

FORM 10.1 Momentum Quiz Answers

1. a. All mass above the hips is being raised and lowered rapidly.
b. Hip flexors are exerting a strong anterior pull on the pelvis and low back.
2. a. Body weight and gravity combine on the down phase.
b. The ankle (Achilles), knee, and possibly the back may be injured if the client has a forward bend posture.
3. a. Body and barbell weight and gravity combine on the down phase.
b. Knees and possibly back can be injured if form is poor.
4. a. Weight of ball, trunk, and arm at the angular velocity is created by the torque of the summed kinetic chain of joints.
b. Eccentric strain is placed on the shoulder rotator cuff in both the preparatory and follow-through phases.
5. a. Weight and speed of the body move in the initial direction.
b. Muscles and joints of the lateral or posterior lower leg must counter with high eccentric forces.
6. a. Speed may be initiated by the arms or back extensors, not by hip extension.
b. Excessive trap firing or compressive and shear forces on the lumbar intervertebral disc.
7. a. Body weight and length of lever from knee fulcrum.
b. Creates shear stress on the knee.