## **Therapeutic Exercises**

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**Q1)** Define therapeutic exercise? Discuss the aims of therapeutic exercise?

Ans: THERAPEUTIC EXERCISE: It refers to a wide range of physical activities that focus on restoring and maintaining strength, endurance, flexibility, stability and balance
The goal of therapeutic exercise is to return an injured patient to a fully functioning pain free state.

## - Aims of therapeutic exercise;

- 1) The ultimate goal of a therapeutic exercise program is the achievement of an optimal level of symptoms free movement during basic to complex physical activities.
- **2)** It improve and restore physical function also prevent loss of function
- 3) It enhance patients functional capabilities
- **4)** It improve overall health status, fitness and sense of well being
- 5) It improves respiratory capacity and decreases stiffness

**b)** What is ROM? why do we use ROM?

Ans) Range of motion: Range of motion is the measurement of the amount of movement around a specific joint or body part. It is commonly measured during a physical therapy evaluation or during a course of treatment Other impairments that physical therapist may measure include strength, gait, flexibility or balance

## -Uses of ROM:

Range of motion exercise help to improve joint function
Range of motion is how far you can move your joints in different
directions these exercises help you move each joint through.
Its full range of motion movement can help keep your joints
flexible, reduce pain and improve balance and strength.

**Q2)** What are aquatic exercises? Discuss the properties of water and its clinical significance?

Ans) AQUATIC EXERCISES: It is low impact activity that takes the pressure off on bones, joints and muscles.

Water also offers natural resistance which can help strengthen muscle.

Aquatic Exercise also has several benefits such as improved heart health, reduced stress and improved muscular endurance and strength.

## **Properties of water and its clinical significance:**

1) **Buoyancy**: A force experienced as an upward thrust on the body in the opposite direction to the force of gravity.

- Clinical significance: It decrease stress and compression to body tissues (weight bearing Surface)
- Assist weak muscles.
- **2) Hydrostatic pressure:** Pressure exerted by fluid on the body immersed in fluid.
- Clinical significance:
- 1) It reduce effusion
- 2) it centralized peripheral blood flow
- 3) The proportionality of depth and pressure allows the patient to perform exercise more easily when closer to the surface.
- 3) Viscosity: Its friction occurring between molecules of liquid resulting in resistance to flow
- Clinical significance:
- 1) It creates resistance with all active movements.
- 2) Increasing the surface area moving through water increases resistance.
- **4) Surface tension:** The surface of fluid acts as a membrane under tension.
- **Q3** Describe Maitland joint mobilized grading based on amplitudes of movements?
- **Ans) Grade I;** SARO small amplitude: Rhythmic oscillating movement at the beginning of range of movement.

  Manage pain and spasm.

**Grade II:** LARO Large amplitude: Rhythmic oscillating movement with in mid range of movement Manage pain and spasm

**Grade III:** LARO: Upto point of limit of the available to motion and are stressed into the tissue with an range restricted point. It is use to gain motion with in the joint.

**Grade IV:** SARO: At very end range of movement it use to gain resistance limits movement in absence of pain

Grade V: Small amplitude quick thurst at end of range

- Accompanied by popping sound
- Required training
- 1) Grade 1 and 2 is primarily used for pain
- 2) Grade 3 and 4 is primarily used for increase motion..