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Question no 1: Define therapeutic exercises? Discuss the aims of therapeutic exercises?

Answer: therapeutic exercises is actually the system and fully planned movement of the body, which is performed to recover different problems. It is actually different from another as it is designed especially for solving specific problems. It is mostly performed to regain certain strengths of muscles.

Aims of therapeutic exercises:

Following are the aims of therapeutic exercises:

- (1) To return nonfunctioning patient to fully functioning and pain free.
- (2) To make the body movable
- (3) It is performed to recover and relaxed contracted tissue.
- (4) To make the joints mobilize.
- (5) It also help in performing the circulation of blood.
- (6) Its disable all the respiratory defects and improve the respiration capacity.
- (7) It help in improving body coordination and muscles strength.

Question a: what is ROM?

Answer: ROM stands for Range of motion. The techniques of Rom progressed from PROM to AAROM and then AROM. It is a techniques performed for looking out the range of different muscles. Also help to improve joint functions.

b) Why we use ROM?

Answer: ROM is used for different reasons that is to performed different activities.

- (1)It is used to move the muscles in different directions.
- (2)It make each joint move through its full range.
- (3)It is used to reduce pain in body.
- (4)It is used for improving the balance of the body.

Question 2: what is aquatic exercises? Discuss the properties of water and its clinical significance.

Answer: Aquatic exercise:

Aquatic exercises is named as low impact activity .which mean that it take off the pressure from bones, joints and muscles. Also it provide the resistance to your muscles so that it become strengthened. Due to aquatic exercises body is able to regain its lost functions. And make the body stable. Benefits: It has several benefits.

- (1) It improve the heart health.
- (2) It reduced stressed
- (3) Also improve the strength of muscles. Properties of water.

Following are the properties of water (a) Buoyancy (b) Hydrostatic pressure (c) Viscosity (d) Surface tension

(a)Buoyancy:

Buoyancy is an upward force used against the gravity.

Clinical significance:

Following are the significance of buoyancy

- (1) Its significance is in relative weightlessness and joint unloading
- (2) The active motion will increase.
- (3) It gives three dimensional access to the potential.

(B) Hydrostatic pressure:

Hydrostatic pressure is the pressure exerted on an immersed object.

Clinical significance:

- (1) It reduces the effusion
- (2) It centralizes the peripheral blood flow.
- (3) It acts as an assist in venous return and avoids DVP.
- (4) The proportionality between depth and pressure allows patient to perform exercise easily.

Viscosity:

Viscosity is the resistance between the molecules of liquid that slow down its flow.

Clinical significance:

- (1) It provides resistance with all movement
- (2) Increasing surface area will increase resistance. Surface tension: surface tension is when the surface of fluid acts as a membrane under tension.

Question 3: Describe Maitland joint mobilization grading based on amplitude movement?

Answer: The grading system is based on five grades. Grade 1 Grade 2 Grade 3 Grade 4 Grade 5

Now we will elaborate each grade.

Grade 1:

SARO in grading system the grade 1 is consider as an initiative which mean at the beginning of movement range, it manages the pain and spasm in muscles.

Grade 2:

LARO it is performed at the middle of range that is mid-range movement .before reaching the limit. It also manages the pain and spasm.

Grade 3:

It is nearly to the point of limits available for the motion. Which stressed into tissue resistance. It is performed to gain the motion in the joint. It also stretch the capsule.

Grade 4:

It is almost to the end of point. Which is performed to gain the motion of the joint. It is used when pain is absent.

Grade 5:

It is used at the end of range .when it completely finish. Performed at small amplitude. It is accompanied by popping sound. Requires training.