



## Australian Resuscitation Advisory Network

# TRAUMA Guideline 6 – BLEEDING MANAGEMENT

## Scope

### Who does this guideline apply to?

This guideline applies to all persons with bleeding.

### Who is the audience for this guideline?

This guideline is for use by BLS first responders, including bystanders, first aiders, and health professionals away from a clinical setting.

## Recommendations

The Australian Resuscitation Advisory Network (ARAN) makes the following recommendations:

1. Direct and/or indirect pressure is effective measures for the control of bleeding and is the most effective first measure in severe bleeding.
2. Elevation and the use of pressure points are effective measures for slowing the rate of bleeding in most circumstances except severe bleeding, where direct pressure is required.
3. Elevation of a limb is not recommended as a measure in fractured limbs.
4. All bleeding control methods have the potential to increase pain, this risk should always be considered against the benefit to the victim.
5. Oxygen therapy is an appropriate strategy for the management of bleeding to maintain SaO<sub>2</sub> of  $\geq 95\%$ .

## General Principles

- In the management of any external bleeding, standard precautions should be used including the use of gloves. An interim measure (to avoid contact until gloves are available) may be to direct the victim in the management of their own bleeding.
- Apply direct or indirect pressure to the site or around the site.
- Elevation of a bleeding part and the use of pressure points may slow the flow of blood and assist the direct/indirect pressure method to arrest bleeding.
- Lay the victim down if bleeding is severe and/or from the lower limbs.
- If severe (life threatening) bleeding is not controlled by the above measures, a haemostatic dressing should be applied if available.

Disclaimer – The recommendations in this guideline are compiled by ARAN from advice available at the time. As ARAN cannot control the manner in which these recommendations are implemented, ARAN and its members accept no responsibility for injury or death resulting from the use or non-use of this guideline.

Acknowledgement - The material in this guideline is based on original work by the Australian Resuscitation Council.

- If severe bleeding is not controlled by the above measures, a tourniquet above the bleeding site (proximal to the wound) should be applied. As a tourniquet can result in tissue and muscle damage, it should only be used after failure of other measures to arrest severe (life threatening) bleeding

## Method

### Direct Pressure

Where the bleeding point is identified control bleeding by applying pressure as follows:

- Apply firm, direct pressure sufficient to stop the bleeding.
- Apply pressure using hand/s or a pad ensuring that sufficient pressure is maintained.
- If bleeding continues, apply another pad and a tighter dressing over the first dressing and bandage.
- To assist in controlling bleeding, where possible restrict movement and keep the victim at rest.
- If bleeding continues, apply another pad and a tighter dressing over the first dressing and bandage.
- If the dressings become soaked with blood it may be necessary to remove these and apply fresh dressings and bandages to aid in control.

### Indirect Pressure

In cases where direct pressure is not practical e.g. an embedded object, the use of indirect pressure may be more effective i.e. pressure applied around the wound rather than removing the embedded object to apply direct pressure.

Pressure points can also be effective in slowing blood flow and to assist the direct pressure methods. Examples of pressure points are pressure over the brachial artery (for bleeding from the arm, below this site) and pressure over the femoral arteries (for bleeding from the leg, below this site), see Figure 1.

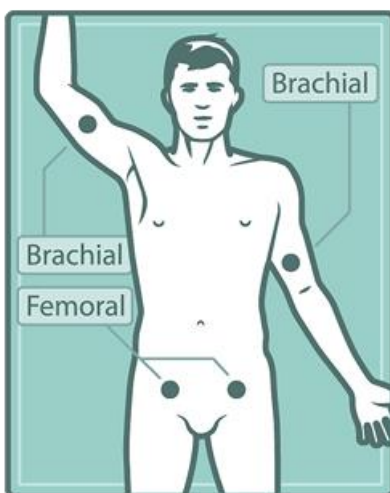


Figure 1



## Elevation

Whilst elevation has a transient benefit in slowing blood flow, it is a reasonable method for assisting in bleeding management, when used in conjunction with direct pressure. Elevation is not appropriate in the fractured limb due to the risk of increased injury.

## Tourniquets

Tourniquets should only be used for life threatening bleeding from a limb that cannot be controlled by direct pressure. A heavy, wide bandage (of at least 7.5 cm) can be used as a tourniquet 5-7 cm above the bleeding point or over the pressure point sites.. The bandage should be tight enough to stop all circulation to the injured limb and control the bleeding. The time of application must be noted and passed on to emergency/ambulance personnel. Once applied, the victim requires urgent transfer to hospital and the tourniquet should not be removed until the victim receives specialist care. A tourniquet should not be applied over a joint or wound, and must not be covered up by any bandage or clothing.

## Cold Packs

Cold packs may assist in the management of internal bleeding (including bruising and closed fractures). Cold packs may also be used as an additional measure in the management of nose bleed (epistaxis).

## Internal Bleeding

Internal bleeding may be difficult to recognise, but should always be suspected where there are symptoms and signs of hypovolaemic shock and there is no associated severe external bleeding.

Internal bleeding should also be suspected when there are where there are significant fractures (especially the thigh and/or pelvis) or where haematomas over the abdomen, for example, may indicate significant internal trauma.

Severe bleeding may also occur from complications of pregnancy (before and/or after delivery).

Symptoms and signs of internal bleeding may include:

- Pain, tenderness or swelling over or around the affected area
- The appearance of blood from a body opening, e.g.: bright red and/or frothy blood coughed up from the lungs, vomited blood which may be bright red or dark brown "coffee grounds", blood-stained urine, vaginal bleeding or bleeding from the penis, rectal bleeding which may be bright red or black and "tarry" in appearance.

## Nose Bleed (Epistaxis)

In the management of epistaxis, pressure should be applied over the soft part of the nostrils, below the bridge of the nose with the victim leaning forward to avoid blood flowing down the throat. The victim should remain seated and at rest for at least 10 minutes to reduce blood pressure. On a hot day or after exercise, it might be necessary to maintain pressure for at least 20 minutes. An additional measure is to apply cold packs to forehead and back of the neck of the victim.

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