Discussion 1: Philosophy

Questions:
1. What is a philosophy? What are the defining characteristics of a philosophy?
2. How does one develop a philosophy?
3. What is a curriculum?

Required Readings:

Discussion 2: “Base” Training

Questions:
1. What is “base” training?
   a. How is “base” training commonly prescribed?
2. What is an “aerobic base”
3. What are the physiologic principles behind developing a “base”?
   a. How are muscle fibres classified? (hint: metabolic ≠ contraction velocity)
   b. What are the metabolic adaptations to training?
   c. How do metabolic adaptations influence successive training?
4. Is “base” training necessary for…
   a. … general health & wellness?
   b. … strength & power athletes?
   c. … tactical athletes?
   d. … endurance athletes?
5. If “base” training is necessary, how is it best accomplished?

Required Readings:
Textbook – Chapters 2, 4 & 10


Suggested Readings:

Discussion 3: Periodization

Questions:
1. What is periodization?
   a. What is “linear” periodization?
   b. What is “non-linear” periodization?
   c. What is “undulating” periodization?
2. What is the time course of adaptations?
   a. How long does it take to stimulate…
      i. … neural adaptations?
      ii. … muscular adaptations?
      iii. … metabolic adaptations?
   b. Is there a sequence in which adaptations must be stimulated?
3. What is staleness? Overtraining?
4. Physiologically, what contributes to staleness?
   a. How frequently must training parameters be modified to avoid staleness?
   b. What are the consequences of too frequent changes to training parameters?

Required Readings:
Textbook – Chapters 1, 10 & 13


Suggested Readings:


Discussion 4: Training to Failure

Questions:
1. What is training to failure?
2. What is the physiologic rationale for training to failure?
3. Is failure necessary to elicit training adaptations?
4. Specifically, what are the stimuli for eliciting adaptations?

Required Readings:

**Suggested Readings:**

**Discussion 5: Specificity**

**Questions:**
1. What is the principle of specificity?
   a. Is the specificity principle valid?
2. What is the SAID principle?
3. What is variability? Physiologically, why is variability important?
4. Should training exercises attempt to simulate performance skills?
5. What are the sites for...
   a. ... strength adaptations?
   b. ... motor learning?

**Required Readings:**
Textbook – Chapters 1 & 12


**Suggested Readings:**


**Discussion 6: Free Weights versus Machines**

**Questions:**
1. Is one training modality superior to the other?
2. How do the mechanics differ between free weight and machine training?
3. What are the pros and cons of free weight training?
4. What are the pros and cons of machine training?
5. Can muscles be “isolated”?
6. Is machine training safer than free weight training?

**Required Readings:**
Textbook – Chapter 12


**Suggested Readings:**


**Discussion 7: Core Stability**

**Questions:**
1. Define stability. Why is stability important…
   a. … for sports?
   b. … for activities of daily living?
2. How is stability generated…
   a. … at the system level?
   b. … at the segment level?
3. What is a feedback loop?
   a. Why are feedback loops relevant for stability?
   b. What sensory feedback is used to maintain stability?
4. Is stability transferable between activities?
5. Does stability training improve performance?

**Required Readings:**


**Discussion 8: Stretching**
Questions:
1. What are the different types of stretching?
2. What are the “sites” of acute responses to stretching? What occurs at each of these “sites”? 
3. What are the “sites” of adaptations to stretching? What occurs at each of these “sites”? 
4. Does chronic stretching reduce the risk of injury?
5. Does acute stretching reduce the immediate risk of injury?
6. Should stretching be performed prior to exercise?

Required Readings:


Suggested Readings:


Discussion 9: Plyometrics

Questions:
1. What are plyometrics? Is all jump training plyometric?
2. What do plyometrics do acutely? What is the physiologic mechanism?
3. What do plyometrics do long-term? What is the physiologic mechanism?
4. What are the biomechanical demands of plyometrics?
5. For what populations are plyometric training effective?
6. Is plyometric training more effective than other forms of power training?

Required Readings:


Suggested Readings:


**Discussion 10: Training Women**

**Questions:**
1. Are there physiologic differences between men and women? If so, where (i.e. muscle, nervous system, etc.)? How would these differences influence training adaptations?
2. Are there anatomic/structural differences between men and women? Do these differences affect performance? How?
3. Do women adapt differently to resistance exercise than men?
4. Should women train differently than men?

**Required Readings:**


**Suggested Readings:**


**Discussion 11: Training Children**

**Questions:**
1. Is it safe for children and adolescents to participate in resistance exercise?
2. At what age can children begin resistance exercise?
3. Should children train differently than adults?
4. Is there a benefit to begin resistance exercise at an early age?

**Required Readings:**


Suggested Readings:


Discussion 12: Supplements & Doping

Questions:
1. What constitutes “doping”? Who decides what is doping?
2. What constitutes use versus abuse?
3. Is “doping” immoral? Why or why not?
4. Is “doping” dangerous to an athlete’s health?
5. Is nutritional supplement use immoral? Why or why not?
6. Is nutritional supplement use effective?

Required Readings:
Textbook – Chapters 6 & 7


Suggested Readings:


Discussion 13: Return to Activity

Questions:
1. What are the mechanisms for response to injury and repair?
2. What is pain? Should pain limit physical performance?
3. Is inactivity (i.e. rest) beneficial or harmful following injury?
4. What is detraining? What is the time-course for detraining?
5. Is rehabilitation alone effective for return to activity?

**Required Readings:**


**Suggested Readings:**

