Self-Bandaging Techniques for the Upper Extremity

The goal in self-bandaging in the self-management phase, or phase two of CDT is to maintain and improve the success achieved in the first phase of treatment. Further reduction and softening of fibrotic tissue in the affected area is the main focus. To achieve these goals, most patients have to continue to wear bandages at night. Even patients who do not experience an increase in swelling during the nighttime, and do not have any areas of fibrotic tissue, may experience fluctuation in limb volume at times (lifestyle, during menstrual period, weight gain, climate, etc.). It is therefore imperative for long-term success that every patient learns appropriate self-bandaging techniques while under the care of an experienced and properly trained lymphedema therapist.

To support patient compliance, it is essential to keep the self-bandaging techniques as simple and the least time consuming as possible. Patients are not expected to use the same techniques and material quantities as the lymphedema therapist would during the intensive phase of the therapy. The use of high-density foam without the supervision of the clinician is not advisable. Bandages in the self-management phase are primarily worn at nighttime, when the patients either sit or lie down. Much less bandage pressure is needed to achieve the beneficial effects of compression therapy. The quantity of materials is therefore much lower than during the intensive phase of therapy, during which the compression bandages are worn 22-23 hours a day.

The following represents a list of recommended materials to apply a compression bandage during the night on the upper extremity during the self-management phase. The quantities represent two sets of compression bandages, which is recommended for hygienic reasons (one to wear and one to wash):

1 bottle of skin lotion
1 box of stockinette (tubular bandage) in the appropriate size
1-2 boxes (20 individual rolls in a box) of gauze bandages (4cm or 6cm width)
2-4 padding bandages (10cm); soft foam bandages or nonwoven synthetic bandages
2 short stretch bandages 6cm, or 2 short stretch bandages 4cm (for smaller hands)
2-4 short stretch bandages 10cm, or 12cm
Tape to secure the bandages

Step-by-Step Instructions in Self-Bandaging for Upper Extremity Lymphedema

Bandages are generally applied with an even pre-stretch of about 30-40% and an overlap of about 50% to 70%. Patients should apply the bandages sitting on a table.
All materials should be on the table in the order in which they are applied; two to three strips of tape per compression bandage (about 5 inches long) should be prepared. Padding bandages are not taped.

Skin Care: appropriate skin care products are applied thoroughly, without causing redness of the skin.

Stockinette: the tubular bandage should be cut to a length that allows for an overlap of about 5” on the upper end of the extremity. This overlap is used to extend over and cover the complete compression bandage on the upper border to protect it from perspiration. A hole is cut for the thumb on the lower end of the stockinette.

Finger Bandages: fingers are slightly spread, and the palm of the hand faces down. A bolster or pillow should be placed under the elbow to support the weight of the arm.

Start the gauze bandage with a loose anchoring turn around the wrist, and then proceed over the back of the hand to the little finger (*or the thumb*). The fingers should be bandaged with light pressure from the nail bed up with approximately 50% overlap (Fig. 2-1).

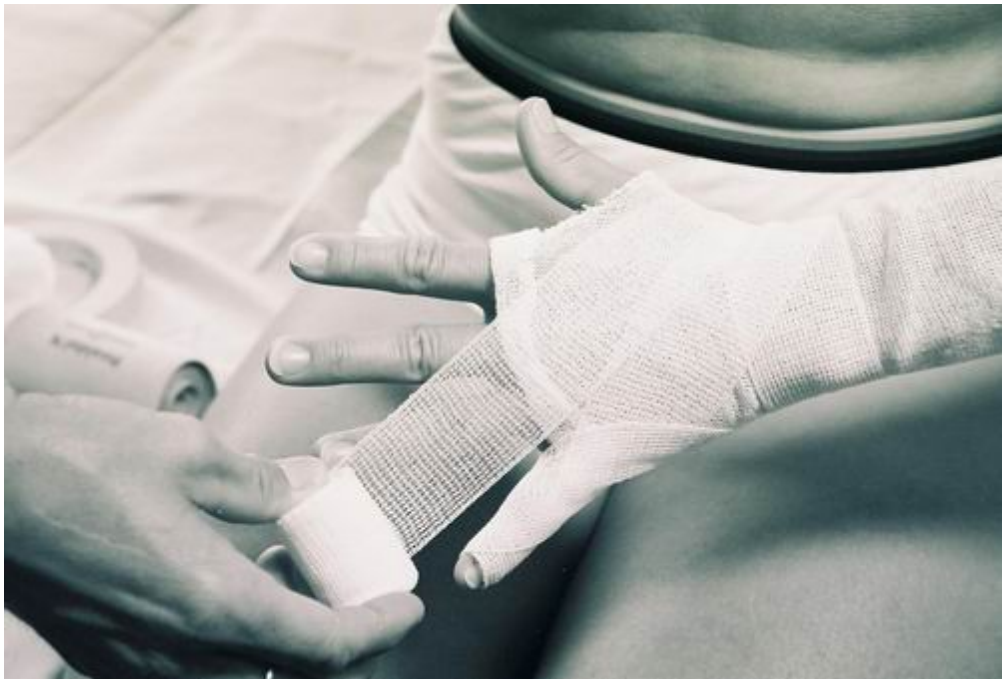

Fig 2.1

The fingertips are not covered. Leave the finger with the gauze bandage towards the back of the hand and proceed to the wrist, apply a half turn (complete anchoring turns around the wrist should be always avoided) around the wrist and continue to bandage the remaining fingers in the same fashion. The borders of the gauze bandage should not slide or roll in on either end of the fingers. One gauze bandage is generally used to bandage all fingers. Any unused part of the second gauze bandage should be wrapped spirally (not circular) around the forearm. The finger bandage should never start or end at a finger. Upon completion, the fingertips should be checked for proper circulation.

Padding Materials: non-woven synthetic padding or soft foam rolls (Rosidal Soft®, CompriFoam®) are used to pad the hand and arm. A hole is cut for the thumb; the padding bandage is secured around the wrist with a circular turn. The hand is then padded down to the knuckles using 2-4 circular turns (Fig. 2-2).

Fig 2.2

The padding bandage proceeds to cover the forearm and upper arm. Two rolls of padding bandages are typically used to cover the hand and arm (Fig. 2-3). Do not use tape to secure the padding materials.

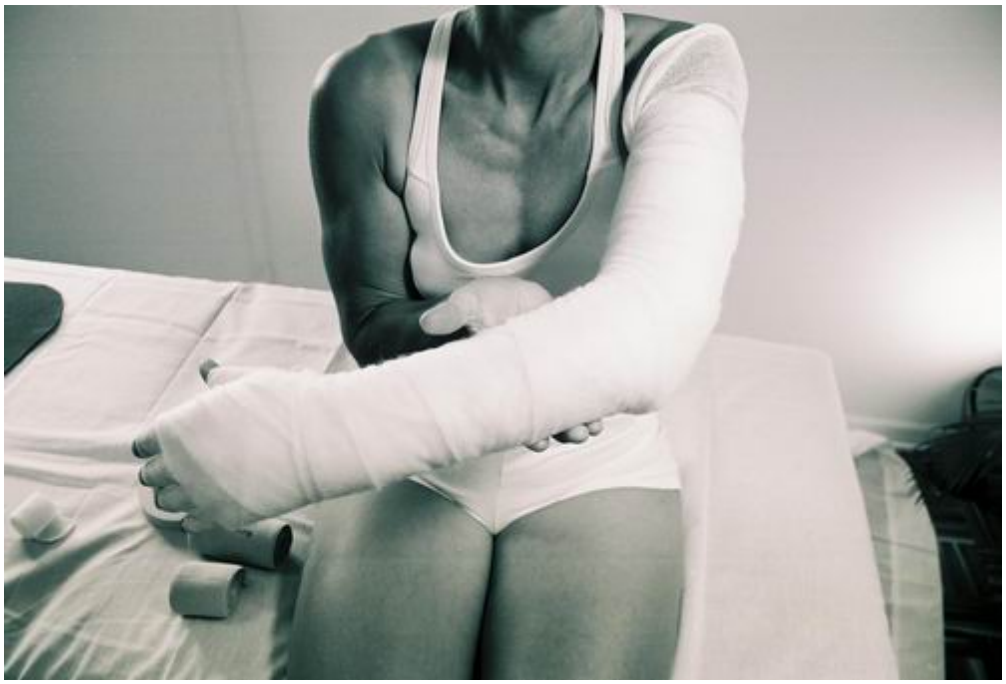

Fig 2.3

Short stretch Bandages: starting a 6cm (or 4cm) wide bandage with a loose anchor turn around the wrist, the hand is bandaged to include the knuckles with slightly spread fingers (Fig. 2-4).

Fig 2.4

The bandage is anchored between each turn around the hand with half turns on the wrist. Any remaining bandage material is used on the forearm (Fig. 2-5).

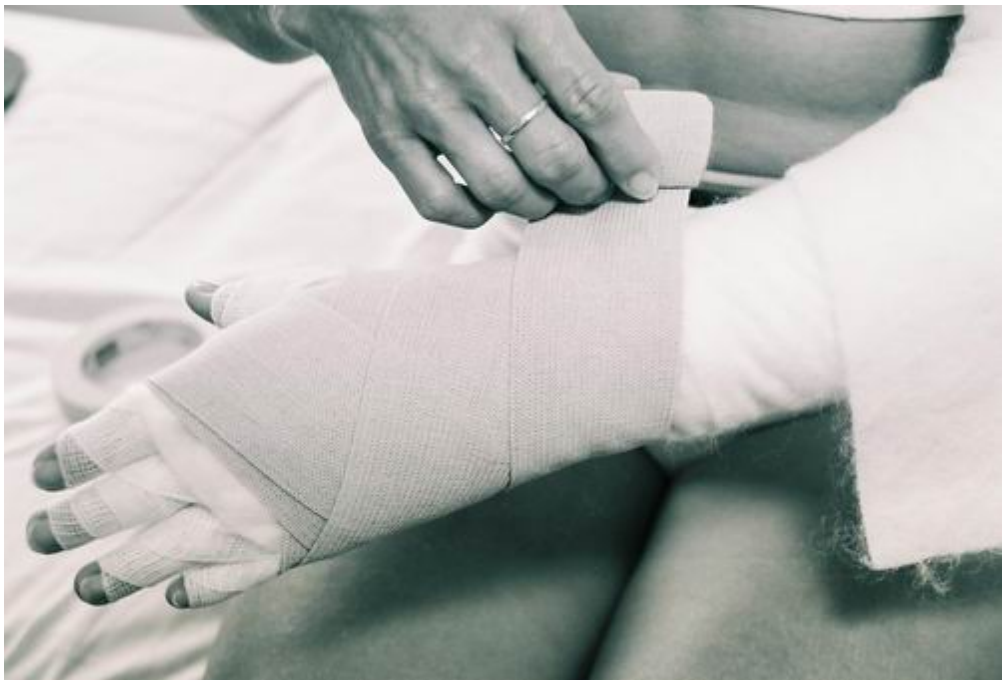

Fig 2.5

The end of the bandage is secured with two strips of tape. The subsequent bandage (10cm or 12 cm) is applied in opposite direction of the first bandage. This provides for a more functional and durable bandage. The bandage starts on the wrist with a loose anchor and proceeds to cover the forearm, elbow area and upper arm with circular turns and about 50% overlap (Fig. 2-6).

Fig 2.6

A third bandage may be used if necessary. It is important that the last bandage ends in the armpit to prevent accumulation of fluid between the armpit and the end of the bandage (Fig. 2-7). The end of the bandage is secured with 2-3 strips of tape and the overlap of the stockinette is folded over the bandage.

Fig 2.7