Note to Participants: There are interactive pop-up questions throughout this lecture. If you choose to pause the lecture and return at a later time, a natural break time would be after answering the interactive questions. (You are able to pause at any time and the presentation will “remember” where you were. It’s just a more natural time to pause after the interactive questions.) For your convenience, this outline reflects where/when within the lecture the interactive questions occur.

This lecture has 112 slides and is 116 minutes in duration.

I. Introduction
   A. Components of the exercise prescription
   B. The evidence for strengthening exercise
   C. Barriers to an effective exercise program
   D. Slippery slope of aging
   E. Evidence of functional loss

Interactive Questions – slide 14 @ 20 minutes

II. Physical Stress Theory
   A. Tissues response to mechanical stress
   B. Components of mechanical stress
   C. Types of mechanical stress

Interactive Questions – slide 20 @ 30 minutes

III. Principles of Exercise Intervention
   A. Overload
   B. Task specificity

IV. Overload
   A. Intensity, duration, frequency and speed
   B. Outcomes based on overload by intensity

Interactive Questions – slide 35 @ 55 minutes

   C. Intensity and older adults, frail adults
   D. Determining intensity
   E. Frequency

Interactive Questions – slide 42 @ 64 minutes
V. Specificity
   A. Relationship between strength and function
   B. Specificity of speed in training (power)

Interactive Questions – slide 54 @ 78 minutes
   C. Task specificity

Interactive Questions – slide 62 @ 91 minutes

Interactive Questions – slide 65 @ 94 minutes

Interactive Questions – slides 71 @ 98 minutes

Interactive Questions – slide 81 @ 105 minutes

VI. Other Considerations
   A. Motor learning
   B. Adapt versus Challenge
   C. Progression
Bibliography


