

Bandages and binders

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Definitions of key terms

Bandages

- strips or rolls of gauze or other materials that are used for wrapping or binding any part of the body and to hold compresses in place
- in common speech, the word "bandage" is often used to mean a dressing, which is used directly on a wound, whereas a bandage is technically only used to support a dressing and not directly on a wound.

Binders

- bandages made of large pieces of material specially designed to fit a specific body part
- used to support large areas of the body such as abdomen, arm or chest
- the most binders are made of elastic, cotton, muslin or flannel



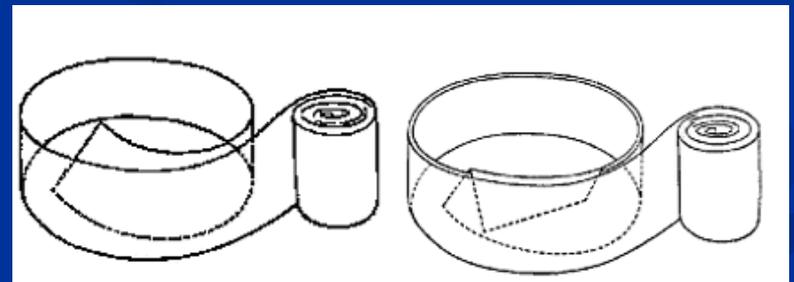
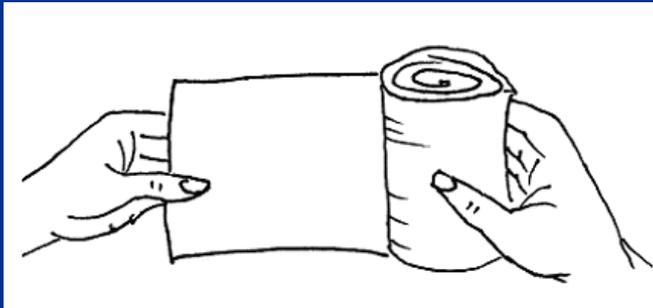
Indications

- creating pressure over a body part (to promote haemostasis or minimize oedema),
- immobilizing a body part (joint, extremity),
- supporting a wound,
- reducing or preventing oedema,
- securing a splint,
- securing dressings,
- protecting wound against infection,
- maintaining the position of special equipment for application traction,
- enabling the patient to participate in effective respiratory functions.

Basic rules of bandaging

- Before applying a bandage, you need to know its purpose (whether to support or apply a pressure, etc.) and assess the area requiring support.
- Choose the width of the bandage according to the size of body part (e.g. 2,5 cm bandage is used for a finger, 5 cm is used for an arm, 7,5 – 10 cm bandage for a leg).
- Bandages should be applied with the body part in its normal position, with the joint slightly flexed to avoid causing the strain on the ligaments and the muscles of the joint.

- One hand (non-dominant) is used to hold the free end of the bandage (tail) in place until it is anchored, while the other hand (dominant) slowly unrolls the needed length of bandage. In dominant the caput – head of bandage is held, in non-dominant hand free ending (tail) is held. Head of bandage unrolls to the palm, opposite the thumb of dominant hand
- Put the free ending on the place where bandaging starts, make the first turn (circular), fold the corner of bandage and then continue with circular turn (make a “lock”).



- Bandages should be applied snugly, but never so tightly that circulation is impeded or pain occurs.
- Apply bandage from distal point toward proximal boundary using variety of turns to cover various shapes of body parts.
- Monitor the change of health status – e.g. change of skin colour, or sweat on forehead – always leave the end of the body part exposed so that it is possible to assess the adequacy of the blood circulation to the extremity (signs of decreased circulation: cyanosis, pallor, coolness, numbness, tingling, swelling, absent or diminished pulses).

- The following turn must lie overlapping previous turn in its one-half to two-thirds.
- Every bandage has to be started and finished with basic circular turns.
- When bandaging an extremity, start bandaging at the distal end to aid the return flow of venous blood and to decrease the chance of oedema or circulatory impairment.
- If you need to use more bandages, put a new bandage 10 cm under free end of previous bandage and repeat the bandage or secure first bandage with tape before applying additional rolls. Apply additional rolls without leaving any uncovered skin surface. Secure last bandage applied.

- Friction between skin surfaces (under arms, under breast) and over bony prominences can be prevented by padding these susceptible areas with gauze or cotton wool.
- Cover dressings with bandages at least 5 cm beyond the edges of the dressing to prevent the dressing and wound from becoming contaminated.
- Face the patient when applying a bandage to maintain uniform tension and the appropriate direction of the bandage, keep contact with patient.
- Bandages are fastened in place with adhesive tape, metal clips or making the knot. Particularly tapes and clips should be located away from the skin to avoid localized pressure and harming the skin.

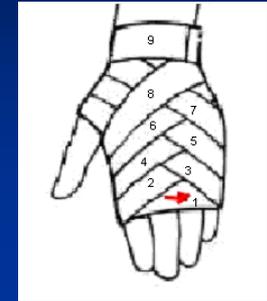
- Work quickly and gently, think about aesthetics.
- Think about economy – don't waste the material.
- Remember hand washing; wear gloves to prevent contact with body fluids.

Assessing before applying bandages or binders

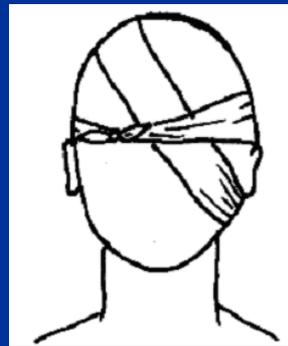
- inspect and palpate the area for swelling,
- inspect for the presence of and status of wounds,
- note the presence of any drainage (amount, colour, odour, viscosity),
- inspect and palpate for adequacy of circulation – skin temperature, colour, sensation, signs of impaired circulation – pale or cyanotic skin, cool temperature, tingling, numbness,
- ask the patient about any pain experienced – location, intensity, onset, quality,
- assess the capabilities of the patient to cooperate, to hold bandaged part of body in needed position,
- assess the capabilities of the patient regarding activities of daily living and assess the assistance required during the convalescence period.

There are three main types of bandages:

roller (open weave material, elastic, crepe)



triangular



tubular

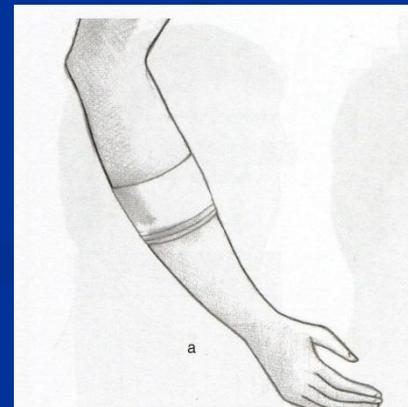
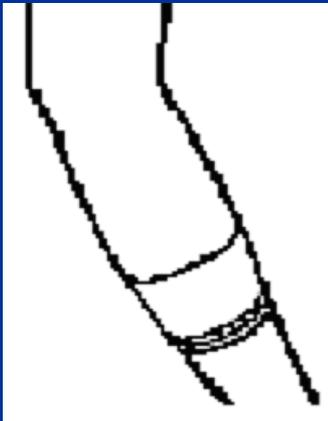


Bandages may be applied using different techniques:

Circular turns

- are used to anchor bandages and terminate them
- are usually not applied directly over a wound because of the discomfort the bandage would cause; they can be used to cover only a small wound

http://www.youtube.com/watch?v=w0KTMrSG_uo



Spiral turns

- are used to bandage parts of the body that are fairly uniform in circumference, to bandage cylindrical body parts (in direction from slimmer to wider parts of body)
- spiral open turns are used to support the fixation splint (e.g. in elbow joint) - start with circular turns, continue by open spiral turns and finish with circular turns.

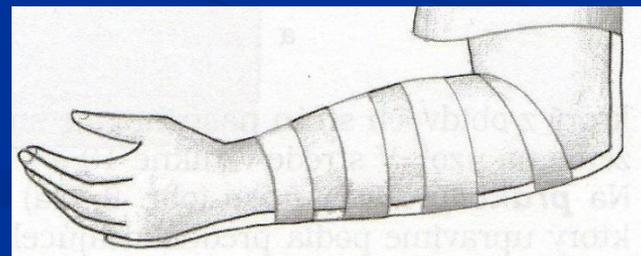
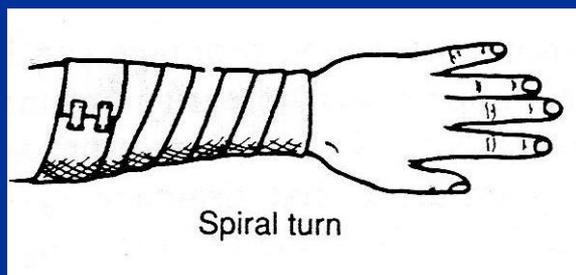
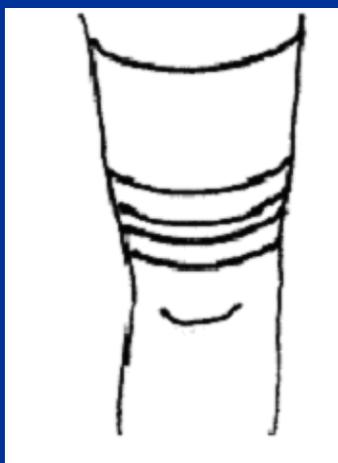
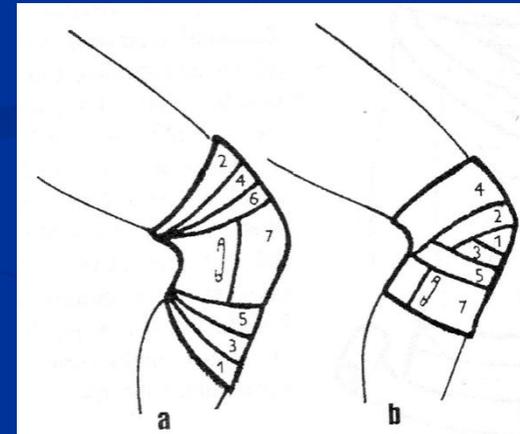
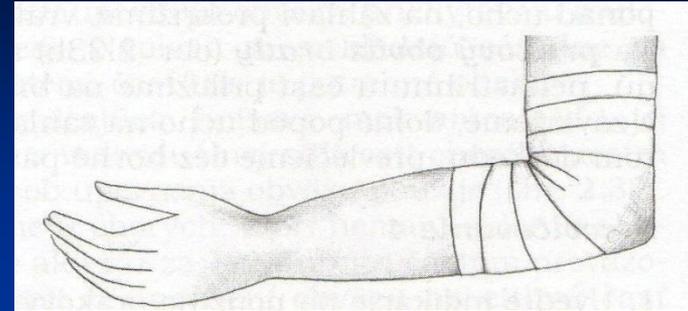
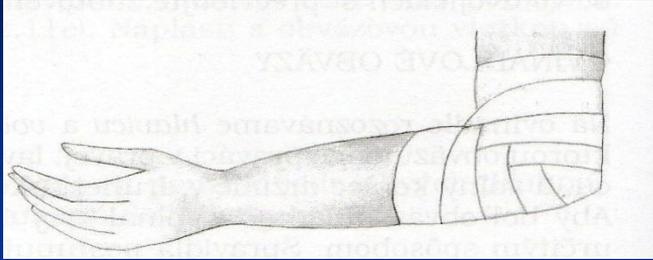


Figure-eight turns

- are used to bandage an elbow, knee or ankle
- is especially useful when bandaging a joint as it permits a certain movement after application
- consists of oblique overlapping turns, alternately ascending and descending over a bandaged part that resembles a figure-eight turns

There are two types of figure-eight turns:

- figure-eight turns reverse (divergent) – start the bandage at the middle of joint
- figure-eight turns inverse (convergent) – start the bandage above or below the joint.

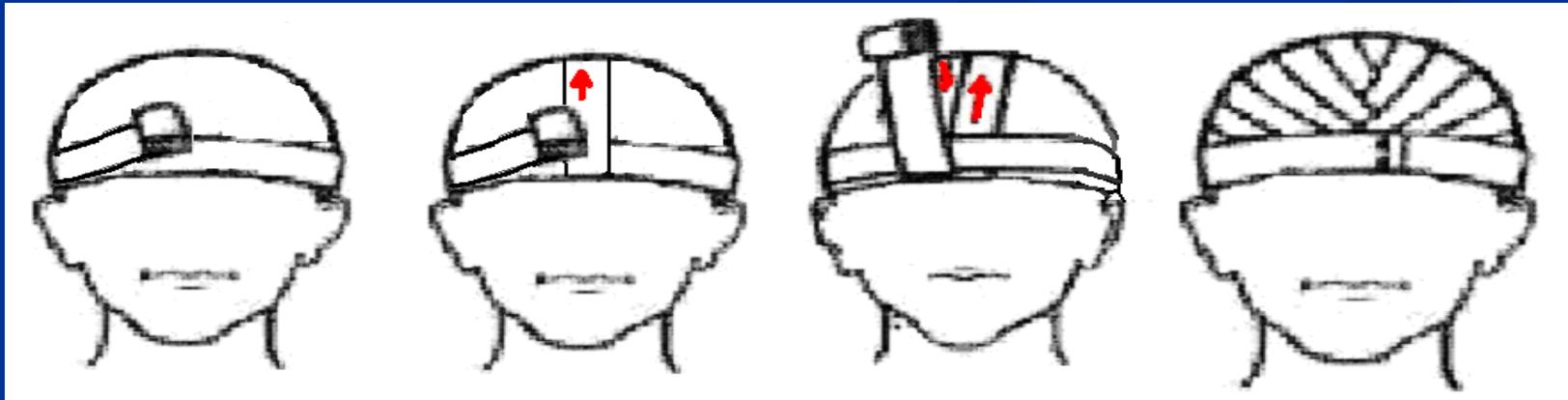
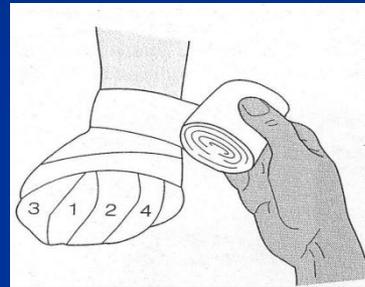


<http://www.youtube.com/watch?v=HcfYYKglxrc>

<http://www.youtube.com/watch?v=Il-ieDA7DQg>

Recurrent turns

- are used to cover distal parts of the body (the end of a finger, the head, or stump after amputation)



Recurrent fold Bandage of head

<http://www.youtube.com/watch?v=UMz4vdxM66A>

Bandaging a freshly above the knee amputated limb

<http://www.youtube.com/watch?v=zaGgLIK0kGE>

Bandage of lower extremities

- it is compression bandage to apply compression to an area
- to prevent oedema and support varicosities, to prevent thromboembolic disease and consequent pulmonary embolism
- it is applied early in the morning prior patient stands up from a bed and is taken off in the evening – after that we have to assess the skin of lower extremities for neuro-circulatory parameters and apply regenerative cream
- usually 3 – 4 bandages rolls of elastic bandage are needed together with adhesive tape in this procedure.

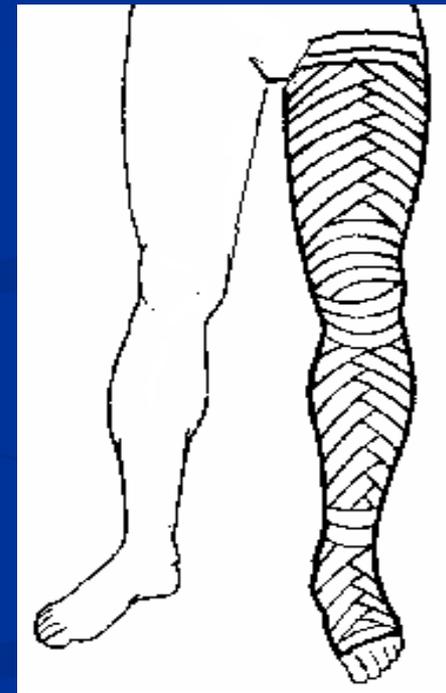
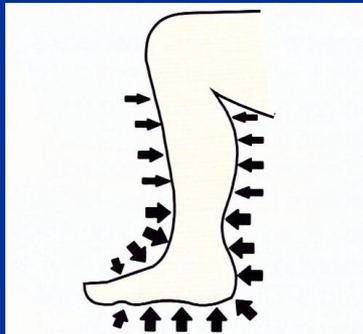
We distinguish:

- low bandage (1/3 of lower extremity, under the knee),
- middle bandage (2/3 of lower extremity, over the knee),
- high bandage (whole lower extremity, to inguinal area).

The strongest pressure of the bandage is applied in the ankle area; in ascendant direction the pressure gradually decreases

<http://www.youtube.com/watch?v=Q1yWgkzTVQs&NR=1>

<http://www.youtube.com/watch?v=WjrhqxHSclU>



Compression stockings

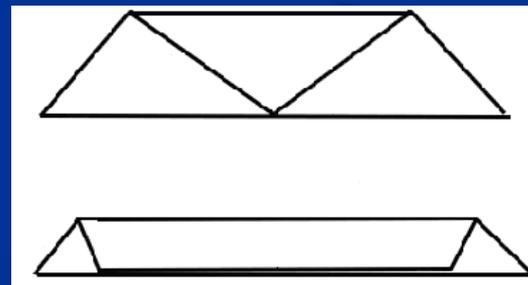
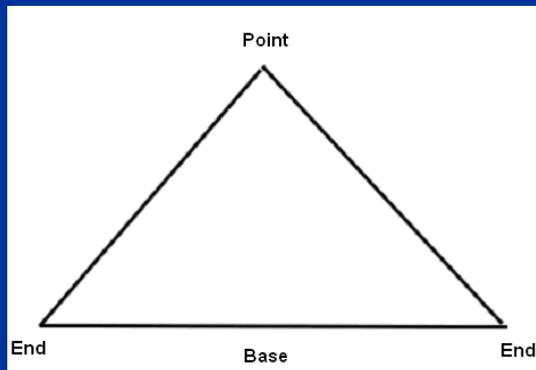
Wound dressing aids have a comprehensive range of uses in the outpatient and partial inpatient treatment of thrombosis, in vein surgery and as a general replacement for compression bandages for the lower extremities.

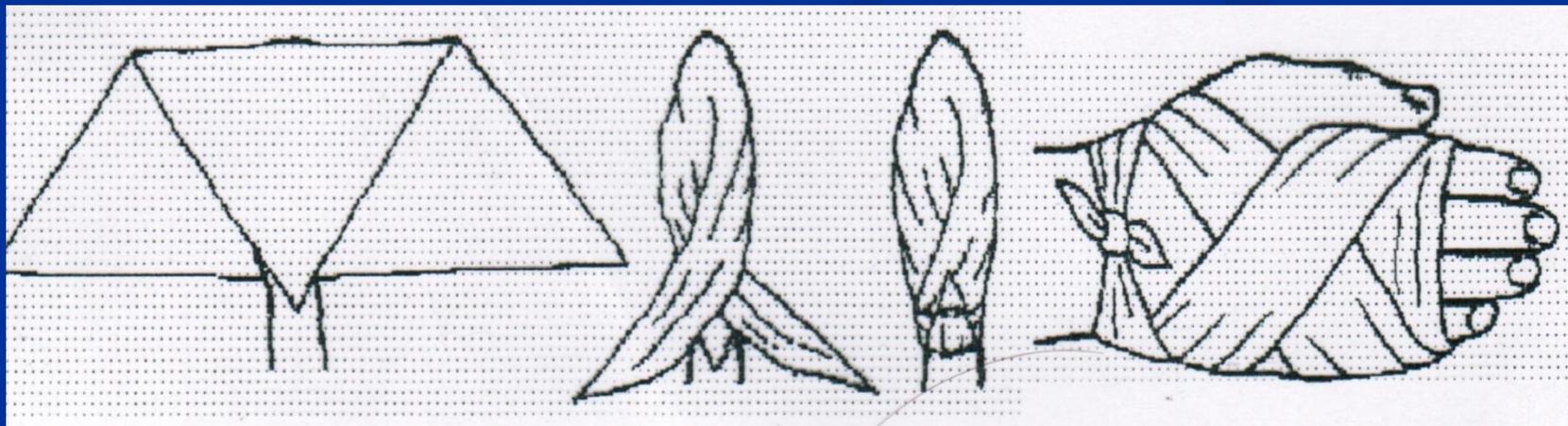
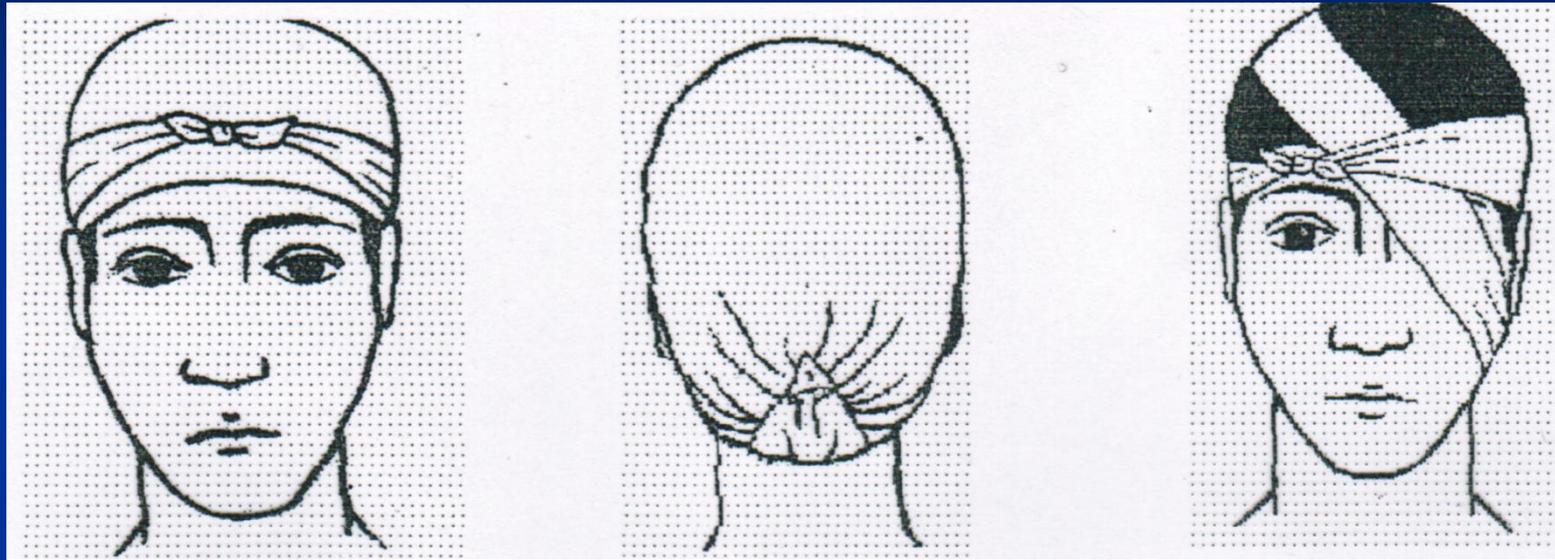


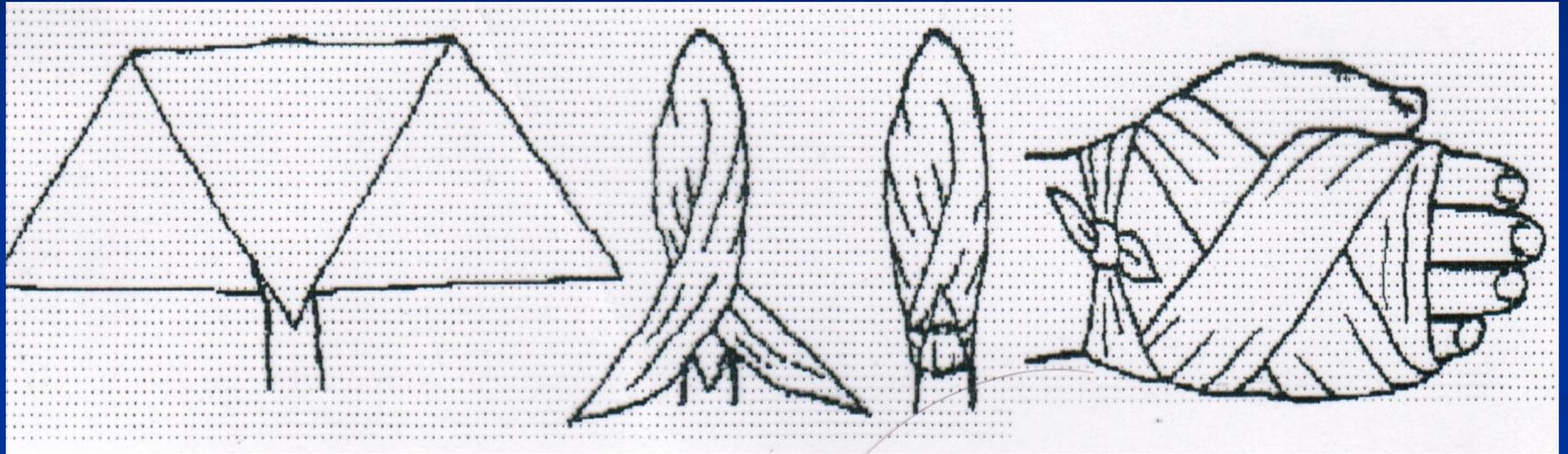
With a pressure of 23 mmHg in the ankle area, which decreases continuously towards the thigh, mediven struva 23 is particularly suitable for postoperative short term compression directly after vein surgery. Venous return is promoted and the development of oedema and effusions prevented.

Triangular bandages

- bandages that are folded into a triangle shape. They can be used as large dressings, as slings to support a limb or to secure a dressing in place
- it can be folded in a variety of ways to fit almost any part of the body. Padding may be added to the areas that may become uncomfortable.
- **Cravat bandage** means to bring the point of the triangular bandage to the middle of the base and continue to fold until a 5 cm width is obtained

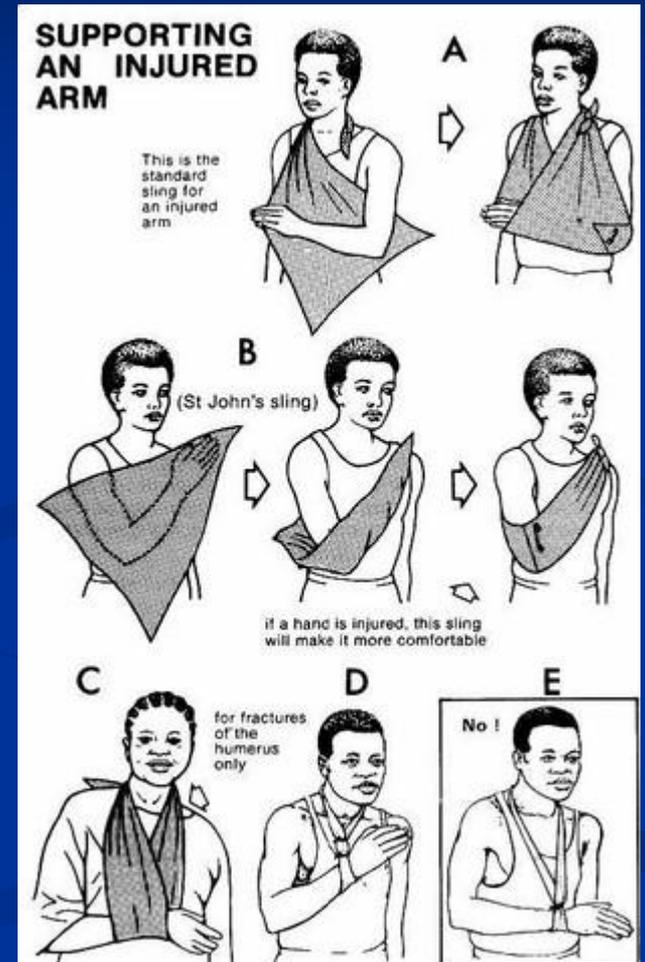






Triangular arm sling

- is used to support the arm, usually after trauma or injury, to limit the movement, enhance circulation and prevent oedema of the arm, hand or wrist
- made of strong muslin or lightweight canvas



Triangular bandage

sling

http://www.youtube.com/watch?v=9Cifk_ohsDo

<http://www.youtube.com/watch?v=EogUEt5kMig>

Hand

<http://www.youtube.com/watch?v=ZxusghQmv-E>

<http://www.youtube.com/watch?v=seSVhjwtQJhE>

Head

<http://www.youtube.com/watch?v=x1Y73Jz3-5Y>

<http://www.youtube.com/watch?v=9XIlpwKcTas>

Tubular bandages

- provide tissue support in the treatment of strains and sprains, soft tissue injuries, general oedema, post-burn scarring and ribcage injuries and are used also for pressure dressings and arm fixation



- a bandage of suitable size may be selected and easily fitted around a body part to be bandaged



- the first end being unrolled to cover the body part and the opposite end portion being unrolled to cover the first bandage part



- Tubular bandage applicators may be used to make application easier over bulky dressing or painful joints. They are available in full range of size and are made from durable chrome – plated steel.

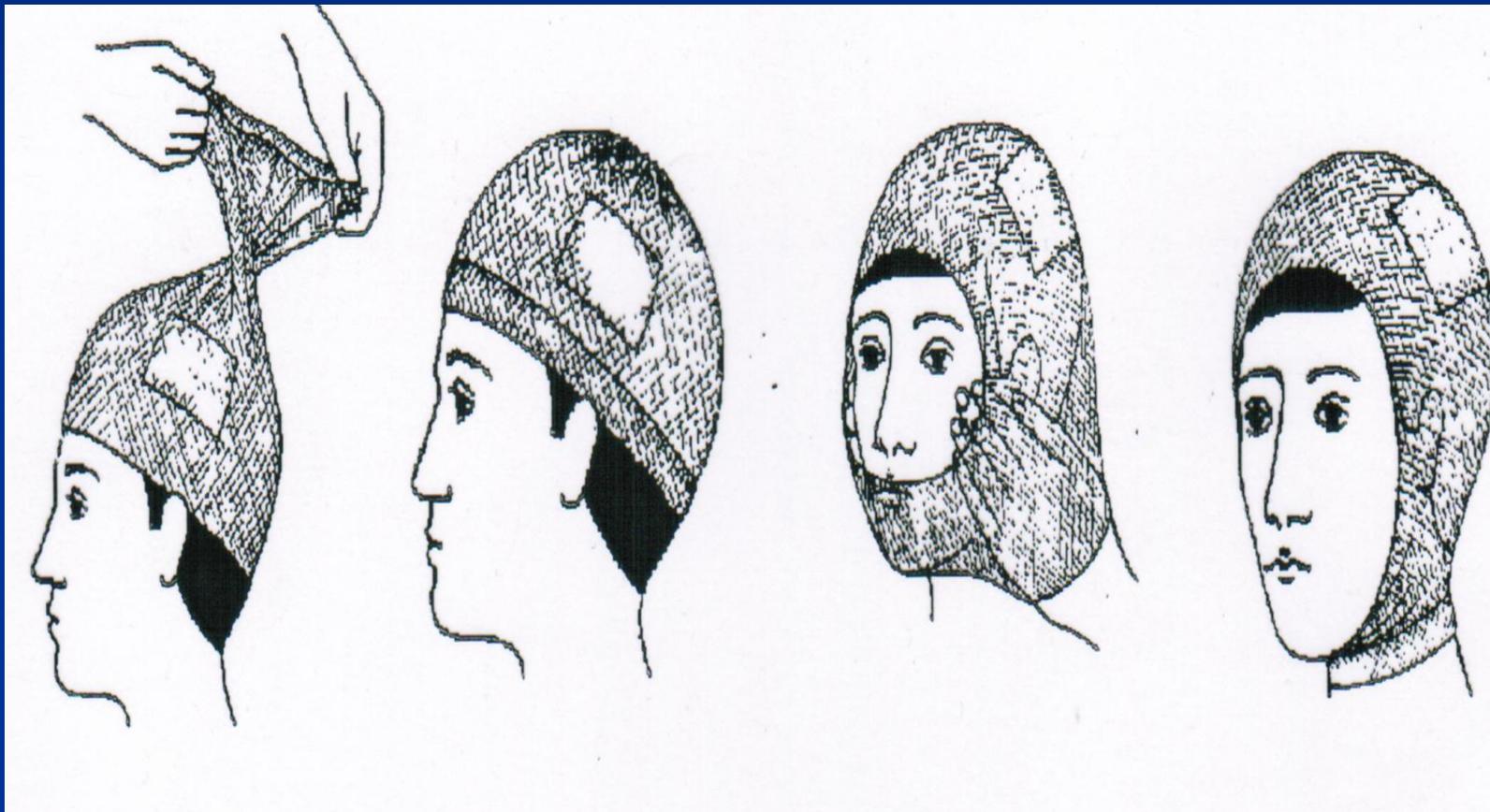


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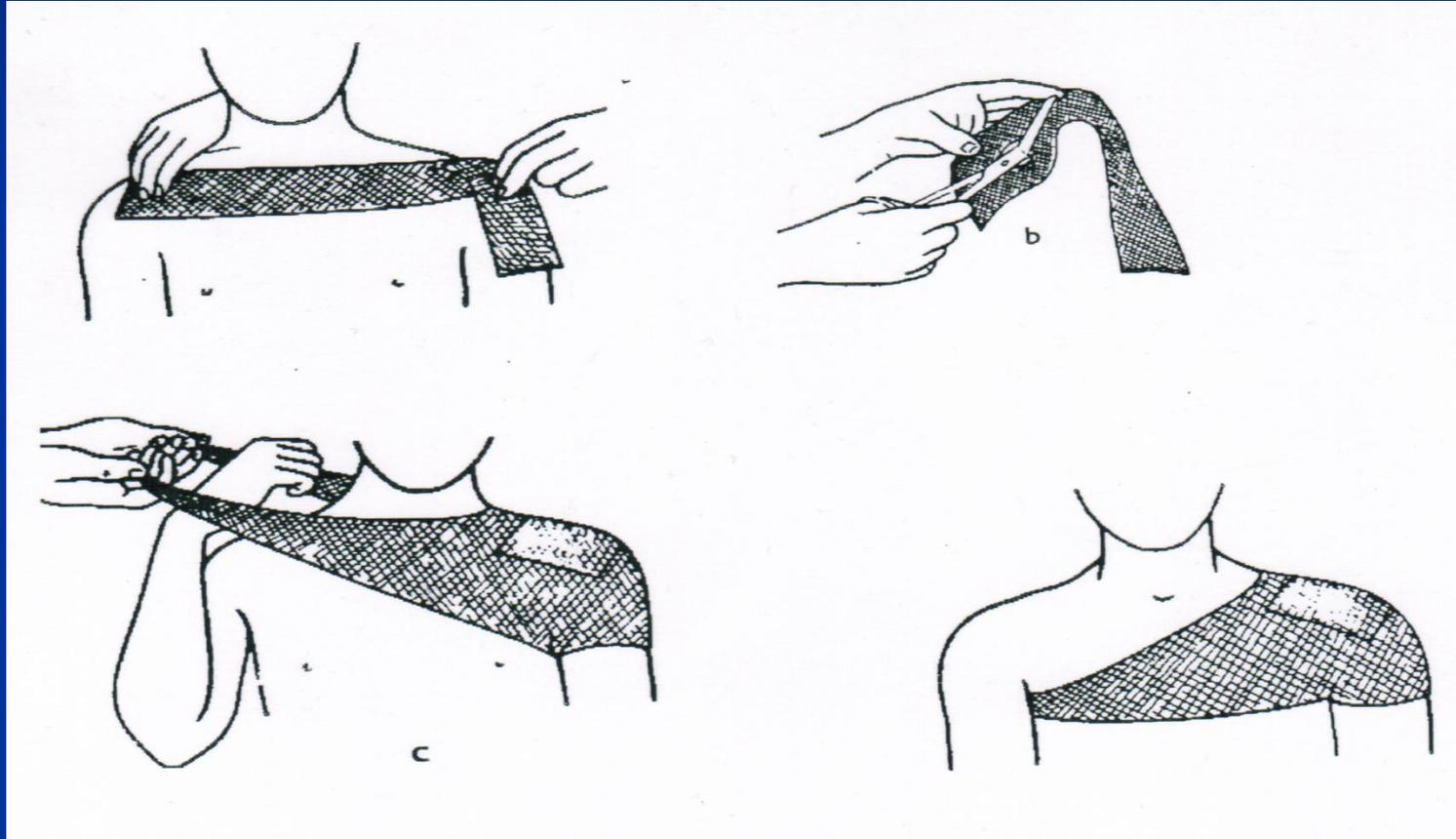
The benefits of using tubular bandages:

- **Comfortable & supportive**, the same time allowing freedom of movement
- **Stays securely** in place without the need for tapes or pins
- **Natural coloured**, cotton blend, elasticated tubular bandage
- Available in a **rang of sizes**, suitable for ankles, knees, thighs, wrists & elbow joints
- **Cost effective**, can be cut to size to suit the individual, available in 10m rolls
- Re-usable & **completely washable** without losing its effectiveness
- **Quick & easy to apply**, can also be used with Applicators - for assistance over bulky dressings or painful joints
- For muscle strains, sprains & joints - use as a **double layer** of bandage
- Can also be used for **dressing retention** with a **single layer** of bandage

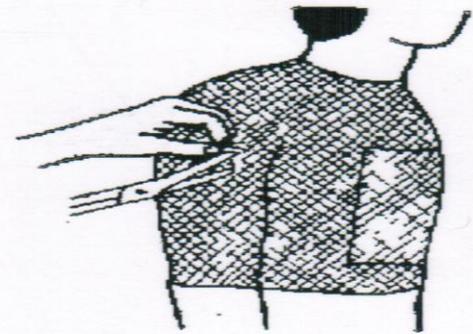
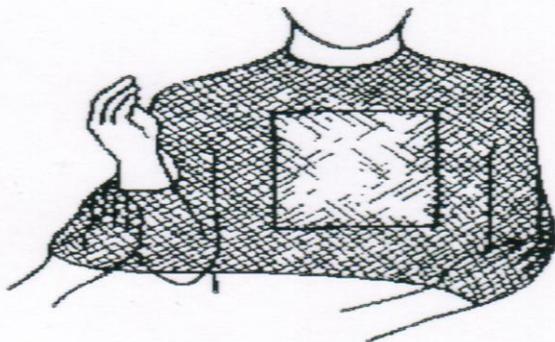
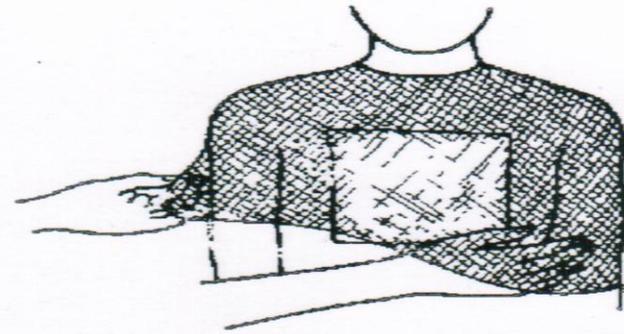
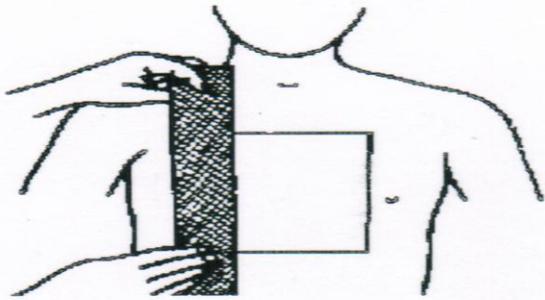
Tubular bandaging of head



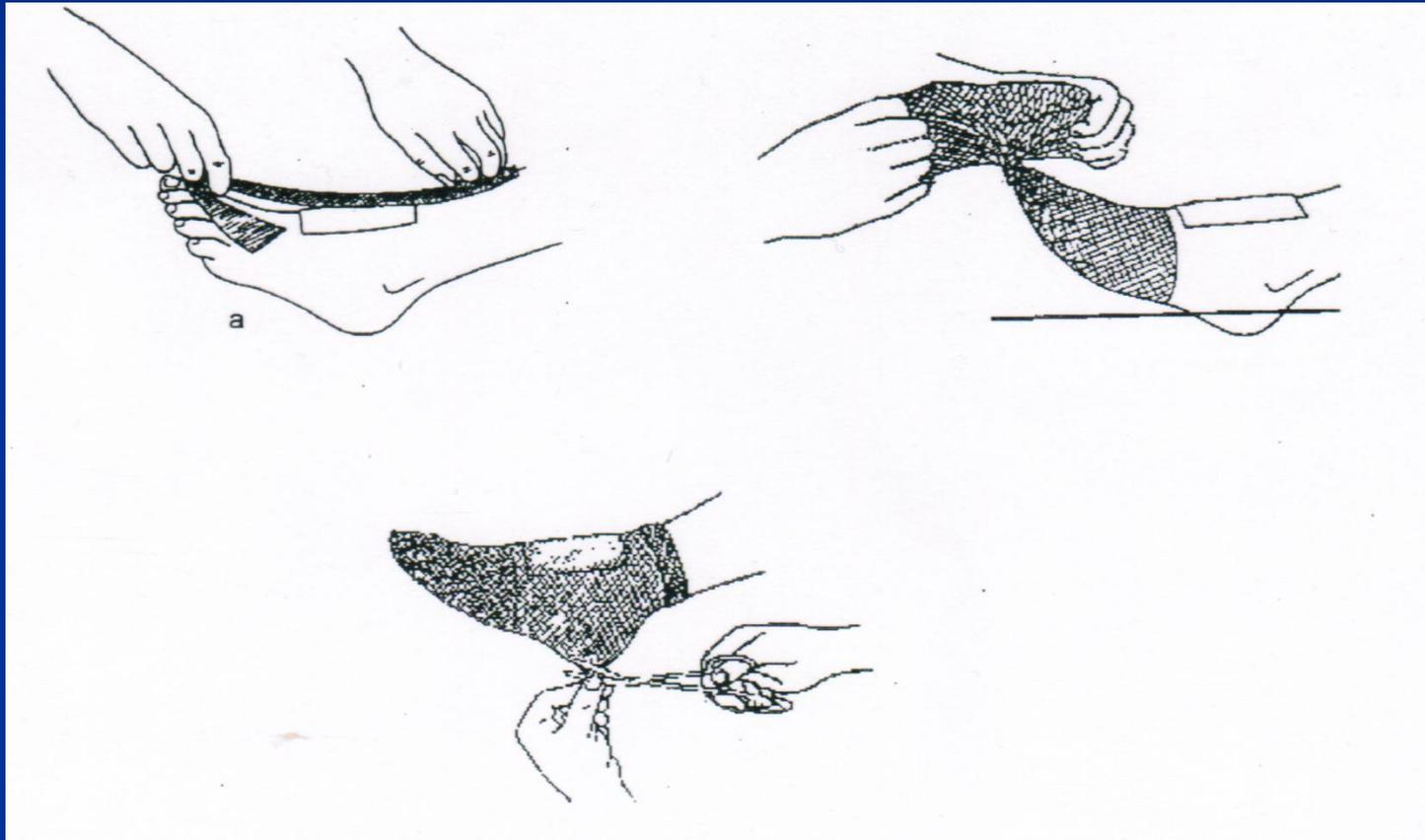
Tubular bandaging of shoulder



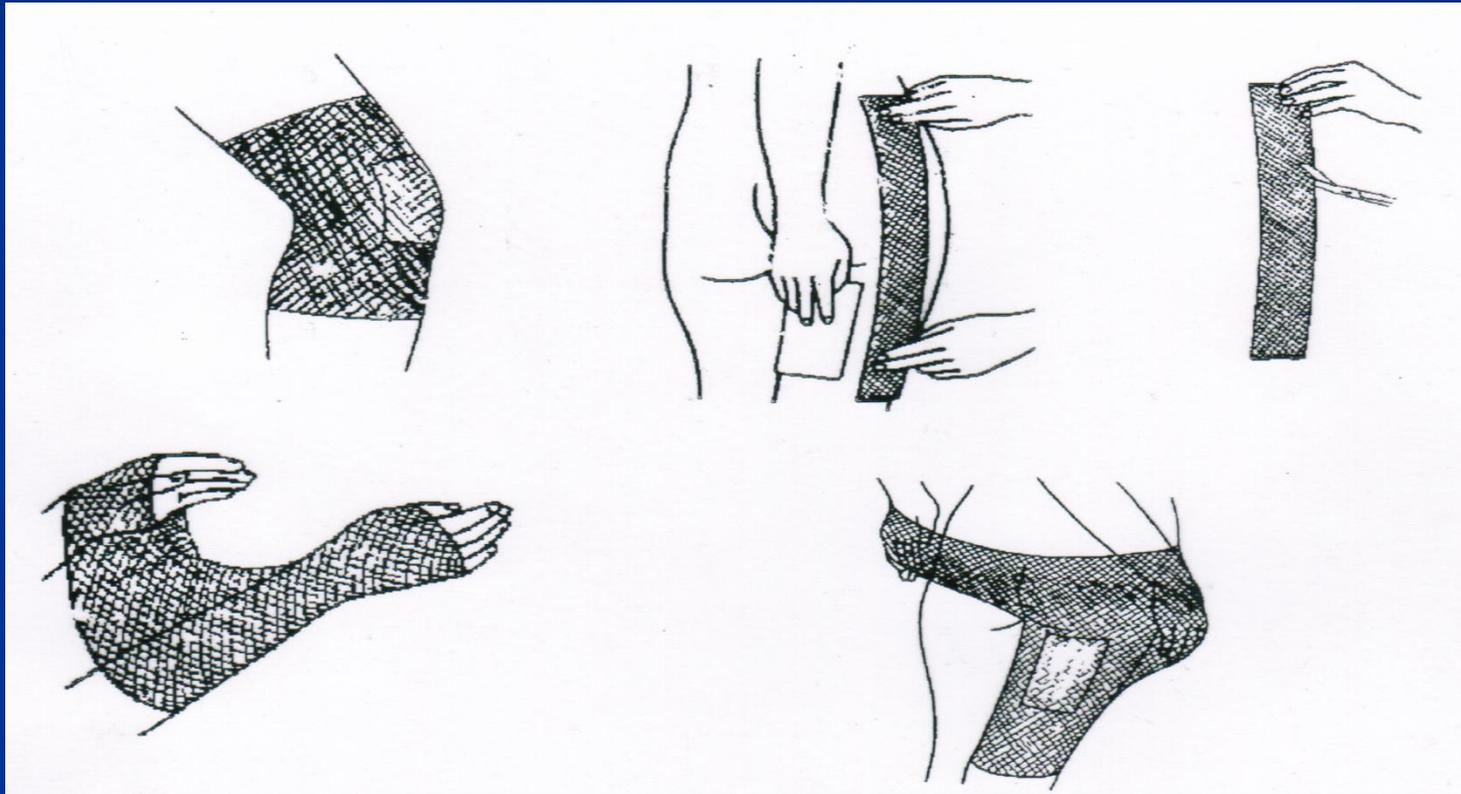
Tubular bandaging of chest

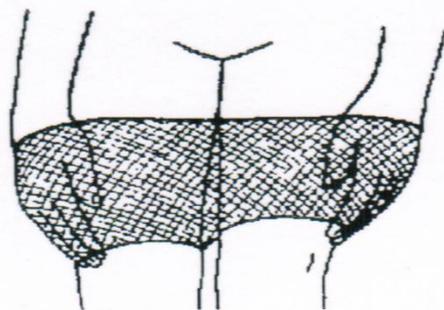
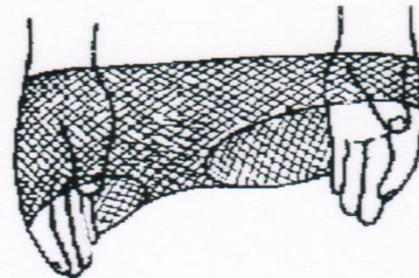
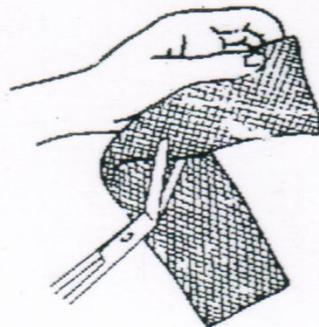


Tubular bandaging of instep



Tubular bandaging of thigh





Thank you for your attention...

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