

Unit 2: Human Performance and Biomechanics
Chapter 12: The Seven Principles of Biomechanics

Section 12.1: Static and Dynamic Systems:

- Understand the nature of static systems
- Understand the nature of dynamic systems

Section 12.2: Stability (Principle 1)

- Know principle 1 of biomechanics
- Understand how Mass, Centre of Mass, Base of Support and Position of Centre of Mass all related to stability

Section 12.3: Maximum Effort (Principles 2 and 3)

- Understand principle 2 the production of maximum effort and how it applies to biomechanics
- Understand principle 3 sequencing of joint rotation and how it applies to biomechanics

Section 12.4: Linear Motion (Principles 4 and 5)

- Understand principle 4 the impulse-momentum relationship.
- Know how principle 4 can be applied to sports
- Understand principle 5 the direction in which movement usually occurs (think Newton's third law)

Section 12.5: Angular Motion (Principles 6 and 7)

- Understand principle 6 the effect of a force acting at some distance from an axis.
- Know what the angle of insertion is.
- Know how principle 6 can be applied to sports
- Understand principle 7 the conservation of angular momentum
- Know how to apply principle 7 and examples from sports.
- Know what the law of conservation of angular momentum is.

Review Questions: 1 – 13 pg. 355