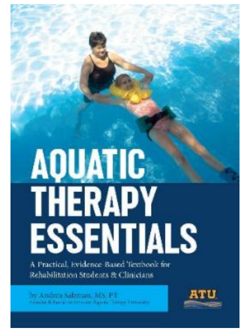
Aquatic Therapy Essentials:



Buoyancy Chapter: Post-Test

1. According to Archimedes' principle, what is buoyancy?

a) The force that pulls a body downward through its center of gravity.

b) The resistance encountered when moving quickly through water.

c) An upthrust equal to the weight of fluid displaced when a body is immersed in fluid.

d) The effect of increased joint stress during aquatic exercise.

2. Which factor makes an individual more likely to sink in water?

a) Low resting muscle tone due to muscle atrophy.

b) Higher body fat percentage.

c) Chronically contracted muscles from spasticity.

d) Deep, relaxed breathing expanding lung volume.

3. When a patient is immersed in water up to their xiphoid process, what is the approximate percentage of body weight bearing they experience?

a) Approximately 50%.

b) Approximately 6-10%.

c) Approximately 25-30%.

d) Approximately 75-80%.

4. How does buoyancy primarily assist movement in aquatic therapy?

a) By increasing gravitational compression on joints.

b) By resisting movement in the direction the patient wants to go.

c) By counteracting gravity and reducing joint stress.

d) By reinforcing pathological movement patterns.

5. Which of the following is a disadvantage of buoyancy regarding proprioception?

a) It activates pressure receptors, enhancing sensory feedback.

b) It increases somatosensory input from the soles of the feet.

c) It dramatically increases the proprioceptive load needed for balance.

d) It reduces gravitational compression on joints and tissues, impairing proprioceptive clarity.

6. What is a common challenge for patients who become overdependent on aquatic support?

a) They become too strong for land-based exercises.

b) They may resist transitions to gravity-dominant environments.

c) Their spasticity dramatically decreases on land.

d) Their postural reflexes become overactive.

7. Why are flotation devices discouraged when assisting weak arm movements?

a) They make the movement too difficult for weak muscles.

b) They prevent the water from assisting movement effectively.

c) They hijack the mechanics and cause the patient to fight the float instead of recruiting target muscles.

d) They increase friction and resistance, making movement harder.

8. How can a therapist increase the difficulty of an exercise in water using buoyancy?

a) By moving the patient in the direction buoyancy wants to go.

b) By asking the patient to move against buoyancy.

c) By adding external flotation devices to the patient.

d) By decreasing the speed of movement in the water.

9. Why is water considered a "co-therapist" in aquatic therapy, according to the sources?

a) It provides resistance for every movement, eliminating the need for therapist assistance.

b) It assists with body support, decreasing the physical burden on the clinician.

c) It suppresses all postural reflexes, making patients easier to handle.

d) It entirely replaces the need for manual contact or cueing from the therapist.

10. What effect does deep, relaxed breathing have on a patient's interaction with buoyancy?

a) It decreases overall body density, making them sink more easily.

b) It physically expands the lungs, increases floatation, and improves midline stability.

c) It leads to increased muscle co-contraction and rigid postures.

d) It has no significant impact on buoyancy.