

Remedial Exercises

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Remedial exercise uses a combination of active and passive exercises to restore and improve musculoskeletal health.

Purpose:

- Improve movement
- Restore muscle strength
- Maintain joint health
- Assist rehabilitation after injury
- Support massage therapy treatment

Remedial exercises can be:

- Performed during treatment by therapist
- Given to client as self-care after treatment.

Main Categories of Remedial Exercise

Remedial exercises fall into three main categories:

- Range of Motion (ROM)
- Stretching
- Resistance Exercise

Each type helps restore:

- Joint mobility
- Muscle flexibility
- Strength and function.

Types of Exercise Participation

Different exercises involve different participants.

- **Therapist-assisted exercises**

- Passive relaxed ROM
- Active assisted ROM
- Passive joint mobilization

- **Client-performed exercises**

- Active free ROM
- Active resisted exercises
- These exercises allow therapists to maximize **hands-on treatment time.**

Range of Motion

Range of motion (ROM) is the movement allowed at a joint based on:

- Joint structure
- Surrounding soft tissues.

ROM occurs in these planes:

- Flexion
- Extension
- Abduction
- Adduction
- Internal rotation
- External rotation

Example: Knee flexion normally moves 0°–135°

How Joint Movement Occurs

Body parts move by three mechanisms:

- Active movement – muscle contraction by client
- Passive movement – movement by therapist
- Gravity-assisted movement (means a joint moves with the help of gravity i.e weight of the body or limb, instead of the muscle doing all work.
Example: During shoulder rehabilitation , the patient may bend forward and swing the arm (pendulum exercise). Gravity helps move the joint gently.

These movements help maintain:

- Mobility
- Joint lubrication
- Muscle coordination.

Role of Proprioception

- Joint position sense is controlled by proprioceptors such as: **Ruffini end organs (sensory nerve receptors)**

Functions:

- Detect stretch in joint capsules
- Inform the brain about joint position.

Adhesions in the joint can:

- Restrict ROM
- Distort proprioception.
- Restoring full ROM helps restore normal proprioception.

Types of Muscle Range

- **Inner Range** -Muscle completely shortened
- **Mid Range** -Middle portion of muscle movement.
- **Outer Range** -From midpoint to full stretch. Moving through all ranges maintains strength and mobility.

Active Free Range of Motion

- Active free range of motion occurs when the client actively contracts the muscles crossing a joint and moves the joint through the unrestricted range.

Example

- Shoulder flexion performed by the client without assistance.

Effects of Active Free ROM:

- Maintains **joint range of motion**
- Maintains **proprioception**
- Improves **circulation**
- Improves **lymphatic flow**
- Creates **succussive action of the joint**
- Maintains **some muscle strength**

Contraindications of AF ROM

Pain in the acute stage

Movement should be performed:

- In a pain-free range
- At a speed and range that do not cause pain.

Research shows that pain-free movement in early stages can prevent adhesions and reduce recovery time.