



## FAQs

### **Q1. Name two causes of muscle weakness of metabolic origin and explain them.**

Ans: The two causes of weakness of metabolic origin are:

1. Addison's disease: It is a disorder that occurs when the adrenal glands located at the top of the kidneys do not produce enough hormones.
2. Hyperparathyroidism: When the parathyroid glands produce too much parathyroid hormone (PTH), the disorder is termed hyperparathyroidism.

### **Q2. Define myositis and its classification.**

Ans: Myositis are muscle inflammation which involve a group of muscle diseases. It is classified into four classifications. Namely:

1. Dermatomyositis
2. Inclusion-body myositis
3. Polymyositis
4. Juvenile myositis

### **Q3. Define muscular dystrophy with example.**

Ans: Muscular dystrophy is a group of inherited disorders that involve muscle weakness that gets worse over time with subsequent muscle loss. The examples are:

1. Myotonic dystrophy
2. Duchenne muscular dystrophy
3. Becker muscular dystrophy

### **Q4. Explain the treatment during flaccid paralysis.**

Ans: The flaccid paralysis are treated in the following manner:

1. The affected muscles must be protected from prolonged overstretching by adequate support and splintage.
2. The circulation to the area must be maintained to ensure adequate nutrition to the paralyzed muscle by the active exercise for other normal muscles in the area.
3. The range of movement in joint immobilized by the paralysis and the extensibility of the affected muscle must be maintained by passive movements.
4. Remembrance of the pattern of movement must be stimulated and kept alive by passive movements while active movement is impossible.
5. The strength and use of normal muscles in the area must be maintained by resisted exercise.

**Q5. Explain the phenomenon of spastic paralysis.**

Ans: In spastic paralysis, muscles received a motor nerve supply only by means of a spinal reflex, since they are cut off from the higher centers by lesion affecting the upper neuron; those muscles are tense, hypertonic and incapable of voluntary contraction or relaxation.

**Q6. Describe the measures used to obtain the initiation of muscle contraction.**

Ans: The measures used to obtain the initiation of muscle contraction are:

1. Warmth: The area affected must be warm, as moderate warmth improves the quality of contraction. Any method designed to improve the circulation in the area is effective; active exercise of unaffected muscle against strong resistance is the method of choice.
2. Stabilization: Stabilize the bones of origin of the affected muscles and joints distal to those over which these muscles work improves their efficiency. Whenever possible, stabilization should be achieved by isometric contraction of strong synergic muscles working.
3. Grip or manual contact: hand gives pressure only in the direction of the movement, to direct the patient's effort and give sensory stimulation.
4. Stretch: Stimulation of the muscle spindle elicits reflex contraction of that muscle provided the reflex arc is intact. Sharp but controlled stretching of the affected muscle at the limit of its extended range is followed immediately by the patient's maximum contraction.

**Q7. What are the goal and indication of resistance exercise?**

Ans: The goal and indication of resistance exercise are:

- i. Increase strength.
- ii. Increase muscular endurance.
- iii. Increase power.

**Q8. Explain the principle of muscle strengthening.**

Ans: The principles of muscle strengthening are

1. The affected muscles must be strengthened progressively by resisted exercises, which are specific for the group to which the muscles belong
  - a. Range: The range of movement is increased.
  - b. Type of muscle work: concentric, eccentric and static muscle work is elicited.
  - c. Resistance: the Resistance is increased by:
    - i. increasing the poundage of the resistance
    - ii. Increasing the leverage of the resistance
  - d. Speed: Increase or decrease in the speed of movement is a progression for concentric work. Decrease in speed is a progression for eccentric work. Lengthening of contraction period is a progression for static holding.
  - e. Duration: Increase in the number of times of an exercise performed or decrease in the rest period between each series of exercise, or a combination of both according to circumstance, makes more work for the muscle.
2. Full range of the affected muscle as a member of the team of muscle which work to produce skilled and co-ordinated movement, must be restored by free activities, natural and skilled movement.

**Q9. What are the types of exercise which used to strengthen muscle?**

Ans: The types of exercise which used to strengthen muscle are:

- a. Assisted-Resisted exercise
- b. Free exercise
- c. Resisted exercise
- d. Activities
- e. Assessment of progression

**Q10. What are the precautions to be taken during strengthening exercise?**

Ans: The precautions to be taken during strengthening exercise are

1. Valsalva maneuver: It is an expiratory effort against closed glottis, and must be avoided during resistance exercise.
2. Patient with a history of cardiovascular problem.
3. Patient with a history of abdominal surgery.
4. Fatigue