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Intermountain Project ECHO
Eating Disorders
Exercise and Eating Disorder Recovery

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Disclosure

The content of this presentation does not relate to any product of a commercial entity; therefore, I have no relationships to report.

Off-label indications will not be discussed.
Objectives

At the conclusion of this activity, participants should be able to successfully:

1. Discuss misconceptions around exercise and EDs
2. Identify core principles for how exercise can be included in ED treatment
3. Discuss ways to change the relationship of exercise from compulsive or obligatory to therapeutic.
Misconceptions about Exercise in Eating Disorders
Misconceptions about Exercise in Eating Disorders

- **All/most individuals with eating disorders “excessively exercise”**

- **Myth**

<table>
<thead>
<tr>
<th>Eating Disorder Variant</th>
<th>Sedentary or No Pathological Exercise</th>
<th>Pathological Exercise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anorexia- restricting</td>
<td>59.7%</td>
<td>40.3%</td>
</tr>
<tr>
<td>Anorexia- purging, no binging</td>
<td>45.5%</td>
<td>54.5%</td>
</tr>
<tr>
<td>Anorexia- no binging and purging</td>
<td>62.6%</td>
<td>37.4%</td>
</tr>
<tr>
<td>Bulimia- purging</td>
<td>79.8%</td>
<td>20.2%</td>
</tr>
<tr>
<td>Bulimia- binging, no purging</td>
<td>76.0%</td>
<td>24.0%</td>
</tr>
<tr>
<td>Lifetime diagnosis of Anorexia or Bulimia</td>
<td>56.5%</td>
<td>43.5%</td>
</tr>
<tr>
<td>Lifetime diagnosis of EDNOS</td>
<td>79.2%</td>
<td>20.8%</td>
</tr>
</tbody>
</table>

1 (adapted from Shroff, et al.)
Misconceptions about Exercise in Eating Disorders

• Including exercise in treatment will lead to harm.
  • Myth
• Exercise appears safe when used therapeutically.
  o Not associated with weight loss.
  o Associated with improved strength, cardiovascular endurance, & psychological well-being (2-4)
Misconceptions about Exercise in Eating Disorders

• Individuals with severe anorexia should not exercise again
  • Myth and True?
  • Managed exercise is possible with some, but not all individuals with ED (5).
  • Exercise may be off the table for those with severe exercise pathology.
Misconceptions about Exercise in Eating Disorders

- Exercise should not be included in ED treatment
  - Myth
- 97% of clinicians believe exercise & eating disorders are related (6,7)
- 68% of treatment centers assess physical activity
- 22% assess body composition
- 5% medical screening of physical fitness
- Acceptance of using exercise in treatment but used less than in other mental health conditions and comprehensive assessment tools and published exercise programs are rarely used
Misconceptions about Exercise in Eating Disorders

- Exercise should be intense or it doesn’t count (no pain, no gain)
- Myth

**Physical activity:** any body movement produced by skeletal muscles and resulting in a substantial increase over resting energy expenditure.

**Exercise:** a form of physical activity undertaken with a specific objective such as the improvement of fitness, health, or physical performance.

**Compulsive Exercise:** Exercising for affect regulation, shape or weight control, despite physical problems, interference in other activities, etc.

-Definitions from Brian Cook PHD: Recommendations for Progression of Exercise in Eating Disorder webinar
Core Principles including Exercise in ED treatment
Differentiate Movement from the ED

- Perfectionism is common in ED and in Exercise/Sports
- Reframe the objectives of exercise.
  - ED strive for perfectionism
  - Perfect Practice makes perfect is common in sports. How do we draw the line?
  - Sports are often win/loss which makes this harder
Rationale for including exercise in ED treatment

- Regular exercise is associated with improvements in risk factors, maintaining factors, outcomes, or ED diagnostic criteria
  - Physical
  - Psychological
  - Social benefits
- We need to help our patients to manage their exercise.
- Change patterns from pathological to a healthier form of movement.
- Target exercise beliefs about interpersonal, social, educational, & vocational activities.
- Goal should be to return the patient to a normal & healthy lifestyle and to include healthy exercise as a part of this.
Protocols for Therapeutic Exercise


- Review identified 11 core themes describing techniques that have been successful in using exercise therapeutically in ED treatment.
- May guide the use of therapeutic exercise in some, but not all ED patients.
- Focuses on empowering individuals with exercise as a tool for healthy living.
Protocols for Therapeutic Exercise

1. Team Approach
   o EDs are biopsychosocial & impact EVERY aspect of well-being
   o Exercise also affects every cell/system of the body

2. Medical Clearance
   o See Safe at Every Stage Guidelines (available at https://www.safeexerciseateverystage.com/)

3. Screen for Exercise Psychopathology
   o “...compulsory quality, rather than the excessive quantity, of exercise is a better characterization of exercise that is related to eating disorders.” (8)
     - The Compulsive Exercise Test (CET; Taranis et al., 2011)
     - The Exercise Dependence Scale (EDS; Hausenblas & Symons Downs, 2002)
Protocols for Therapeutic Exercise

4. Write out program rules, goals, outcomes, expectations, & contingencies for progression & regression of exercise activity.

5. Include a Psycho-educational Component
   - The appropriate use of exercise for health benefits,
   - How to recognize when exercise is becoming problematic,
   - Developing healthy attitudes and exercise behaviors,
   - Body awareness (i.e. understanding physiological states, injury, and pain),
   - Enjoyment of exercise and exercising for fun rather than as a behavior that may serve a functional role in maintaining an ED,
   - Identifying factors related to overtraining or burnout,
   - Exercise identity.
Protocols for Therapeutic Exercise

6. Focus on Positive Reinforcement, NOT punishment

7. Create a Graded Program
   Begin w/ small amounts of low intensity exercise
   Amount & intensity increase very gradually when demonstrated progress w/ ED tx, weight restoration, & any other predetermined therapeutic outcomes.
   Ceiling or upper limit for exercise amount & intensity.
Protocols for Therapeutic Exercise

8. Start With Mild Intensity, Slowly Build

- limit to short bouts of mild intensity to allow gradual physiological conditioning

Understand biofeedback, bodily states, distinguishing appropriate feelings of muscular exertion from pain and/or injury, heart & breathing rates, recovery, rest, & bodily acceptance

Crucial to understand link among psychology and physiology

- Desires to push on with more exercise (intensity, amount, frequency, etc.)
- Form, function, & fueling
Protocols for Therapeutic Exercise

9. Mode of Exercise

*Tailor exercise to physical, psychological, emotional, and social needs*

Combination of cardiorespiratory (i.e., aerobic), resistance (i.e., strength), and flexibility (i.e. stretching) training
Protocols for Therapeutic Exercise

9.a. Cardiorespiratory Training
Weekly exercise amounts of 150 minutes of moderate-intensity exercise.
Performed through a daily accumulated total of 30-60 minutes of moderate-intensity exercise (5 day/wk) or 20-60 minutes of vigorous-intensity exercise (3 day/wk).
Or accumulated through 10 minutes intervals.
A reasonable upper limit may be 30-40 minutes at 65-70% of maximum effort (HR).
Protocols for Therapeutic Exercise

9.b. Resistance Training

Focus on large muscle groups (i.e., Pectoralis, Latissimus Dorsi & Rhomboids, Gluteus, Quadriceps, Trapezius, etc.).

2 – 3 days/ week, beginning at very light or light intensity.

2 - 4 sets of 10-15 repetitions each.

Importantly, a full 48 hours of rest should be taken between resistance training sessions.

Mode – Resistance bands, machines, free weights, etc.
Protocols for Therapeutic Exercise

How to progress with cardiovascular and/or aerobic exercises?

• **MUST** be coordinated with adherence and progression in eating disorders treatment (psychotherapy **AND** nutrition!)
• Typically increase volume first
  o then increase intensity
• ED clients may need more time at a level of volume or intensity before progressing to connect biofeedback, satisfy nutritional issues, and allow additional rest for restoration of physiological function
Protocols for Therapeutic Exercise

• Define the phases
  • Work towards cardio improvement OR muscular hypertrophy phase.
  • Individual coaching and creativity come into play.
  • Each phase needs to meet a defined short term goal that leads to the long term goal.
  • IMPORTANT! – Backing off amount and intensity is necessary for health. Rest has to be a factor in exercise progression.
Protocols for Therapeutic Exercise

Cardiovascular VS Resistance Training

• In general, you can have a higher ratio of work to rest for cardio than resistance

<table>
<thead>
<tr>
<th>Phase</th>
<th>Weekly Frequency</th>
<th>Rest needed in between sessions</th>
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<tbody>
<tr>
<td>Endurance</td>
<td>2-3x/week, usually total body each session</td>
<td>48 hours</td>
</tr>
</tbody>
</table>
| Hypertrophy and strength| 2x/week/muscle group  
  • so if total body will only be 2x/week  
  • If split routine, could be 3-4x/week, but needs to be specified which muscle groups are getting worked at which sessions | 72 hours/muscle group          |
Protocols for Therapeutic Exercise

• Adequate rest can not be stressed enough
• Most training plans do not provide enough rest
• Work smarter not harder.
• Too many people (especially young men) think that just because they can work harder they should and will do better because of it
• Remember: strength and hypertrophy training is only 2x/week/muscle group
Protocols for Therapeutic Exercise

- **REST IS PART OF EXERCISE!!**
- Physiology of rest
  - 2 hours post exercise to return most systems to homeostasis
  - 24 hours to regenerate muscle glycogen stores
  - 36 hours to maximize protein synthesis
  - 72 hours to return to complete homeostasis and for muscles to heal

**Important Note on Exhaustion**
- If a client does become exhausted, it is recommended they take at least 4 weeks of recovery
- At least 1-2 weeks completely off, and the rest in light leisure recreational activity
Protocols for Therapeutic Exercise

LOAD

RECOVERY

Physical Stress

Mental Stress

Sleep

Stress Management

Nutrition
Protocols for Therapeutic Exercise

9.c. Flexibility Training

2 - 3 days of flexibility training per week.

**Static stretching** – stretching muscles and holding the position for a specified length of time (10 to 30 seconds) repeated 2 - 4 times, accumulating 60 seconds per stretch.
Protocols for Therapeutic Exercise

10. Nutrition

• **No exercise until all nutritional deficits are addressed.**
• Especially micronutrients, minerals, and electrolytes
  • cardiovascular function
• Several cardiovascular complications in AN remit with appropriate refeeding.
• Without an adequate exogenous energy source, the body will draw from endogenous sources.
Protocols for Therapeutic Exercise

• Debrief After Each Exercise Session
  • Preferably during the exercise session, but certainly afterward, the individual should be “debriefed” regarding sensations, emotions, and thoughts evoked by exercising
  • Link assessments to processing physical and mental experiences of exercise session

• Clinical Considerations
  • Close monitoring & supervision by a multidisciplinary treatment team.
  • If exercise becomes maladaptive or reflects a driven form of pursuit of thinness or purging, clinicians will need to modify treatment recommendations.
Conceptual Model from Alsana

**Antecedents**
- Nutrition
- Physical Well-being
- Mental Well-being

**Behavior**
- Exercise With Abnormalities
- Exercise Without Abnormalities

**Consequence**
- Physical Well-being Outcomes
  - Cardiovascular events, rhabdomyolysis & muscular injuries, acute & chronic use injuries, death
  - Functional fitness, cardiovascular improvements, metabolic improvements
  - Anxiety, withdrawal symptoms, depression, body-focused pathology, eating disorder symptoms, exercise addiction
  - Fury/pleasure, mood improvement, self-acceptance, body image satisfaction, self-esteem, self-efficacy, increased sense of well-being
  - Isolation, shame, social withdrawal, missed socialization opportunities
  - Social connections, opportunity to meet new people, increased relational awareness, connections with nature

**Physical Well-being**
- Abnormal values in hydration, electrolytes, glucose, etc.
- Normal range values of hydration, electrolytes, glucose, etc.
- Abnormal cardiovascular profile or temperature; current physical limitation or compromise
- Normal cardiovascular profile, temperature; absence of physical limitations or compromise
- Irrational exercise beliefs; external motivation; exercise pathology or compulsions; relevant trauma
- Rational exercise beliefs; internal motivation; no exercise pathology or compulsions; no relevant trauma history

**Mental Well-being**
- Physical Well-being Outcomes

**Social Well-being Outcomes**
Changing Exercise from Compulsive to Therapeutic
Changing the Functional Relationship of Exercise

• Why do people exercise?
  • Beliefs about exercise behavior and expected results may change the function of exercise. (9,10)
  • Help patients to change their beliefs about the function of exercise.
  • Function= why we do what we do.
    o What is the real reason or purpose you exercise?
    o What do you believe exercise does for you?
How Exercise Beliefs Lead to Eating Disorders

- Criticism (from self and/or others) increases risk of ED
  - Criticism negatively influences how individuals see themselves
  - ED symptoms and behaviors are self-critical
- This may lead individuals to seek out behaviors that can be self-critical
  - Sport, exercise, athletic cultures often objective related
- Performing exercise/sport fills this self-critical role
  - Ideals about body
  - Perfectionism/rigidity
  - Focus on objectives (example: win/lose)
Bibliography/References


