



Taking It To the Next Level: Exercise Physiology for Indoor Cycling

Instructors

Friday, October 8, 2010
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This outline is meant to be very general, and may not represent the order in which we will cover the various topics. **I strongly recommend that you bring a notebook.**

Systems Overview

System	Organs (for our purposes)	Job
Cardiovascular	Heart, lungs, blood vessels	Circulate oxygen, nutrients and chemicals
Neuro-Muscular	Skeletal muscles (under voluntary control) and the nerves supplying them	Move you and your parts
Endocrine	Brain, adrenals	Organize the troops, supply essential chemicals
Metabolic	All	Convert chemical energy (aka food) to mechanical energy to make you go

What is exercise physiology?

Bird's Eye View

1. Acute Changes in Exercise
 - a. What they are
 - b. How they are met
2. Adjustments in Exercise
 - a. Signals
 - b. How they occur
 - c. If they don't occur
3. Adaptations
 - a. Signals
 - b. Acquisition
 - c. Decay



Street View

1. Metabolism!
 - a. How it works
 - b. How this affects exercise
 - c. Thresholds
2. Cardiovascular System
 - a. Breathing
 - b. Circulation
 - c. Adaptations
3. Muscles
 - a. What they do
 - b. How they do it
 - c. How they are classified
 - d. What they eat
 - e. How they change
4. Hormones (Endocrine system)
 - a. What they do
 - b. Effect on exercise
 - c. Effect on overall health and well-being
5. Life Support
 - a. Responding to exercise in heat, cold, altitude
6. Research
 - a. How questions in exercise physiology get answered
 - b. Why it seems to change so much
7. Books and other resources for continued learning