Compulsive Exercise
Non-compulsive exercise?

- Government guidelines
- Athletes

“What fits your busy schedule better, exercising one hour a day or being dead 24 hours a day?”
• 2.5 hours a week of moderate-intensity, or 75 minutes a week of vigorous-intensity aerobic physical activity, or an equivalent combination of moderate- and vigorous-intensity aerobic physical activity. Aerobic activity should be performed in episodes of at least 10 minutes, preferably spread throughout the week.

• Additional health benefits are provided by increasing to 5 hours (300 minutes) a week of moderate-intensity aerobic physical activity, or 2.5 hours a week of vigorous-intensity physical activity, or an equivalent combination of both.

• Adults should also do muscle-strengthening activities that involve all major muscle groups performed on 2 or more days per week.
Benefits of Exercise

Physical health

Mental health
A FEW MORE ADVANTAGES OF REGULAR EXERCISE

- Increased over-confidence
- Excessively optimistic outlook
- Perfection of narcissistic tendencies
- Smog particles filtered from local environment by lungs
- Generation of novel and interesting fungal populations
- Stress fractures
- Depleted bank-balance
Benefits of moderate exercise…. not a new concept

“if we could give every individual the right amount of nourishment and exercise, not too little and not too much, we would have found the safest way to health”

Hippocrates (460-370 B.C.)
History of Exercise (for non-athletes)

- Paleolithic humans did not need gyms
- Civilizations = less activity
- Industrialization = less activity
- Exercise science
- Our food environment has increased our need for exercise even more
- Tied to beauty
Compulsive Exercise

- Beyond the requirements for good health
- Exercises despite injury, illness
- Fanatical about weight and diet
- Work, school, relationships suffer
- Loses the fun of it all
- Define self-worth based on performance
- Rarely/never satisfied with achievement
- Doesn’t savor victory
A man in Chicago ran a fast eight miles a day, seven days a week, regardless of weather, holidays, or injury. Having once run a marathon with a 101-degree fever and an ear infection, it wasn't long before he suffered three stress fractures--two in one foot--but continued riding a bike 15 miles a day, even in a cast.
Three or more of the following…

1) I have missed important social obligations & family events in order to exercise.
2) I have given up other interests, including time with friends, in order to make more time to work out.
3) Missing a workout makes me irritable and depressed.
4) I only feel content when I am exercising or within the hour after exercising.
5) I like exercise more than sex, good food, or a movie. There's almost nothing I'd rather do.
6) I work out even if I'm sick, injured, or exhausted. I'll feel better when I get moving anyway.
7) In addition to my regular schedule, I'll exercise more if I find extra time.
8) Family and friends have told me I'm too involved in exercise.
9) I have a history (or a family history) of anxiety or depression.
Negative Consequences

- Deterioration of personal relationships or failure at work or school
- Social withdrawal
- Insomnia, depression, and fatigue
- Muscular and skeletal injuries
- Amenorrhea, testosterone
- Physical performance deteriorates
- Increased risk for eating disorders
- Increased risk for abuse of “performance-enhancers”
Primary Compulsive Exercise

• Motivation going in
  – Improving performance
  – Getting supremely “cut”, “buff”
For example…

- Running
- Body building
Running

- Obligatory running
  - Fear of fat
  - Restricted diet
  - Undue influence of body shape or weight on self-evaluation
  - Personality characteristics common to eating disorder sufferers
Body Builders

• Drive for perfection and control over body
• Unusual eating habits
• Dangerous behaviors?
Eating Disorders in Athletes

• Sports and body image satisfaction
• Unusual eating patterns socially acceptable in athletes
• Striving for very low body fat percentages
• 15-62% of college athletes show signs of disordered eating
60% of the athletes surveyed reported the desire to drop at least five pounds
  - 62% of female athletes
  - 23% of male athletes

30% actively working to lose weight for their sport.

Almost 20% of the athletes met criteria or demonstrated symptoms of an eating disorder.
Female Athlete Triad

- Disordered eating
- Amenorrhea
- Osteoporosis
Secondary Compulsive Exercise

- Motivation
  - Losing weight or compensating for extra calories
  - Adjunct to eating disorder
- Morbid fear of fat
Eating disorders are a risk factor for compulsive exercise

- 80% AN, 55% BN
- Eating disorders often present as exercise injury
- During ED recovery - increased risk of developing compulsive exercise behaviors
Percent of Subjects with AN and Controls with Different Levels of Physical Activity
Homeostasis.....

Decreased food → Decreased activity

Increased activity → Increased food
Link Between Starvation and Activity

- Rat wheel running
- Food restriction + excessive exercise = death
What if we suddenly had no food in San Diego?? What would we do?

Allostasis...
Food Scarcity
(Decreased food intake)

Stress Hormones (CRF)

Migration
(Increased activity)

Rich Food Supply
(normalized behaviors)
Compulsive Exercise as an Addiction?
### Compulsive Exercise as an Addiction?

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<td>More and more exercise needed for positive effects</td>
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<td>Withdrawal</td>
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<td>Narrowing of behavioral repertoire</td>
<td>Sacrificing work, social life and family life to spend time exercising</td>
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<td>Use continues despite problems</td>
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Self-Regulation Failure: Underregulation

- Conflicting standards
  - Health vs. obsession
- Inertia
- Reduction of monitoring
  - Insensitivity to internal cues, decreased pain sensitivity
- Attention
  - See exercise-related stimuli everywhere
Self-Regulation Failure: Misregulation

• Inadequate or wrong knowledge
  – No pain, no gain
• Trying to control the uncontrollable
  – Genetic influence over body types
  – Are “those abilities” or is “that body” possible??
Spiraling Distress

Preoccupation/Anticipation

Thinking about the gym: wishing you were there instead of in class

Excessive Exercise

Depressed mood, anxious

Withdrawal/Negative Affect

In the “zone”

Binge/Intoxication