# Dressing and bandage

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## INTRODUCTION

The terms ‘dressing’ and ‘bandage’ are often used synonymously. In fact, the term ‘dressing’ refers more correctly to the primary layer in contact with the wound. A bandage is a piece of material used either to covering wounds, to keep dressings in place, to applying pressure controlling bleeding, to support a medical device such as a splint, or on its own to provide support to the body. It can also be used to restrict a part of the body.

### Dressing

Dressings are used to cover wounds, prevent contamination and control bleeding.

In providing first aid we commonly used self-adhesive dressings or gauze dressings :

- **Adhesive dressings** are used mainly for small wounds. They come in many different sizes, including specific types for placement on fingertips.
- **Gauze dressings** are thick, cotton pads used to cover larger wounds. They are held in place with tape or by wrapping with a gauze strip (bandage).

Dressings must be sterile and absorbent to deter the growth of bacteria, and should be left in place until the wound heals, unless it needs to be regularly cleaned.

Figure 1. Adhesive and gauze dressing

### Bandage

The three major types of bandages are: roller bandages, tubular bandages and triangular bandages. They are necessary for :

- covering wounds,
- applying pressure controlling bleeding, or
- supporting a strain or sprain.

There is a specific bandage made for each of these tasks.

**Roller bandages** are long strips of material. Basically there are two types of roller bandages :

- An **elastic roller bandage** is used to apply support to a strain or sprain and is wrapped around the joint or limb many times. It should be applied firmly, but not tightly enough to reduce circulation.
- **Cotton or linen roller bandages** are used to cover gauze dressings. They come in many different widths and are held in place with tape, clips or pins.

They can also be used for wound compression if necessary, as they are typically sterile.

Figure 2. Roller bandage

**Tubular bandages** are used on fingers and toes because those areas are difficult to bandage with gauze. They can also be used to keep dressings in place on parts of the body with lots of movement, such as the elbow or knee.

Figure 3. Tubular bandages

**Triangular bandages** are made of cotton or disposable paper. They have a variety of uses:

- When opened up, they make slings to support, elevate or immobilize upper limbs. This may be necessary with a broken bone or a strain, or to protect a limb after an operation.
- Folded narrowly, a triangular bandage becomes a cold compress that can help reduce swelling.

They are used also for applying pressure to a wound to control bleeding.

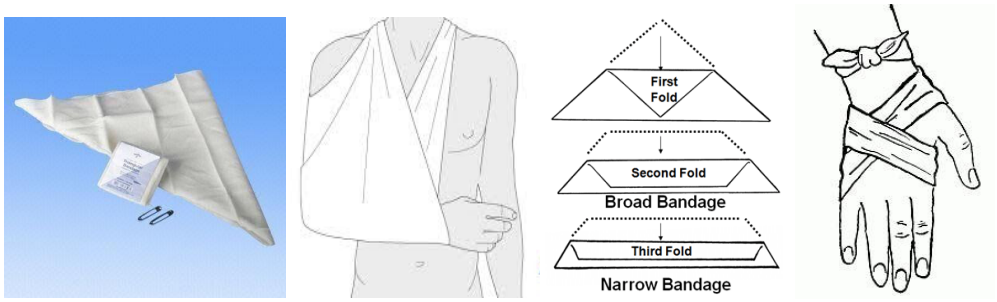


Figure 4. Triangular bandages

**BASIC BANDAGING FORMS**

Each bandaging technique consists of various basic forms of bandaging. The following five basic forms of bandaging can be used to apply most types of bandages:

1. circular bandaging
2. spiral bandaging
3. figure-of-eight bandaging
4. recurrent bandaging
5. reverse spiral bandage

**Circular bandaging** is used to hold dressings on body parts such as arms, legs, chest or abdomen or for starting others bandaging techiques.

For circular bandage we used strips of cloth or gauze roller bandage or triangular bandage folded down to form strip of bandage (cravat).

In the circular bandaging technique the layers of bandage are applied over the top of each other:

- With the roll on the inner aspect, unroll the bandage either toward you or laterally, holding the loose end until it is secured by the first circle of the bandage.
- Two or three turns may be needed to cover an area adequately. Hold the bandage in place with tape or a clip.

Almost all bandaging techniques start and end with a few circular bandaging turns.

Figure 5. Circular bandage

**Spiral bandaging**

Spiral bandages are usually used for cylindrical parts of the body. An elasticated bandage can also be used to apply spiral bandaging to a tapered body part. Despite the increasing diameter of the body part, the elasticity will allow the bandage to fit closely to the skin.

With each spiral turn, part of the preceding turn is covered generally by 1/3 of the width of the bandage.

Figure 6. Spiral bandage

**Figure-of-eight bandage** involves two turns, with the strips of bandage crossing each other at the side where the joint flexes or extends. It is usually used to bind a flexing joint or body part below and above the joint.

The figure-of-eight bandage can be applied using a roller bandage in two ways:

- Following a circular turn around the middle of the joint, the bandage should fan out upwards and downwards. The turns should cross at the side where the limb flexes.
- The figure-of-eight turns can also be applied from a starting point located below or above the joint crease, working towards the joint itself. The cross-over points will be located at either the flexing or extending side of the joint; the side where the turns do not cross remains uncovered.

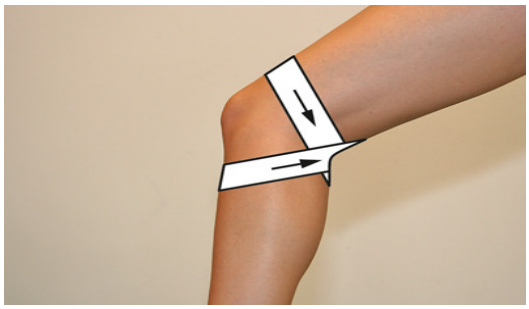

Figure 7. Figure-of-eight bandage

**Recurrent bandaging** is used for blunt body parts consists partly of recurrent turns.

The bandage is applied repeatedly from one side across the top to the other side of the blunt body part. To be able to fix the recurrent turns well, not only the wound, but the entire length of the blunt body part should be covered.

Depending on the width of the bandage and the body part, successive turns either cover the preceding turn fully or partially.

Recurrent bandages are fixed using circular or spiral turns.

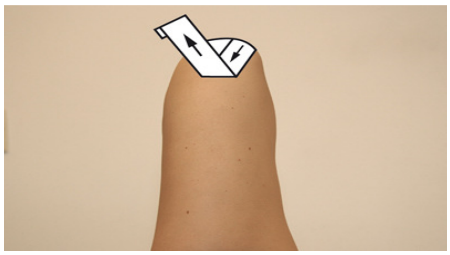

Figure 8. Recurrent bandage

**Reverse spiral bandage** is a spiral bandage where the bandage is folded back on itself by 180° after each turn.

This V-shaped fold allows the bandage to fit to the tapered shape of the body part all the way along.

This type of bandaging is required when using non-elasticated bandages. The development of elasticated fixing bandages, which are applied to tapered body parts using the spiral technique, means that the reverse spiral technique is far less commonly used nowadays.

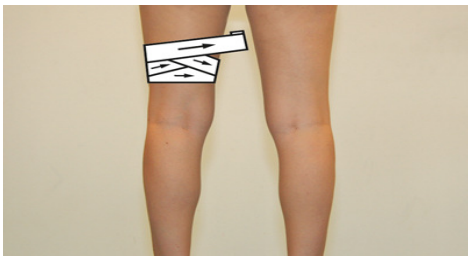

Figure 9. Reverse spiral bandage

**APPLICATION ROLLER BANDAGES**

1. ***Select the appropriate bandage material for the injury***.

    – Use gauze or a flex roller for bleeding injuries of the forearm, upper arm, thigh, and lower leg.

- Use a flexible roller bandage for bleeding injuries of the hand, wrist, elbow, shoulder, knee, ankle, and foot.
- Use an elastic roller bandage for amputations, arterial bleeding and sprains.

It is best to use a bandage with some degree of stretch in the weave. This will make the bandage easy to use and more likely to stay in place for many hours.

However, the correct application technique is essential to provide comfort and adequate support for the affected part.

2. ***Select the appropriate width of bandage***

The width of the bandage to use is determined by the size of the part to be covered. As a general guide, the following widths are recommended:

- **Hend and fingers** – 50 mm
- **Lower arm, elbow, hand and foot** – 75 mm.
- **Upper arm, knee and lower leg** – 100 mm.
- **Large leg or trunk** – 150 mm.

3. ***Prepare the patient for bandaging.***

- Position the body part to be bandaged in a normal resting position (position of function).
- Ensure that the body part that is to be bandaged is clean and dry.

4. ***Apply the anchor wrap.***

- Lay the bandage end at an angle across the area to be bandaged. (See Figure A.)
- Bring the bandage under the area, back to the starting point, and make a second turn.
  (See Figure B.)
- Fold the uncovered triangle of the bandage end back over the second turn. (See Figure C.)
- Cover the triangle with a third turn, completing the anchor. (See Figure D.)

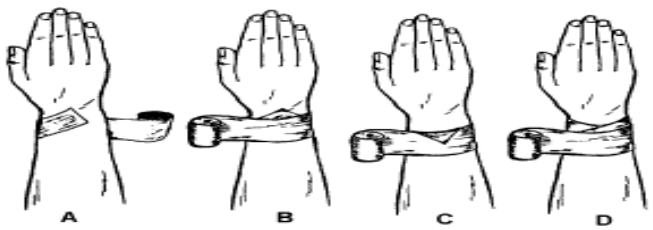


Figure 11. The anchor wrap

5. ***Apply the bandage wrap to the injury*** (Figure 12)

   – Use a circular wrap to end other bandage patterns, such as a pressure bandage, or to cover small dressings (A).

   – Use a spiral wrap for a large cylindrical area such as a forearm, upper arm, calf, or thigh. The spiral wrap is used to cover an area larger than a circular wrap can cover (B).

   – Use a spiral reverse wrap to cover small to large conical areas, for example, from ankle to knee (C).

   – Use a figure eight wrap to support or limit joint movement at the hand, elbow, knee, ankle, or foot (D).

   – Use a spica wrap (same as the figure eight wrap) to cover a much larger area such as the hip or shoulder.

   – Use a recurrent wrap for anchoring a dressing on fingers, the head, or on a stump (E).

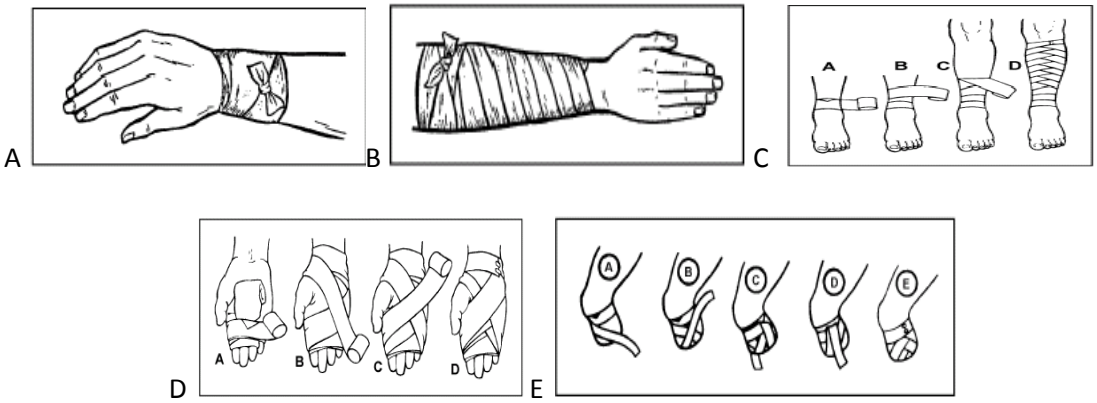


Figure 12.

6. ***Check the circulation after application of the bandage***.

   – Check the pulse distal to the injury.

   – Blanch the fingernail or toenail, if applicable.

   – Inspect the skin below the bandaging for discoloration.

   – Ask the patient if any numbness, coldness, or tingling sensations are felt in the bandaged part.

   – Remove and reapply the bandage, if necessary.

7. ***Elevate the injured extremities***

   – to reduce swelling (edema) and

– control bleeding, if appropriate.

**HOW TO APPLY BANDAGES TO SPECIFIC PARTS OF THE BODY**

Figure 13. Examples of bandages

*** Donut Bandage**

The Donut Bandage is used to put pressure around an impaled object without putting pressure on the object itself.

Figure 14. Donut bandage