A LAB MANUAL

HANDLING SKILLS

Used In The Management Of Adult Hemiplegia

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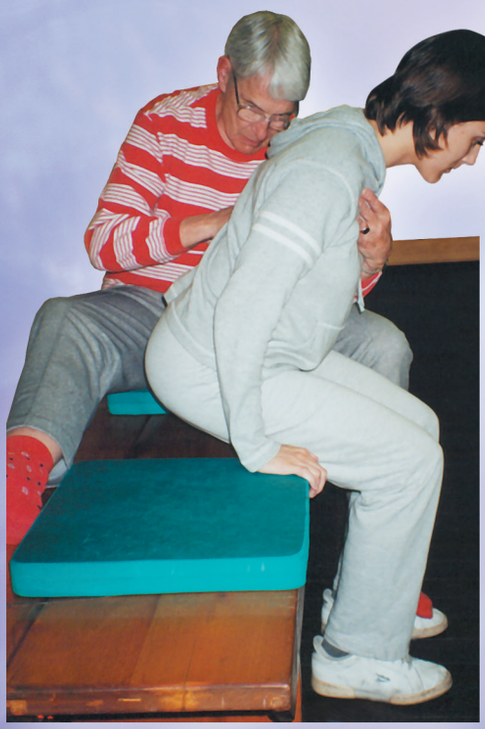

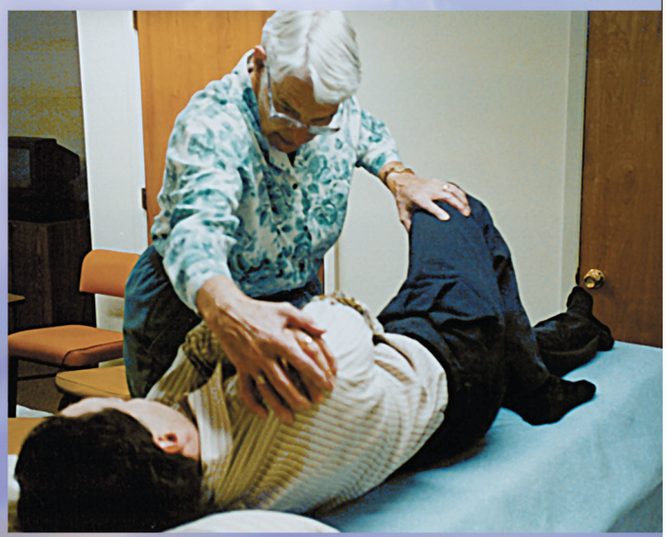

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Handling Skills Used in the Management of Adult Hemiplegia: A Lab Manual
2nd Edition

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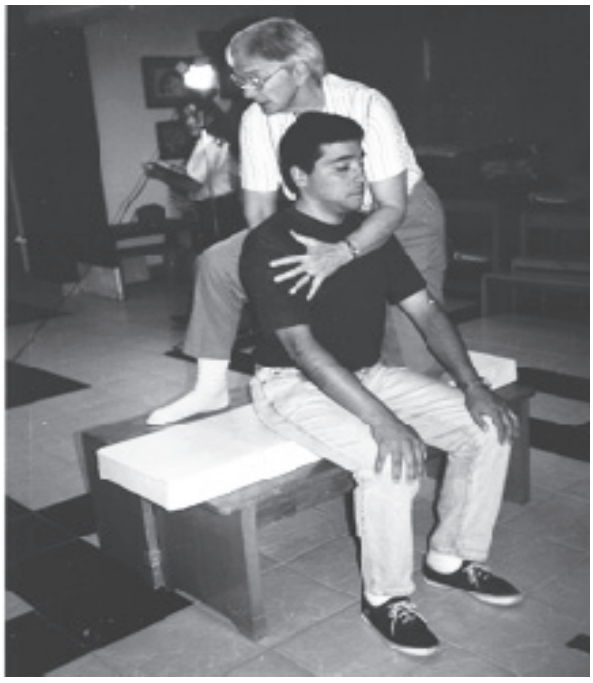
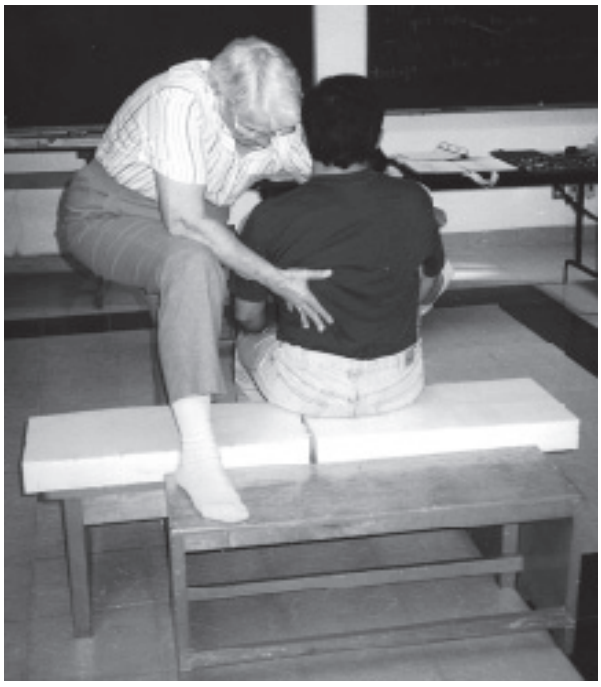
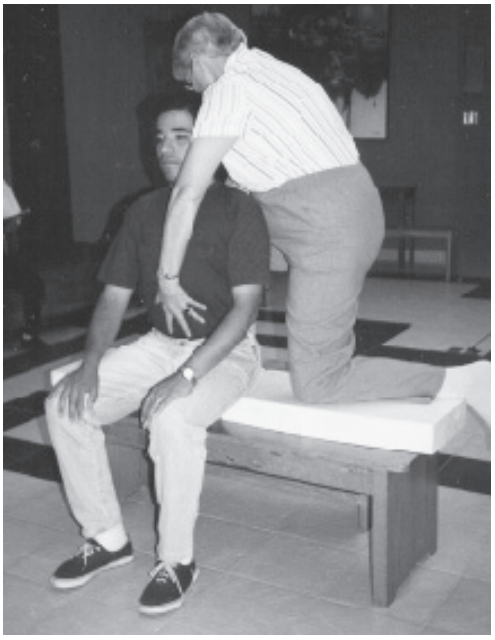
TRUNK MOBILIZATION

If the patient needs mobilization in the low trunk area, the ranges should be checked in the order in which they are listed. Then, if mobilization is necessary, it should be done in this same order. Remember only mobilize in those areas required. If the patient only needs "thoracic extension" or "pectoral stretch," he/she still needs at least a neutral low trunk before doing any stretching to the upper trunk. Also, the better extended the thoracic area is, the better the mobility and alignment one will achieve in the scapulae. It is always necessary to think about how the alignment of one area relates to and effects another part.



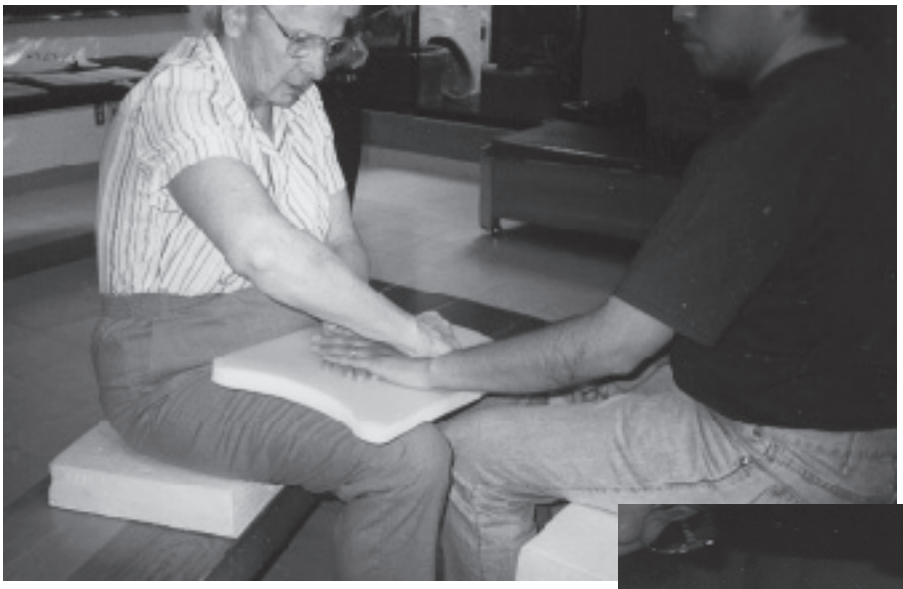




UPPER EXTREMITY STRETCHING

Mobilization of the trunk and scapula usually helps to reduce the tone in the UE so that these should precede any UE stretching. The inhibition of the hand will help you determine if mobilization of the metacarpals, carpals and forearm are necessary. If the hand is extremely tight and you cannot get a hold of the first metacarpal to inhibit the hand, then mobilize the metacarpals first. Metacarpal mobilization should always precede carpal and forearm mobilization.

Once you can get the hand in weight bearing (on a flat or curved surface) maintain it there with the arm in as much lateral rotation as possible; then have the patient move the trunk over the arm. Use small movements at first and gradually the tone will decrease. The patient should be encouraged to actively weight bear on the hand, but this will probably need to be facilitated. (**See section on facilitation of the arm in weight bearing page 48.**)



ROTATION AND REACHING
Anterior View

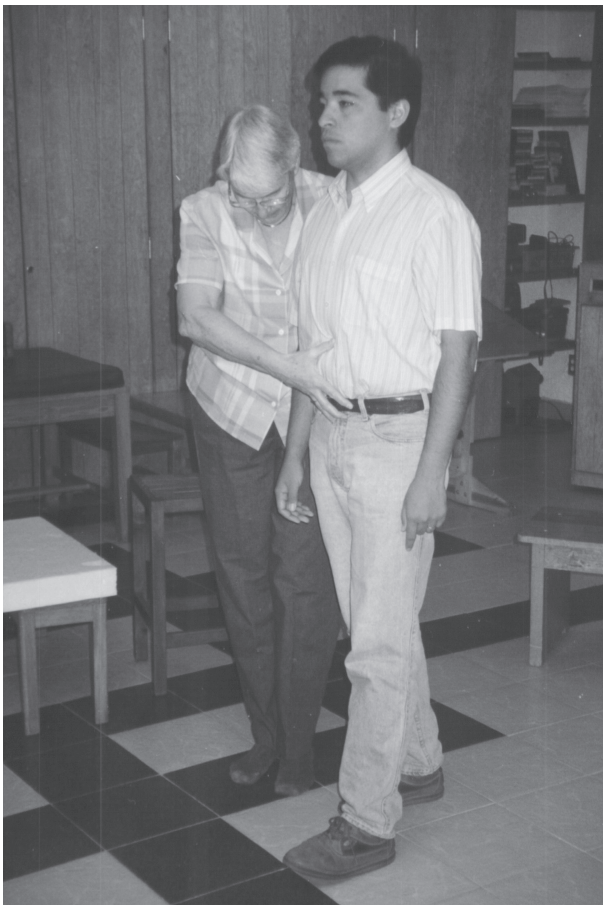
Patient's involved arm is placed out to the side in external rotation. The therapist is at the side with her foot on the patient's involved foot and thigh over the patient's hand. The therapist facilitates the trunk and arm with her left hand. The patient rotates the upper trunk and reaches with the left arm across the body toward the more involved side taking weight on the involved arm and letting it bend slightly. The patient then returns to midline, extending the involved arm while the therapist facilitates the trunk extension and scapula approximation. To activate the involved arm more resistance can be applied to the trunk as it returns to the middle. The more the rotation and reach the harder the activity so it must be graded carefully.

REACHING FORWARD WITH "LIFT OFF"
Anterior View

To increase the demand on the involved side, the patient can bend forward and reach with the better arm as he/she maintains weight on the involved side, keeps the trunk active and lifts the hips off the surface. The therapist maintains the dominals with the right finger pads and approximates the scapula with her right thumb while the patient pushes into both feet (heels) And the involved arm to left off the surface. The therapist's back hand can assist with the lift off as previously described (see page 51).

FACILITATING THE TRUNK WHILE WALKING FROM THE SIDE

Note: In all trunk facilitation the therapist **must** be able to influence both the upper trunk and lower trunk at all times to keep the trunk aligned.



Anterio-lateral View - **1.** The therapist's right hand is over the abdominals cueing the upper abdominals to bring the rib cage down and/or the lower abdominals to keep the pelvis neutral.

Posterio-lateral View - **2.** The therapist's left hand uses the thumb to cue the rib cage forward and the fingers cue the back of the pelvis down into a "tuck". There should be no contact over the low back as the patient is usually already over-extended there, due to frequent leaning of the upper trunk back or tilting the pelvis forward.

POSITIONING AND EARLY BED MOBILITY

GENERAL AIMS

1. To provide support.
2. To discourage movement strategies that elicit abnormal tone.
3. To promote symmetry in alignment, weight bearing and orientation.
4. To provide more normal sensory feedback.
5. To encourage awareness of the affected side.
6. To relieve pain and provide comfort.
7. To develop and reinforce basic strategies of movement for function in bed.

CLINICAL IMPLICATIONS FOR POSITIONING AND EARLY BED MOBILITY

Proper early positioning of the patient is extremely important to the prevention of tightness and to maintain sensory awareness of the body parts through weight bearing.

Teaching the patient how to move in bed is also extremely important. However, trying to move the body around while horizontal is extremely difficult because of the influence of gravity on the body parts. Therefore, these bed activities should be preceeded by some preparatory activities in sitting on the edge of the bed with feet flat on floor or on a firm support surface. Activating the muscles of the trunk in sitting and/or standing is much easier because of the decreased influence of gravity, as well as, the decrease in size of the base of support which creates an increased demand on the muscles. Thus, many activities described earlier under "sitting activities" might be used as a preparation for the bed mobility activities.

It is also important to recognize that these activities are encouraging the patient's active participation, so it is very important to wait for the patient's response following facilitatory input. Otherwise, the therapist is doing the "work" which teaches the patient very little. It is much better to do fewer activities, but insure that the patient is actively involved in everything that is being attempted.This does not imply that the patient is doing "everything" for himself, rather that the therapist helps only as much as is necessary to help the patient achieve the activity, As the patient becomes more active, the therapist withdraws her input to allow the patient to achieve more in a shorter period of time.

Note: In the following photographs, the "patient's" involved side is indicated by the sash tied around the model's arm.

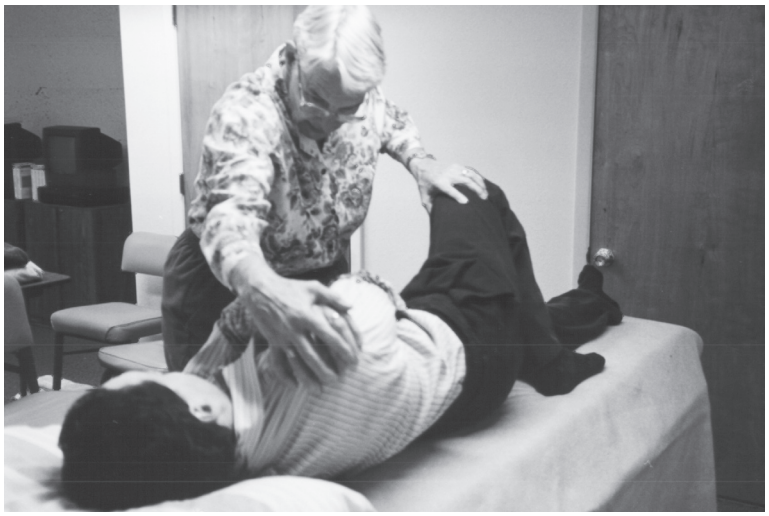
ROLLING TO SIDELYING ON THE LESS AFFECTED SIDE

As the patient turns his head, the therapist facilitates head lift. As upper body turns, legs follow. If patient's involved knee is bent and affected foot is trapped, therapist can facilitate weight bearing into the affected foot to encourage pushing with the leg.

Affected arm is positioned on pillows to avoid too much adduction and external rotation. Pillows should not block patient's view.

The bottom leg is straight and the top leg is flexed slightly at the hip and knee and positioned on 1 or 2 pillows placed in front of the bottom leg. This helps avoid too much adduction at the hip and should keep the entire leg and foot in alignment.

The spine should be fairly straight. If necessary, a folded sheet placed under the patient's less affected side prior to rolling, should prevent shortening on the affected side. The width of the folded sheet is such that it lies between the patient's iliac crest and inferior angle of scapula.



Note: Patient will usually make his own comfort adjustments when lying on the less involved side.