cream or any other medication. Whatever the apparent depth when first seen, burns affecting 0.5 percent of the body's surface require medical attention (0.5 per cent is roughly half the area of the casualty's palm and fingers).

Flame Burns

a. If the clothing is a light, lie the patient down and smother the flames with a suitable wrapping (e.g., a blanket, rug or coat).
b. Do not remove clothing or adherent matter from the burnt area.
c. Wrap the burnt area in a burns dressing, if available, or in a clean sheet or cloth.
d. Do NOT apply soda, ointment, paste or any other medication to the burnt area.
e. Evacuate to medical care.
f. Drinks are permissible because flame burns are almost always extensive enough to cause shock.

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BURNS…CONT

Hot Water Burns (Scalds)

a. If seen AT ONCE, hot, wet clothing should be removed; it can act as an insulator and aggravate the damage.
b. Otherwise, treat as for flame burns.

Electrical Burns

a. Remove the casualty from the current (taking suitable precautions) or switch off the current.
b. If breathing is not perceptible: ensure a clear air passage, and carry out artificial respiration.
c. When breathing has resumed, look for and treat: wounds, fractures, and burns.

Chemical Burns

a. Remove contaminated clothing at once.
b. Irrigate freely with water; this includes immersion and the use of a shower bath if practicable.

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DRESSING AND BANDAGES

Rules for Applying Dressings

Apply the following rules when dressing an injury:

a. Have the patient sitting or lying comfortably and handle the patient and the injured part as gently as possible to avoid further pain

b. Cover the wound. Apply the dressing directly over the wound. Use a dressing that is large enough to cover the entire wound.

c. Avoid contaminating the wound. Use a sterile dressing where possible. Do not touch the side of the dressing that goes next to the wound. Do not let the dressing touch your clothing or that of the casualty. Do not drag the dressing over the skin around the wound. When tying the dressing, hold it in place so that it does not slip and rub dirt into the wound.

d. If the dressing is secured by tying, place the knots where they are easy to see and to reach. Use reef knots when tying dressings and bandages. Avoid tying the knot over the wound or placing the knot where a casualty will lie on it.

e. After a dressing is applied it should not be disturbed or replaced unless it slips and exposes the wound.

f. If blood continues to ooze through the dressing, apply another over the first and secure it firmly with a bandage.

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DRESSING AND BANDAGES…CONT

Bandages

A bandage is any flexible material used to:

a. hold a dressing in place over a wound,
b. fasten a splint to an injured part of the body,
c. create pressure over a wound for control of bleeding,
d. support (as a sling) an injured part, or
e. supplement a dressing in protecting a wound from contamination.

Do not apply a bandage directly over a wound. Put a sterile dressing on first, and then cover it with a bandage. The bandage may not be sterile and can contaminate the wound.

Securing Bandages

Bandages are secured as follows:

a. *Tying.* The ends of the bandage should be secured by a reef knot, and not by the common granny knot. A reef knot does not slip and is more easily undone.

b. *Pinning.* A safety pin should be used. Keep one finger between the bandage and the patient's skin to make sure he/she is not pricked.

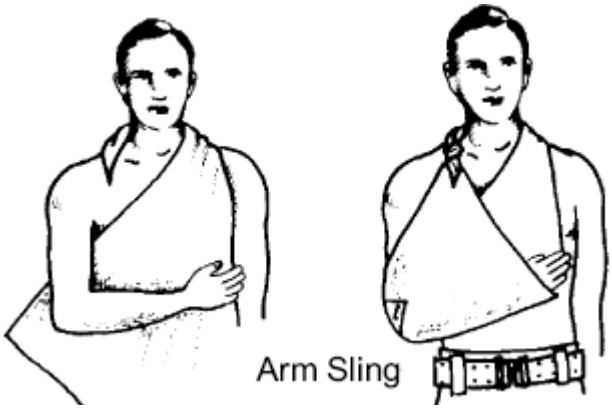
c. *Adhesive Plaster.* Adhesive plaster maybe used to secure a bandage if tying or pinning is not convenient.

TRIANGLE BANDAGE

The Arm-sling

Place the patient facing you with his/her arms to his/her sides. Apply a whole-cloth to his/her chest with the point towards the injured arm; the upper end goes over the shoulder on the sound side and the lower end hangs down in front. Carry the upper end round the back of the neck and then forward over the opposite shoulder. Draw the point backwards between the chest and the injured arms other lies behind the elbow.

Bend the injured arm carefully at the elbow, and bring the forearm across the chest so that it lies over the middle of the bandage, with the thumb upper- most. Pick up the lower end, bring it upward in front of the forearm, and knot it to the upper end, which is lying in front of the shoulder on the injured side Draw the point forward round the arm and elbow and secure it with a pin.



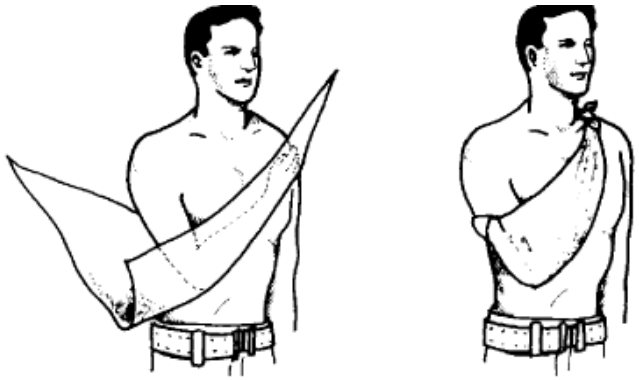
Arm Sling

TRIANGLE BANDAGE….CONT

St John Sling

Carefully bend the injured arm at the elbow so that the forearm lies diagonally across the chest with the hand resting on the breastbone. Apply the whole-cloth over the arm And chest with the point towards the injured side and the upper end passing over the shoulder on the sound side.

Bring the lower end upward and outward so that the base of the bandage comes to lie across the chest behind the injured limb. Carry the end across the back and knot in the hollow above the clavicle on the uninjured side. The point of the bandage is now tucked in front of the elbow and firmly pinned



St John Sling

TRIANGLE BANDAGE….CONT

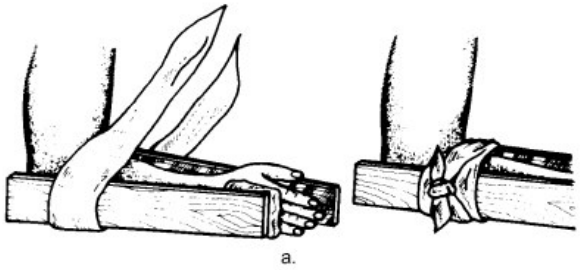
Collar and Cuff Sling

Carefully bend the injured arm at the elbow and place the forearm across the chest with the fingers pointing towards the shoulder of the uninjured side. Using the triangular bandage as a narrow-fold, make a clove hitch. Pass the clove hitch over the hand and around the wrist, with the knot of the clove hitch on the thumb side of the wrist.

Pass the ends of the bandage around the neck and tie the ends in the hollow just above the collar-bone on the uninjured side. Finally, check the circulation.

THE ROLLER BANDAGE

Roller bandages are strips of material of various lengths and widths. Ordinary roller bandages are made of loose-woven material. Muslin bandages are employed with plaster-of-paris. Crepe bandages provide slight elastic pressure.



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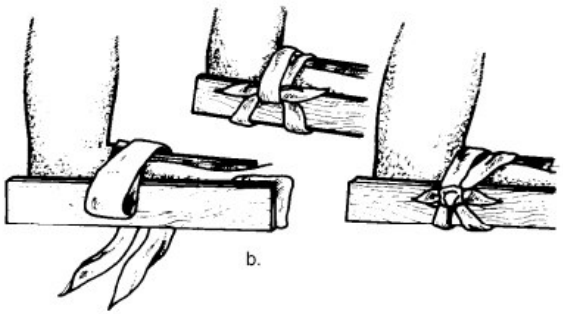

b.

RULES FOR BANDAGING

The bandage must not be put on so tightly as to cause discomfort or swelling of the limb. It is possible for a very tight bandage to cause death of tissue (necrosis) in a limb by cutting off the blood supply. Signs that a bandage has been applied too tightly are: blueness, coldness or swelling of the limb below the bandage with tingling, discomfort or pain.

If, after squeezing a finger-nail (or toe-nail) the colour returns more slowly in the limbs or does not return at all on the bandage side, this is a clear indication that the bandage is too tight and must be loosened. The roller bandage is applied as follows:

a. Stand or sit opposite the patient.
b. Place the limb in the position it is to occupy when bandaged.
c. Take the roll of bandage in the right hand.
d. The outer surface of the bandage should be next to the skin. Not more than 10 cm should be unrolled at a time.
e. Fix the bandage with two or three turns.
f. Bandage from below upward, and from within outward over the front of the limb.
g. Use uniform pressure throughout.
h. Let each turn overlap two-thirds of the one before.
i. Keep all margins parallel and let the crossings and reverses be in one line towards the outer aspect of the limb.
j. Secure the bandage with a safety-pin by tying or with a small strip of adhesive plaster.

INJURIES TO BONES AND JOINTS

DISLOCATION

A dislocation is the displacement of the normal relationship of the bones that make up a joint. Dislocations may be caused by a blow or by abnormal twisting or stretching of a joint.

Signs and symptoms

a. pain at the joint,
b. deformity of the joint,
c. usually a complete loss of movement, and
d. swelling and discolouration about the joint (in some cases).

Treatment

a. Keep the patient as comfortable as possible with the injured part elevated (except for a dislocated shoulder) and supported.
b. Apply cold compresses to the area of the deformity.
c. Evacuate the casualty to an MO as soon as possible.

SPRAIN

A sprain is an injury produced by stretching and tearing of ligaments around a joint. At the time of injury, the casualty may feel a sharp pain and a sudden sensation that the joint has given way. The symptoms are severe pain, rapid swelling, and impairment of function in the joint.

Treatment

a. Keep the joint at rest and elevate the part (when possible).
b. Cold compresses will lessen swelling if applied within 24 hours after injury.
c. Bandaging or adhesive plaster strapping helps immobilize the joint and enable the torn ligaments to heal.

INJURIES TO BONES AND JOINTS…CONT

STRAIN

A strain is the result of too sudden and forceful stretching of muscles or tendons, so that a slight tearing takes place.

The symptoms of strain are pain in the region of the injury, characterized by a sharp pain and cramps immediately the injury occurs; and persistent, sharp pain and marked disability when attempts are made to use the strained muscles. In severe strains, a moderate amount of swelling with stiffness and bruising may be found.

Treatment

a. Place the casualty in a comfortable position to lessen the tension and reduce pressure upon the injured muscles. Elevate the part if possible and keep it at rest.
b. For the first 24 hours after injury, use cold compresses to reduce swelling.
c. Strapping the areas with strips of adhesive tape immobilizes the part and promotes healing.

FRACTURES

A fracture is a break in the continuity of a bone. It is not necessary for the fragments to be separated. In many fractures the bone may only be ‘cracked’. Fractures are generally classified as closed (simple) or open (compound). A fracture is closed if there is a break in the bone without a break in the exterior surface of the skin. A fracture is open if the break in the bone communicates directly with the exterior surface of the skin.

INJURIES TO BONES AND JOINTS…CONT

Signs and symptoms

a. The casualty feels or hears the bone snap.
b. Pain occurs at the point of the break.
c. There is partial or complete loss of motion in adjacent joints.
d. The part is deformed. The arm or leg may be in an unnatural position, or bent where there is no joint. The chest wall may be caved-in.
e. Tenderness is felt at the site of the break.

Treatment

a. Stop the bleeding and apply sterile dressings to open wounds.
b. Splint all fractures ‘where they lie’ before moving the casualty.
c. Avoid unnecessary handling of the injured part. When lifting an injured limb, always support it under the break and at points above and below the break.
d. Evacuate the casualty as soon as possible.

Sometimes, a fractured limb may be so deformed that it will be impossible to apply bandages or splints without some realignment of the limb. In this case, carefully and gently apply traction to the end of the limb and straighten it as far as the casualty will allow, causing as little pain as possible.

To minimize damage following a fracture, the bone fragments must be immobilized. Any movement of these fragments will further damage surrounding muscle, blood vessels and nerves. The splint should immobilize the joint above and below the fracture. Thus, for a fracture of the leg, the knee and ankle joints should be immobilized.