

FIRST AID FOR COMMON INJURIES

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In most accidents the danger to life is bleeding, so the first action of the first-aid worker must be to arrest haemorrhage. Bleeding may be external or internal. If external, it is easy to realise, but internal bleeding is more difficult to diagnose.

Internal haemorrhage. The patient with internal haemorrhage is pale, cold and clammy; but these are also the symptoms of shock. How can you distinguish between shock and internal haemorrhage? There are two points of difference. The patient suffering from shock has shallow breathing and lies very still. With haemorrhage the patient is short of blood and, therefore, of oxygen. He consequently suffers from air hunger and gasps for breath, and he is also very restless. If, as a first-aid worker, you have a case of internal haemorrhage, do not waste time trying to stop it, for no first-aid means can accomplish this. Get the patient to hospital without delay.

External haemorrhage. In the vast majority of cases of external haemorrhage, bleeding can be stopped by *direct pressure* on the wound. If a sterile pad is available, bandage this firmly on the wound. If no sterile dressing is available, or if an artery is divided, apply pressure on the artery by means of a *tourniquet*. Do not attempt to put an unsterile dressing on the wound; you may infect it, and so endanger the patient's life. Apply the tourniquet on the proximal side of the wound (between it and the heart) and as near the wound as possible. Exert pressure until the bleeding stops, but do not press more than is necessary. The reason for applying the tourniquet as near as possible to the wound is that the greater the space left between the tourniquet and the wound, the greater is the risk of infecting it. Also there is a larger area to absorb the toxins produced by the damaged tissues, and this absorption of toxins is one of the causes of shock.

During the recent Spanish war, when dressings were very scarce, the first-aid treatment for external haemorrhage was by tourniquet, and it was found effective. If you treat a patient in this way, remember to mark him with a "T" before sending him on, and remember also to mark the time when the tourniquet was applied. This is very important, for a tourniquet must be loosened at intervals of about twenty minutes in order to allow circulation of blood to the damaged limb. When you release the tourniquet, watch to see if the bleeding has stopped. If it has, just leave the tourniquet loosely in position, ready to twist again if bleeding should start. If a limb is very badly crushed, so that there is no doubt that it will have to be amputated, do not release the tourniquet at all. The products of the badly damaged tissues will get into the circulation and cause shock.

Shock. Haemorrhage is the first danger to combat. Second in importance comes the treatment of shock. Shock may be due to (a) mental stress, (b) pain, (c) loss of fluid, and (d) absorption of products of damaged tissues.

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(a) *Mental stress.* The victim of an accident is generally frightened and it is important to realise this and try to relieve his mental stress. If a man, he is probably worried at the thought of losing life or limb: if a woman, she possibly fears disfigurement. In any case the first-aid worker should attempt to reassure the patient.

(b) *Pain.* The relief of pain is a problem, for although drugs are available they are not safe to administer unless they are thoroughly understood, and are therefore outside the province of the first-aid worker. There is only one good pain-relieving drug—opium, and its derivatives. Generally speaking, opium has a more soothing effect than morphia. Opium is available as tinct. opii and as chlorodyne, but these are very dangerous drugs and cannot be given by the first-aid worker. Drugs, however, are not the only means of relieving pain. The reason for pain is the local condition—the burn or fracture—and if you can deal with this you can mitigate the pain to a very great extent. Coagulate the burn, straighten the fracture, and you will give the patient immense relief. Smoking, too, is soothing, and if your patient is a smoker a cigarette cannot do him any harm. It will soothe his nerves and take his thoughts off his injury to a certain extent.

(c) *Loss of fluid.* The fluid which has been lost must be replaced. You cannot give the patient a saline infusion, perhaps, but you can give him hot drinks. A hot drink containing plenty of sugar will be very welcome; the patient will find it soothing and will soon look better. On the whole avoid alcohol as a first-aid measure in accidents. If it is a case of a bad heart, you may give spirits in moderation, but a hot, sweet drink has a much better effect. If alcohol is given, the best form is rum because of its sugar content. Rum in hot milk is better than brandy or whisky.

(d) *Absorption of toxins.* The only way to prevent absorption of toxins is to apply the tourniquet as near as possible above the wound.

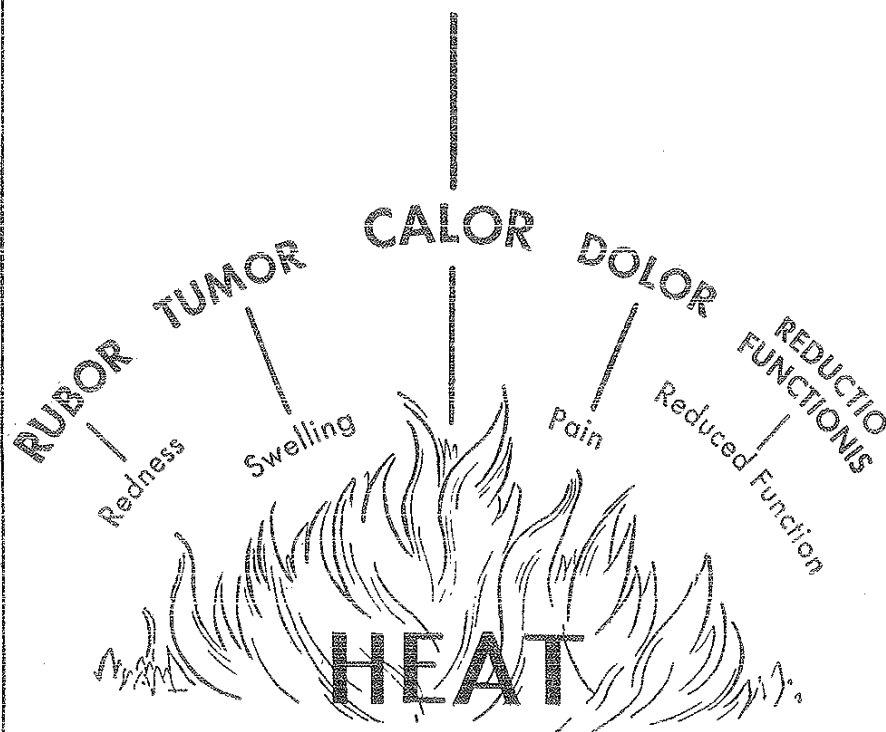
Other things needed in the treatment of shock are warmth and rest. Warmth is very important, yet only too often the clothes are stripped off a patient before he is treated. This is not right. Expose the patient as little as possible while attending to his injury, then wrap him up in plenty of blankets and give him hot water bottles. Be careful to see that these are well covered. A burn is very dangerous to a patient with shock.

When you have completed your treatment, leave your patient to rest a little while before sending him off in an ambulance. Do not hustle him on to a stretcher and into an ambulance, for the journey is necessarily a very uncomfortable one. The only exception is, of course, the case of internal haemorrhage, when the patient must be sent off at once without any attempt to treat him.

It is essential that the efficient first-aid worker should be able to improvise, for, except in a first-aid station or factory surgery, the proper equipment will not be to hand. Rolled-up newspapers, or straw rolled in newspapers, make good splints. A stocking makes a good tourniquet.

Fractures. In a case of fracture, pull the affected limb into good position and fix it there with splints. These must hold the joints

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above and below the fracture. The patient will be much more comfortable once his limb is in a better position, although the act of putting it there will be painful; and his shock will be lessened.

A fractured spine must be moved in the position in which the patient is lying. If he is in the prone position, move him on to the stretcher without trying to roll him over.

A fracture you may meet with is a fractured *front of jaw* when both sides of the jaw are broken, thus doing away with the support for the tongue. This slips back and the patient begins to swallow it. The treatment is to pull out the tongue with your hand, and then make the patient walk, bending over forwards to prevent its slipping back again (if he is a stretcher case, he must be carried face down). Teach the man how to pull out his tongue and explain to him how he must walk to prevent its slipping back again.

In *burns and scalds*, the patient's shock is due largely to pain from the burn and partly to loss of fluid from the burn. The treatment is to coagulate the burn as quickly as possible. The usual method nowadays is to coagulate with tannic acid. You may not always have tannic acid, but tea (containing tannic acid) is usually available. Soak clean linen in tea (the ordinary strength) and bandage it in place (be sure to cool the tea first). Do not attempt to clean the burn; merely apply the tannic acid dressing, give the patient a drink, and treat him for shock.

Electrical burns. If you are called to treat a patient with an electrical burn, you will probably find him still on the cable. So before attempting to treat him either switch off the current or insulate yourself by wearing rubber gloves or standing on glass or rubber.

Chemical burns. These include gas burns. Always neutralise the burn before coagulating it, otherwise the chemical will go on burning the patient. If the burn is caused by an acid, neutralise it by applying an alkali, *e.g.*, washing soda; if an alkali, use an acid to counteract its effect. If the right antidote is not immediately available, however, it is usually sufficient to wash the part very thoroughly with warm water. Swill the water over the place, but do not rub it in any way. When the chemical has been washed away, coagulate the burn in the usual way.

Septic fingers. I should like to include a word of warning, especially for those nurses who work in factories or other industrial works, on the subject of little punctured wounds in the fingers. Workers should be encouraged to report these little wounds and have them attended to; often they are not reported until there is a whitlow and this may cripple a person for life. Impress on the workers the importance of treating small wounds and pricks immediately. A good, stock antiseptic for this purpose is one per cent. aqueous solution of gentian violet. This has the added advantage of being painless, and the patient will not object to the treatment. The patient should be made to squeeze the wound until a drop of blood comes out before the antiseptic is applied.

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