

# Exercise Therapy

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## Mechanical Resisted Exercises

**Definition:** Mechanical resistance exercise is any form of exercise in which resistance (the exercise load) is applied by means of some type of exercise equipment.

### Advantages

- Provides measurable baseline to track muscle improvement.
- Best for moderate to strong muscles ( $\geq 4/5$  strength).
- Allows heavy resistance beyond manual therapy.
- Enables precise, gradual progression.
- Motivates patients with visible progress.
- Improves strength, endurance, and function.
- Adds variety to training programs.
- Some devices offer variable resistance & high-speed training.
- Suitable for home exercise after training.

### Disadvantages

- Not suitable for very weak muscles or early healing stage.
- Constant resistance loads muscle only at one ROM point.
- Limited adjustment for painful movements.
- Costly equipment.
- Resistance increases depend on fixed machine increments.

### Use of Mechanical Resisted Exercises

It is used to improve strength, power and endurance

It is used in conditioning program

Used in the sports training program

Used in disease prevention program

Used in general health and fitness maintenance program

### Methods

Any external resistance is used like dumbbells, multigym, weight bars etc etc

### Indication

Any muscle weakness

### Contraindications

Unconscious patients

Uncooperative patients

No minimal muscle power

Reference: Kisner, Carolyn Therapeutic exercise: foundations and techniques / Carolyn Kisner, Lynn Allen Colby. — 5th ed.

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