

AmbujaNeotia.



**THE NEOTIA
UNIVERSITY**

ज्ञानम् आत्म प्रदीपाय

UGC Enlisted & Recognised

Department of Physiotherapy

School of Health Science

Bachelor of Physiotherapy

(BPT)

Exercise Therapy I Practical Manual

Course Code: BPT 372

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Certificate

This is to certify that Mr./Ms. with
UID number of Bachelor of
Physiotherapy Semester 3rd has satisfactorily completed the practical prescribed by
the Neotia University for the year

.....
Signature of Student

.....
Signature of Faculty

Date of Submission:

Soft Tissue Manipulation (Therapeutic Massage)

The systemic and scientific manipulation of the soft tissues of the body is massage.

GENERAL INDICATIONS FOR MASSAGE

- Bells' palsy
- Pain relief
- Scar tissue mobilization
- Burns.
- Stiff neck
- To improve circulation
- Muscle spasm
- To break muscular adhesions

GENERAL CONTRAINDICATIONS OF MASSAGE

- Hypertension
- Very sensitive patients when intolerable
- Very old age patients
- Hyperpyrexia (fever)
- Early emphysema
- Presence of hair
- Unconscious patients
- DVT
- Diabetes
- Carcinoma
- Open wounds
- Recent scar
- Tuberculosis
- Embolus.

Therapeutic Massage

Upper Limb

Therapeutic Massage

Lower Limb

Therapeutic Massage

Face, Neck, Back

Range of Motion (ROM)

Range of Joint Motion of Major Joints Range of Motion is the measurement of movement around a specific joint or body part. To measure range of motion, physical therapists most commonly use a goniometer, which is an instrument that measures angle at a joint. Goniometers show degrees of an angle from zero to 180

or 360 degrees and are available in different shapes and sizes for the unique joints in the human body.

PROCEDURE

- Patient's clothes are removed where the joint measurement is taken.
- Position the patient in the relaxed manner and the joint to be measured should be free from any obstructions like pillow, couch, etc.
- Measuring joint has to be in 0° position.
- Total procedure should be explained to the patient.

Therapist Position-

- Therapist has to stand near to the patient and facing the joint, which has to be measured.
- Axis or the fulcrum of the goniometer is placed over the axis of the joint to be measured.
- Stable arm is fixed with the proximal segment of the joint.
- Movable arm is fixed with the distal segment of the joint.
- Therapist has to move the distal segment of the joint with the movable arm of the goniometer to measure the joint range.

POSITION OF THE PATIENT

Position of the patient is important proper positioning of the patient itself is the competition of half of the procedure of measuring the joint range.

To measure the range of motion of a particular joint, the mentioned factors has to be followed.

- The joint structures have to be in a relaxed manner.
- Joint should be in zero or starting position.
- The complete range of motion of the joint has to be permitted.
- Proximal joint has to be fixed or stabilized.

Upper Limb-

Lower Limb-

Manual Muscle Testing (MMT)

Manual muscle testing is a procedure for the evaluation of the function and strength of individual muscles and muscle groups based on the effective performance of a movement in relation to the forces of gravity and manual resistance.

The grading is done using both numbers as well words to describe the muscle grade:

- 0 – Zero No muscle contraction.
- 1 – Trace Flicker of contraction is observed or palpated.
- 2 – Poor Full range of motion is performed in the gravity-eliminated position.
- 3 – Fair Full range of motion is performed against gravity.

4 – Good Full range of motion against gravity; moderate to strong resistance is offered. If the patient is able to withstand the resistance, then it is graded as 4. 5 – Normal Full range of motion is performed against gravity; and the examiner offers maximum resistance. If the patient is able to hold for some time, then it is graded as 5.

Note: Always tell your patient about what procedure you are going to perform and what you are going to obtain from that procedure. Remember to check the uninvolved side first and be consistent on where you apply the resistance. Also, instruct your patient not to hold his or her breath as you apply force or resistance.

Upper Limb

MANUAL MUSCLE TESTING
MENTION THE MMT GRADES-

0-
1-
2-
3-
4-
5-

Lower Limb

MANUAL MUSCLE TESTING
MENTION THE MMT GRADES-

0-
1-
2-
3-
4-
5-

Fundamental Positions & Derived Positions

The postures from which movement is initiated are known as starting positions. There are five fundamental starting positions they are STANDING, KNEELING, SITTING, LYING and HANGING. Equilibrium and stability is maintained in these positions by balance of forces acting upon the body.

Sherrington stated that every moment begins in posture and ends in posture.

1. STANDING

This is the most difficult position of all the fundamental positions to maintain, as the whole body must be balanced on a small base of support and by the coordinated work of many muscles.

2. KNEELING

The body is supported on the knees which may be together or slightly apart. The lower leg rests on the floor with feet plantar-flexed. The rest of the body is held as in standing.

3. SITTING

The position is taken on a chair or stool, the thighs are fully supported, the hips and knees to be flexed to a right angle and feet rest on the floor.

4. LYING It is easiest of the fundamental positions as the body can be completely supported in the supine position.

5. HANGING

The body is suspended by grasping over a horizontal bar, the forearm being pronated, the arm straight. The head is held high. The trunk and legs hang straight with the heels together and ankle plantarflexed.

Positions which may be altered from the fundamental positions to modify the effect of the positions or of the exercises.

DERIVED POSITIONS

Positions which may be altered from the fundamental positions to modify the effect of the positions or of the exercises. To increase or decrease the stability of the body and to alter the center of gravity. To increase or decrease the muscle work required for maintaining the position. Provide a convenient position for a particular group of exercises.

Some of the derived positions are-

From Standing

- Half standing
- Step standing
- Toe standing
- Close standing
- Wing standing
- Reach standing

From Kneeling

- Kneel sitting
- Side sitting
- Half kneeling
- Prone kneeling.

From Sitting

- Half sitting
- Long sitting
- High sitting
- Ride sitting.

From Lying

- Side lying
- Prone lying
- Half lying
- Side half lying.

From Hanging

Full hanging

Suspension Therapy

Suspension is defined as suspending a part of the body or whole body with the supported slings and pulleys. It is working under the principle of

- (i) Friction,
- (ii) Pendulum, and (iii) Eliminating gravity movement.

ADVANTAGES

1. It reduces the burden for the therapist.
2. Easy to lift the limbs.
3. Active movement can be performed easily with minimum friction.

SUSPENSION INSTRUMENTS

1. Suspension frame
2. Supporting ropes
3. Pulleys

4. Slings
5. S-hook , dog clips
6. Wooden cleat.

TYPES OF SUSPENSION

1. Axial suspension
2. Vertical suspension

USES OF SUSPENSION THERAPY

1. The suspension therapy encourages active participation of the patient.
2. It is mostly used for the muscle graded as second in order to increase the muscle grade.
3. It promotes relaxation through smooth, rhythmic and supported movement.
4. The patient learns to use the appropriate muscle.

Relaxation

Relaxation is considered as a positive state in which the person perceives himself as being relieved from stress or tension. This includes both physical as well as mental relaxation. If the muscles are free from tension or rest are said to be relaxed.

AIMS OF RELAXATION

1. As a preventive measure to protect the particular organs involved in stress-related disease.
2. As a treatment to help to relieve stress in conditions like hypertension, tension headache, and asthma.
3. Teaching the relaxation of the muscular system.
4. As a coping skill to calm the mind and allow thinking to be clearer and more effective.

GENERAL ASPECTS OF RELAXATION

1. Support: Various forms and modifications of positions are used to achieve the maximum support to the body.
2. Comfort: By taking the comfortable position and other means like fresh air in the room and well-balanced light meal.
3. Clear explanation about techniques & restful and peaceful atmosphere.
4. Tone of the therapist should be quiet and calm.
5. To allow the trainee to understand, pause between instructions is mandatory.
6. Explaining the trainee proper termination technique at the end of the session.
7. Home program.

RELAXATIONS ACHIEVED IN PHYSIOTHERAPY

General Relaxation

1. Passive movements: Rhythmical passive movements may assist in relaxation.
2. Group therapy: General relaxation sometimes may be carried out efficiently in a group.

Local Relaxation

1. Massage: By the techniques of massage, general as well as local relaxation can be achieved.
2. Hold relax techniques.