GUIDELINE for
A NATIONAL STANDARD TECHNIQUE OF MEASUREMENT OF LYMPHOEDEMATOUS LIMBS

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Aim

This standard indicates a basic technique for the circumferential measurement of lymphoedematous limbs that can be used by clinicians and researchers across Australasia.

Standard measurement techniques will encourage clinician accountability, quality of services for consumers, consistency in approach for consumers, comparability for research. and strengthen the evidence base for lymphoedema services.

Background

From 1996 there have been several stages of consultation and opportunities for comment provided by the Australasian Lymphology Association (ALA) to lymphoedema clinicians. The issue of a measurement standard was recognised as a priority by a group of Australian experts who identified many major domains of concern relating to training, education, treatment and measurement standards. In 1998 at the second ALA Conference in Brisbane in 1998, the role and function of standards and the framework for the standards committee were determined. In 2000 at the third ALA Conference in Melbourne, a standards determination session was held facilitated by Neil Piller, developing strong agreement on measurement techniques. At the 2002 conference a vote was taken on each issue and the results of this session were published in the ALA newsletter. The final guideline was presented at the 2004 ALA Conference.

Tools & Positioning required to undertake the standard technique of measurement

- Ensure the patient's limb is in the correct measuring position and rested for ideally 1-2 minutes before measurements (limb volume changes up to 3-5% in total, depending on position alone).

- With arm measurements, the arm should stay on the measuring board for the whole measuring procedure.

- With leg measurements some patients may feel discomfort when lying on the measuring board when their legs are being measured, so it is recommended that the board be removed once the leg is marked.

- A measuring board * (see note at end) and a set-square should be routinely used to ensure accurate and reproducible marking of the limb. It is necessary to mark the limb medially and laterally using a pen and the set-square. Marking on the skin should occur on the distal side of the set-square.

Protocol for arm measurement

1. Positioning of the arm.

The patient should be seated with the arm abducted and pronated in a horizontal position, resting on the measuring board which is supported on a stable flat surface.

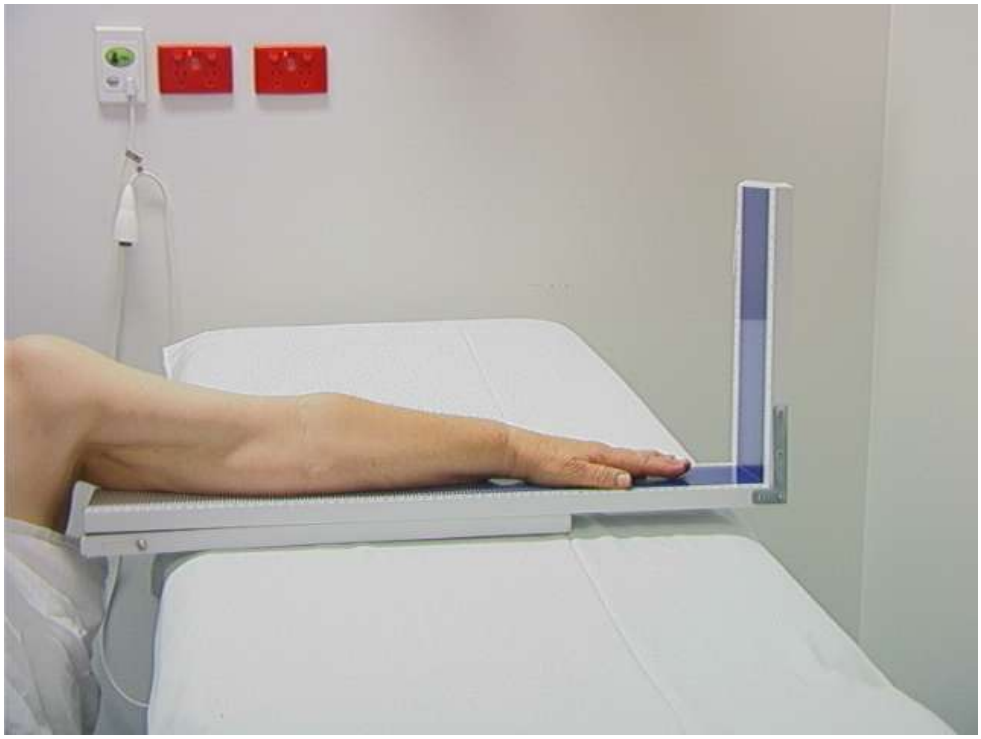


FIGURE 1 – Position for Measurement

- The end of the measuring board is positioned at the anterior axillary fold and the board position of the tip of the third finger (cm – at the point (under fingernail overhang) is notated on the datasheet. If the arm is longer, ensure that the tip of the third finger is touching the end of the measuring board (0cm) or notate the position if there is fingernail overhang.

2. Marking of the arm

- Using the set-square to ensure vertical alignment is maintained, and using the distal side of the set-square, mark the ulnar and radial aspects of the hand and arm at:

    1. Mid-point of the metacarpo-phalangeal joints of the hand
    2. Mid-point of the ulnar styloid process at the wrist (the 0cm point for reference)
    3. 10cm, 20cm, 30cm and 40cm from the ulnar styloid process.

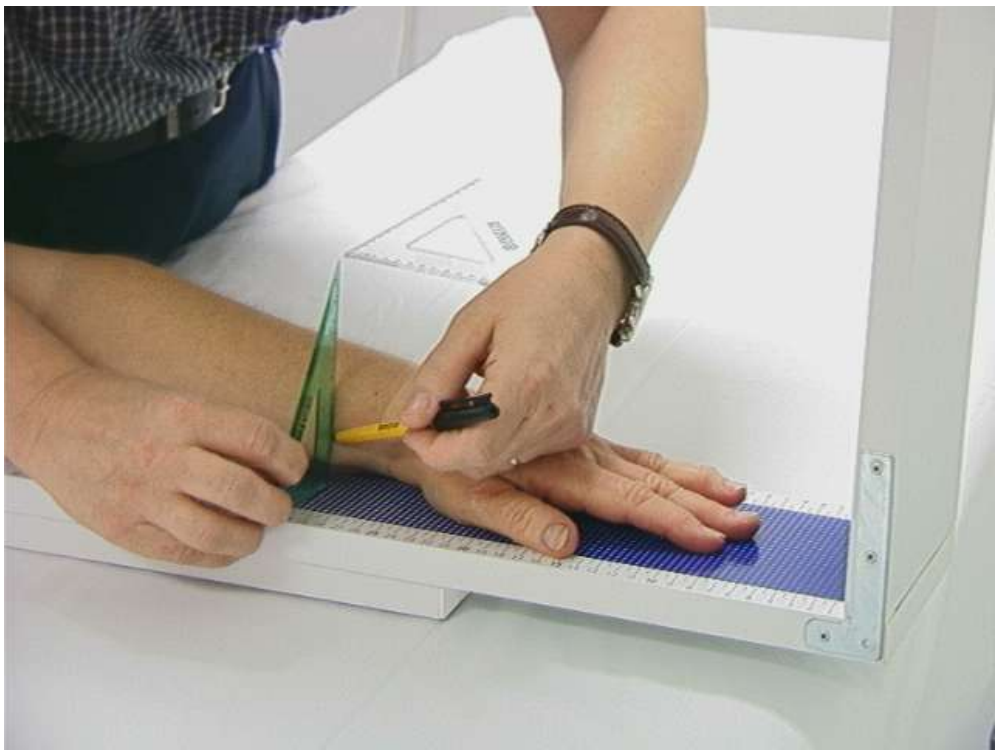
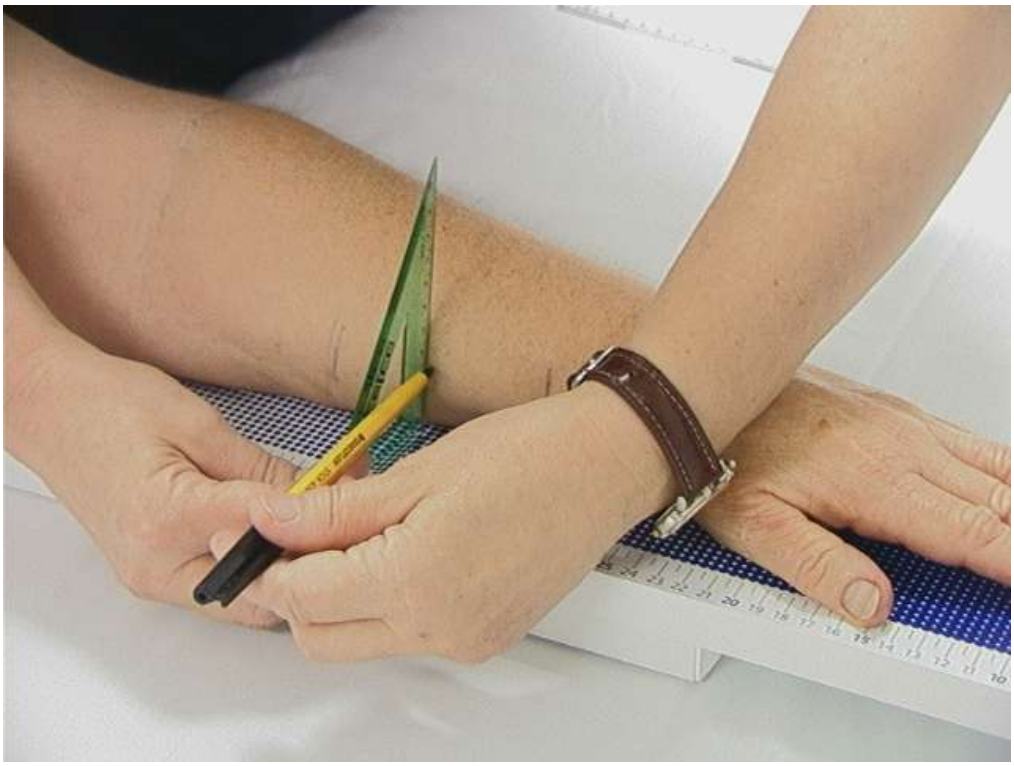


FIGURE 2 & 3 – Marking the Arm



3. Measuring of the arm

- The measuring tape should be lying distal to the mark on the skin and the circumference measurement read from the proximal edge of the tape.

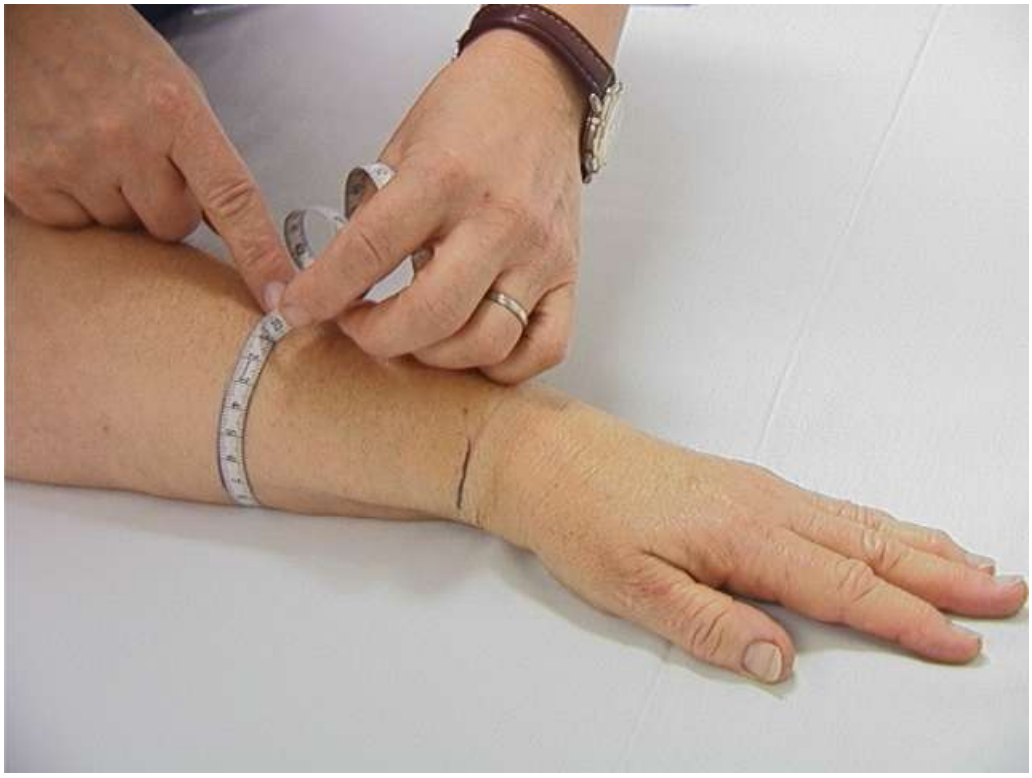


Figure 4 – Placement of tape around arm

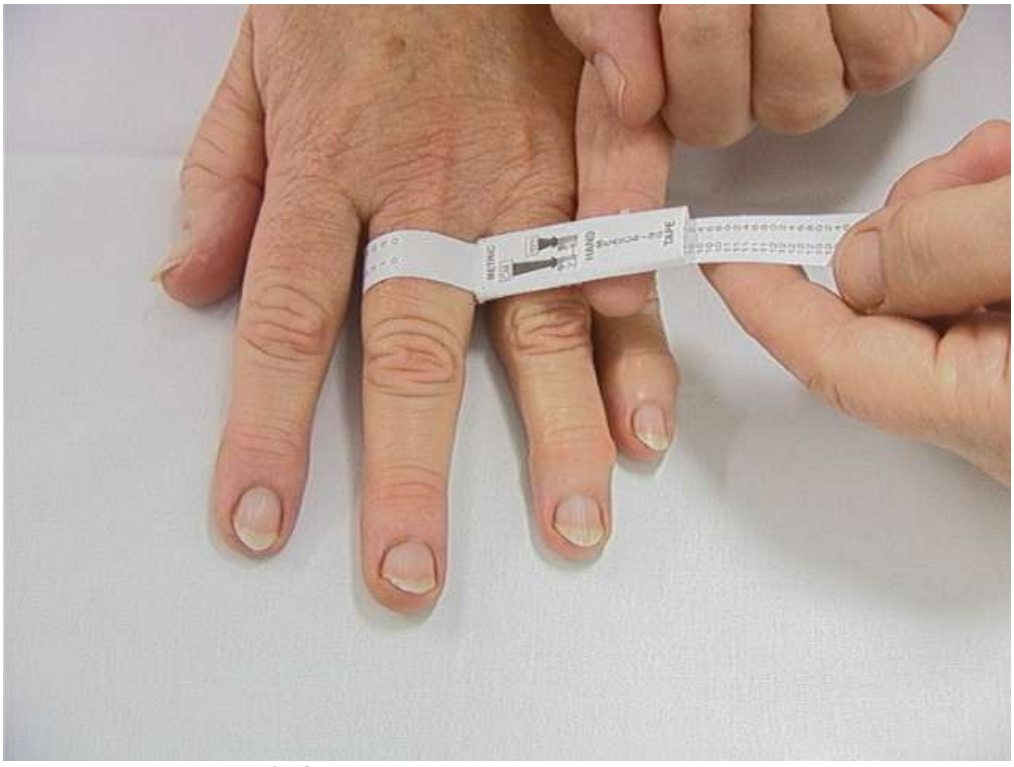


Figure 5 – Measurement of Fingers

- Fingers and toes should be measured distal to the web space using small narrow measuring tapes if possible to assist in obtaining more accurate and consistent records.
- Such tapes are produced by garment suppliers and may be paper recommended that a new tape is used with each patient) or synthetic which should be disinfected between uses as per infection control guidelines

Protocol for Marking the Leg for Measurement

1. Positioning of the leg

- The patient should be lying with the leg slightly abducted and resting on the measuring board with the sole of the foot flat against the end of the board and the dorsal surface of the foot aligned and facing upward unclear .The hip of the other leg should supported during measurement by a folder towel to avoid rotation of the pelvis during marking of the limb.

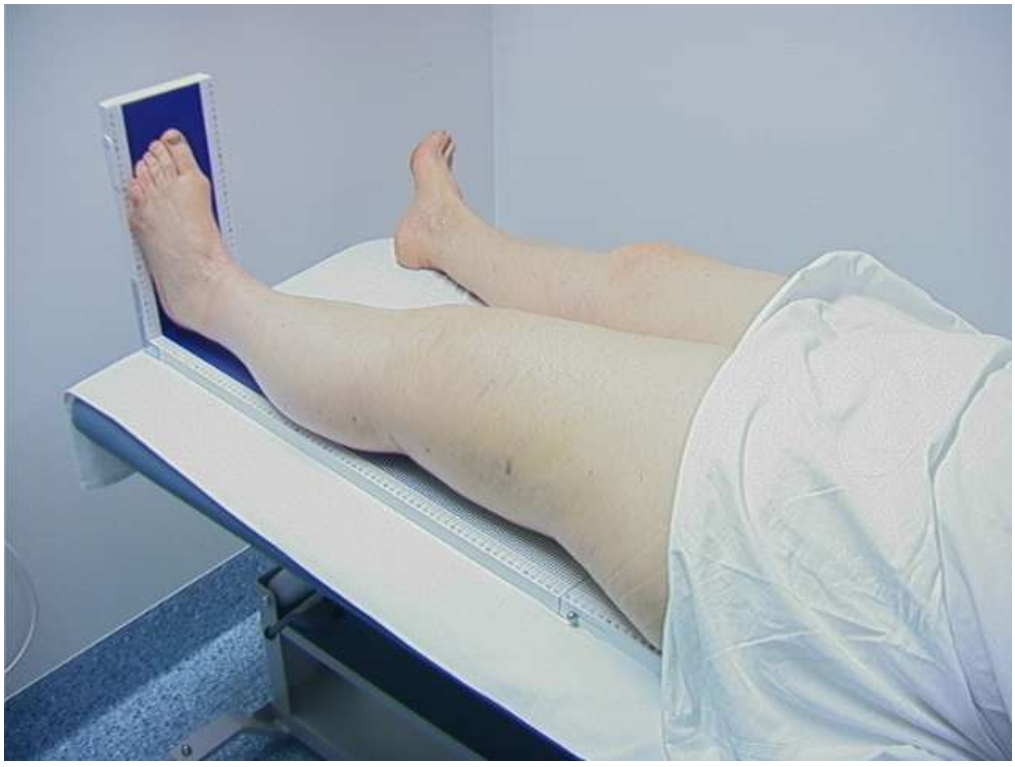


FIGURE 6 – Positioning and Alignment of the Leg

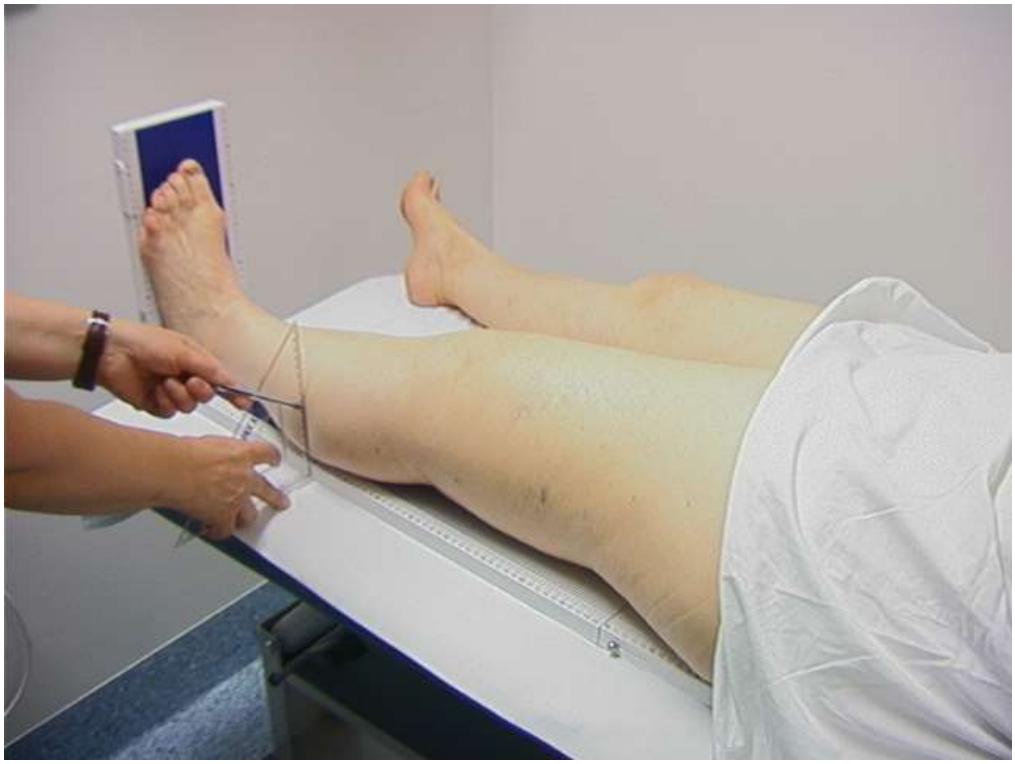
- The positions of the midpoints of the medial and lateral malleoli are noted and used to maintain the aligned position of the leg and to reposition the leg at every subsequent assessment.

2. Marking of the leg

- Using the distal side of the set-square and ensuring alignment of the malleoli is maintained, are, mark the medial and lateral aspects of the leg at:

    1. Mid-point of the metatarsal-phalangeal joints of the foot
    2. Mid-point of the tarsal-metatarsal joints of the foot (mid-foot)
    3. 10cm intervals from the sole of the foot to the top of the thigh, up to the 70cm mark depending upon the subject's height.

Figure 7 Anatomy of the foot



FIGURES 8 & 9 – Marking of the Leg (8 - lateral and 9 - medial)

The measurement board may be removed from under the leg once marked,

3. Measuring of the Leg

Placement of Tape for Leg and Toe measurements are as described for Arm and Fingers

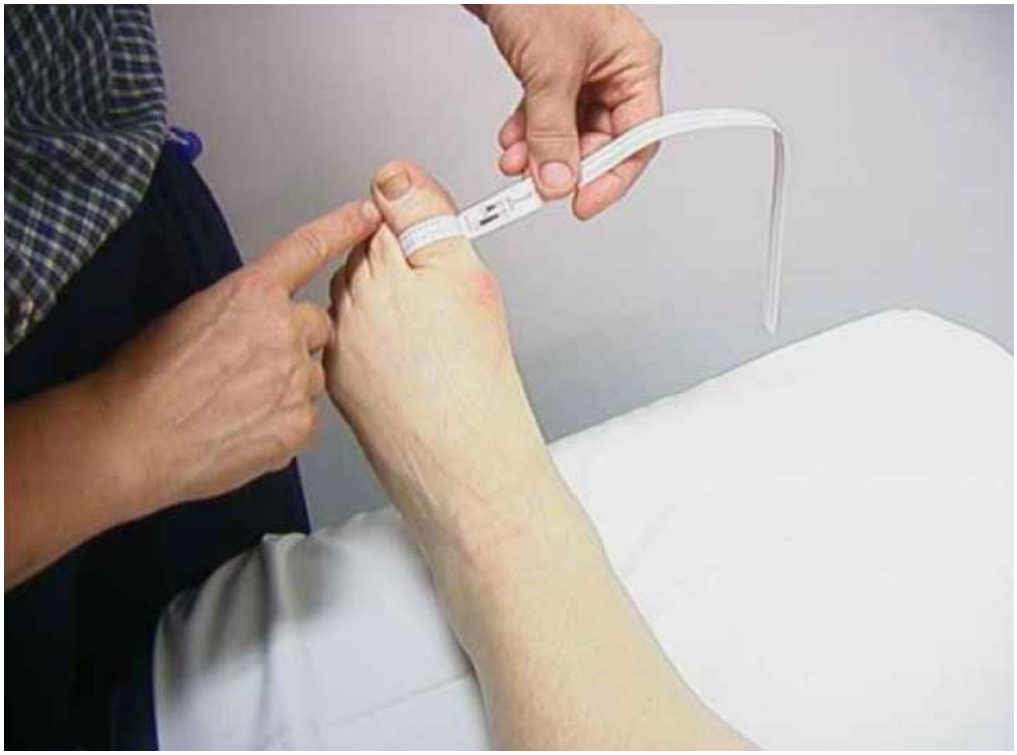


FIGURE 10 – Measurement of the Toes

Recording of measurements

Lymphoedema Measuring Form is available on the ALA website

Use of circumferential Measurements

Circumferential Measurement Guideline on the ALA website