Exercise: Addiction or Healthy Lifestyle Choice

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Presentation Goals

• Definition and identification of exercise addiction
• Understand the difference between excessive exercise and healthy lifestyle exercise
• Provide treatment strategies to provide a framework for a health-focused exercise plan
ASAM Definition of Addiction

• A primary, chronic disease of brain reward, motivation, memory and related circuitry.
• Dysfunction in these circuits leads to characteristic biological, psychological, social and spiritual manifestations.
• Reflected in an individual pathologically pursuing reward and/or relief by substance use and other behaviors.
Types of Addiction

• Substance: ingested substance directly causes release of dopamine and opiates in brain’s reward center

• Process: dopamine and endogenous opiates released when engaging in the process
Process Addiction Defined

• Engaging in compulsive mood-altering behaviors

• Participating in an activity with intention of avoiding painful feelings

• Chasing the “high” through the behavior

• The behavior becomes unmanageable and destructive
Definition of Exercise Addiction

- Addiction Model defines excessive exercise as “Behavioral process that can provide either pleasure or relief from internal discomfort, and characterized by repeated failure to control the behavior, and maintenance of the behavior in spite of negative consequences.” (Goodman 1990)
Definition of Exercise Addiction

- **Tolerance**: increasing the amount to feel the desired effect
- **Withdrawal**: negative effects such as anxiety, irritability, restlessness, and sleep problems, when exercise is stopped;
- **Lack of control**: unsuccessful at attempts to reduce exercise level;
- **Intention**: unable to adhere to intended routine
- **Time**: a great deal of time is spent preparing for, engaging in, and recovering from exercise;
- **Reduction in other activities**: social, occupational, and/or recreational activities are reduced;
- **Continuance**: continuing despite negative physical, psychological, and/or interpersonal consequences.

Hausenblas HA, Downs DS. How much is too much? The development and validation of the Exercise Addiction scale. Psychology and Health. 2002;17:387–404
Symptoms of Exercise Addiction

• An increase in exercise that becomes harmful.
• A dependence on exercise in daily life to achieve a sense of *euphoria*; exercise may be increased as *tolerance* of the euphoric state increases.
• Not participating in physical activity will cause *dysfunction* in one's daily life.
• **Withdrawal** symptoms following exercise deprivation including *anxiety*, restlessness, depression, guilt, tension, discomfort, loss of appetite, sleeplessness, and headaches.
• High *dependence* on exercise causing individuals to exercise through trauma and medical conditions.

Prevalence

• Based on a literature review the prevalence in the general population is close to 3%.

• Higher among ultra-marathon runners and sport science students the figure is even higher.

• A French study found that 42% of the members at a Parisian fitness club met criteria for exercise addiction.
EDs, Exercise Addiction and Sport

- ED prevalence rates associated with physical activities
  - 13% judged sports
  - 3% refereed sports
  - 3% in non-athlete population
- The line between Exercise Addict and Elite Athlete can be blurry.
Co-Occurring Disorders

- 39–48% of people suffering from eating disorders also suffer from exercise addiction (secondary exercise addiction)
- 15–20% of exercise addicted individuals are addicted to nicotine, alcohol, or illicit drugs
- Exercise addiction clusters with food disorders, caffeine use, work addiction and shopping addiction.
- Depression, trauma, GAD, and OCD.

A Solution That’s an Illusion

• The pain feels overwhelming. The person in pain reaches not toward people, whom he or she learned to distrust, but toward a behavior.

• Addicts may initially feel they have found a solution, but the solution becomes a primary problem...

• The longer traumatized people rely on external substances to regulate their internal worlds, the weaker those inner worlds become.
What Happens...

- Emotional muscles atrophy
- Personality development is truncated or goes off track
- Thinking becomes increasingly distorted and secretive as addicts strive daily to justify to themselves and others a clandestine life
- Authentic, honest connection slowly erodes as relationships turn from sources of support to targets of deception and means of enabling

(Dayton, 2000 p. xvi-xvii)
Choice or Enslavement?

“I have run since infancy ... It’s the passion of my life. Running as long as possible – I’ve made that into a sport. I have no other secrets. Without running I wouldn’t be able to live.”

Waldemar Cierpinski, 1980
Healthy Lifestyle Model of Exercise

• Exercise associated with improved health, cognition, prevention of osteoporosis, greater life satisfaction (AMA, 2010)
• Exercise on regular basis contributes to health and disease prevention and has positive effects on mental and physical well-being for all age groups. (Dept. of HHS, 2010)
• Compares to use of psychopharmacology to positively address mild to moderate depression, anxiety (Carek, Laibstain & Carr, 2011)
Features of Healthy Exercise

- Activities, physical in nature that promote health and well-being for the individual
- Health and weight are maintained
- Enhanced quality of life versus “life circumstance avoiding” behavior
- Often done in social situation versus secretly or alone
- Promotes fun and relaxation versus an ideal body shape/weight
- Flexibility, freedom and choice
Distinguishing Addicted vs Non-Addicted Exercise

• Quantity/intensity of a behavior not a good measure of addiction.

• Four phases of addiction useful to distinguish “highly engaging” exercise from addictive exercise.

• Phase One: Recreational Exercise

• Recreational exercise primarily occurs because it is a pleasurable and rewarding activity.
Phases of Addiction

• Phase Two: At-Risk Exercise
• Increasing intensity and frequency
• Those who do not develop problems with their exercise are considered “highly engaged”
• Risk factors for addiction: when the primary motivation is not enjoyment from the activity
• Periodic loss of control and negative consequences
Phase 3: Problematic Exercise

- Exercisers begin to organize their day around their excise
- Regimen is becoming more and more rigid
- Exercise occurs for mood-altering effects *but also* to remove withdrawal symptoms.
- Behavior continues despite having met the stated goal, loss of control
- Behavior now occurs in isolation
- Secondary negative consequences
Phase 4: Exercise Addiction

• Exercise becomes life’s main organizing principle
• Originally used to benefit life by facilitating coping, ultimately makes life unmanageable
• Primary motivation is to avoid w/d symptoms
• Tertiary negative consequences in the form of impairments in daily functioning and inability to meet role obligations
Risk Factors

• Genetics, parental substance use, unhealthy peer norms, low self-esteem, traumatic life events

• Co-occurring disorders: eating disorder, substance abuse, depression, anxiety disorders (GAD, OCD, PTSD)

• High risk sports participants -- gymnastics, figure skating, cross country, rowing, cheerleading (aesthetic and endurance sports)

• Family culture supporting excessive exercise
Risk Factors
Exercise Dependence Scale-21
Hausenblas & Symons Downs (2002)

Instructions. Using the scale provided below, please complete the following questions as honestly as possible. The questions refer to current exercise beliefs and behaviors that have occurred in the past 3 months. Please place your answer in the blank space provided after each statement.

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1. I exercise to avoid feeling irritable._____
2. I exercise despite recurring physical problems._____
3. I continually increase my exercise intensity to achieve the desired effects/benefits._____
4. I am unable to reduce how long I exercise._____
5. I would rather exercise than spend time with family/friends._____
6. I spend a lot of time exercising._____
7. I exercise longer than I intend._____
8. I exercise to avoid feeling anxious._____
9. I exercise when injured._____
10. I continually increase my exercise frequency to achieve the desired effects/benefits._____

Timberline Knolls
Exercise Dependence Scale
Cont’d

11. I am unable to reduce how often I exercise.
12. I think about exercise when I should be concentrating on school/work.
13. I spend most of my free time exercising.
15. I exercise to avoid feeling tense.
16. I exercise despite persistent physical problems.
17. I continually increase my exercise duration to achieve the desired effects/benefits.
18. I am unable to reduce how intense I exercise.
19. I choose to exercise so that I can get out of spending time with family/friends.
20. A great deal of my time is spent exercising.
21. I exercise longer than I plan.
Overtraining Syndrome

- Feeling, drained, lack of energy
- Mild leg soreness, general aches and pains
- Pain in muscles/joints
- Drop in performance
- Insomnia
- Headaches
- Increased compulsivity

- Decrease in training capacity
- Moodiness/irritability
- Depression
- Decreased concentration
- Loss of enthusiasm
- Decreased appetite
- Increased injuries
Physiology of Exercise Addiction

- Decreased anabolic (testosterone) response
- Loss of emotional vigor
- Autonomic sympathetic insufficiency
- Immunosuppression
- Decreased maximum oxygen uptake
- Decreased blood lactate
- Increased cortisol response (muscle wasting)
- Hypothalamic dysfunction
- Increased central serotonin & GABA
- Adrenal exhaustion
Tolerance and Withdrawal

- Need for increased amount/intensity of exercise over time to get the desired effect
- Using other behaviors or substances to avoid anxiety or depression when cutting down.
- Withdrawal from exercise can be especially challenging because of the resultant depression.
- Exercise addicts feel like “jumping out of their skin” when exercise is taken away.
Treatment Interventions

• Assess medical and nutritional status
• Thorough assessment of individual’s relationship to exercise, food, body
• Delineate the line between health promoting and health interfering exercise (compulsory/obligatory)
• Use of standardized scales to screen and monitor (Exercise Dependence Scale)
Treatment Interventions

• Assign a TEAM: internal medicine, psychiatrist, therapist, exercise specialist, nutritionist, significant others (family, coaches)

• Assess for and treat co-occurring disorders: ED, SUDs, depression, anxiety

• Psychiatrists avoid: anorexigenic agents (Adderall, Ritalin, Topamax), Wellbutrin if history of AN/BN, benzodiazepines
Treatment Interventions

• Defining goals/healthy exercise
• Rest is a potent medicine
• Skills groups: mindfulness/meditation, emotion management, interpersonal effectiveness (DBT)
• Therapists: MI, CBT, DBT
• Support groups: group therapy, 12 step support groups
Reintroducing Exercise

- Develop clear, individualized and flexible plan for exercise and nutrition
- Reintroduce exercise when medically and psychologically stable
- Initial exercise should be group activities or monitored exercise (up to 3 times/week, 20-30 min.)
- Ongoing monitoring and support is critical
- Back off on exercise if worsening of physical/psychological status
Case Study

• KP is 22yo female, unmarried, not working, lives with parents, completed college, pursuing grad school in physical therapy.
• Admitted to TK for progressively worsening eating disorder and exercise addiction
• Lost 20# in past month restricting food intake to 200kcal/day (coffee and apples)
• Exercising 6-7 times per week for 2-3.5 hours
KP

• Purging 2 times per week, usually after eating a bowl of cereal
• Increases exercise on days when she purges “just in case there are calories left over”
• Typically runs 5-7 miles per day, push-ups, sit-ups and weights
• Eating disorder started at age 17yo with restricting food intake, eliminating carbs from diet, and onset of purging behavior
KP

- Relates onset to being unable to cope with school stress, unable to live in the moment
- Saw outpatient therapist, was able to stop purging through college, restricted food intake when stressed in college
- Aug. 2013 started purging again after college
- Sept. 2013 started abusing laxatives 2-3 times per week
- Oct. 2013 became obsessed with burning calories through exercise after running a marathon
KP

• Family history:
  – Mother with anxiety, untreated
  – Father was a college hockey player, loves sports, and per resident “drinks too much”
  – Older brother has ADHD
  – Reports being close with family
  – No eating disorder hx in family
  – Maternal grandfather was alcoholic
KP

• Education/Social history:
  – “A” student through high school, perfectionistic
  – Studied psychology in college, A/B student
  – Plans to begin PT school in the fall
  – Had few close friends growing up
  – Played basketball and ran track/cross country through high school
  – One romantic relationship, lasted 3mos in college, not sexually active
  – Raised Catholic but lost her faith
KP

• Meds: multivitamin daily
• Initial diagnoses: AN, purging type, Exercise Addiction, and GAD
• Initial labs were all normal
• Amenorrhea for 7mos
• EKG normal except slow heart rate 52 bpm
• Weight/height: 93#, 5’ 3”
• VS: HR seated 60, standing 90, bp normal
Initial Treatment Plan

- Weight restoration meal plan, goal weight 115#
- DEXA scan
- Exercise restriction, ED protocol (labs, weights, VS)
- DBT groups, ED programming, 1:1 nutrition therapy, individual and family therapy, expressive therapies
- Add in exercise specialist for exercise plan once 90% IBW
- Meds started: Zoloft 25mg, Colace and Miralax
- EDA 12 step meetings
- Treatment course/aftercare planning
Questions
Thank You for Joining Us!

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Dr. Kim Dennis
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A residential treatment center located on 43 beautiful acres just outside Chicago, offering a nurturing environment of recovery for women ages 12 and older struggling to overcome eating disorders, substance abuse, mood disorders, trauma and co-occurring disorders.

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