Physical Activity: Should it be **Exorcised** or **Exercised** in Eating Disorder Treatment?

Ron A. Thompson, PhD, FAED, CEDS
Email: rthomps2@sbcglobal.net

The Victory Program

Agenda

- Introduction
- Conventional Wisdom vs. Evidence
- Practical Reasons for Including Exercise in ED Treatment
- Medical Reasons to Exercise (with Balance)
- Evidence for Inclusion of Exercise in ED Treatment
- Implementing Exercise in Treatment
- Patient Selection
- Training/Re-Education Regarding Exercise
  - Normal/Healthy Exercise

The Victory Program

"Excessive" vs. "Unbalanced/Unhealthy" Exercise

- I prefer "Unbalanced/Unhealthy" because:
  - "Excessive" implies quantity and many times the issue or problem is not the "amount" of exercise but rather the "appropriateness" or "balance" based on a variety of factors (i.e., age, gender, health status, time availability, motivation, personality, energy balance, athletic ability, etc.). Thus, qualitative factors are more often the important issues rather than quantitative factors.
  - Even if the issue is quantity or amount of exercise, the terms "unbalanced" or "unhealthy" are still apt descriptors.

The Victory Program

Eating Disorders and Exercise

- **Unhealthy exercise plays a role in many, if not, most eating disorders.**
- Unhealthy exercise is often related to body image issues.
- **Eating disorders can be precipitated and perpetuated by unbalanced exercise.**

"Conventional Wisdom" says that ED patients should **not** exercise while in treatment. Why?

- It is risky from a **medical** standpoint.
- It will interfere with the **weight gain** process.
- ED patients are **"addicted"** to exercise and cannot control it; thus, their exercise will be compulsive and/or excessive.
- They will use it as their **primary means of coping.**

Practical Reasons for ED Patients to Exercise in Treatment

- Can ED patients actually be prevented from exercising? **Might it be easier to build exercise into treatment rather than trying to prevent or control it?**
- Most ED patients will return to exercise following treatment. Without re-education/training regarding exercise, ED patients are apt to exercise symptomatically again.
- **Intensive treatment would be the ideal time to re-educate/train** for athletes and non-athletes with ED.

Medical Reasons to Exercise (if Exercise is Balanced)

- Improves cognitive function (unless obsessive about exercise)
- Improves quality of life (unless exercise interferes with life)
- Reduces tension and other uncomfortable emotion (if it does not become the primary/sole means to manage emotion)
- Protects/improves cardiac function (if the heart is healthy enough to exercise)
- Weight bearing exercise can improve bone density (if the femoral neck and spine are not too osteoporotic/fragile to exercise)

Eating, Exercise, Body Image, and Balance

- Exercise seems to be a difficult concept for many people. They either want to do too much or not enough. That is, they have difficulty finding a "balance."
- Interestingly, many people with difficulty finding a balance with their eating, also have the same problem with their exercise. That is, people who exercise too much often do not eat enough.
- Unhealthy exercisers are more apt to be "unbalanced" regarding self-statements to, and about, their bodies—comments are usually negative.

Exercise in Eating Disorder Treatment: Is it **Safe**? Can it be **Effective**? What Does the Research Say?

Evidence for Including Exercise in Eating Disorder Treatment

- Blinder et al. (1970): Physical activity was used as reinforcement contingent on weight being at least one-half pound higher than the previous day in 3 AN inpatients; results indicated a positive relationship between increased duration of activity and weight restoration.
- Beumont et al. (1994): Successful use of a supervised exercise program for ED inpatients that allowed exercise as a reward for weight gain and treatment compliance; exercise group showed an average weight gain of 1 kg per week.
- Cararro et al. (1998): Adapted physical activity was a "useful element within a treatment programme aimed at the treatment of eating disorders;" also, when engaged in physical activity, patients showed a more relaxed attitude toward treatment.
- Thien et al. (2000): Graded exercise program for AN inpatients; exercise group gained slightly more weight than control group; exercise group showed an increase in all aspects of quality of life while controls showed a decrease in all aspects of quality of life.
- Sundgot-Borgen et al. (2002): Exercise produced treatment effects that were greater than for a treatment group receiving CBT which were maintained at 18-month follow-up; at follow-up 62% of exercise group had recovered from BN as compared to 36% in the CBT group.

Evidence for Including Exercise in Eating Disorder Treatment (cont'd)

- Szabo & Green (2002): Resistance training program was associated with an improvement in body composition and psychological well-being in AN inpatients; exercise program did not have a negative impact on weight restoration.
- Tokumura et al., (2003): Exercise training increased cardiovascular endurance in child and adolescents with anorexia nervosa; exercise group showed a significantly greater increase in BMI, and showed no adverse effects of weight regain.
- Calogero & Pedrotty (2004): ED inpatients in an exercise group gained 33% more weight and significantly reduced obligatory attitudes toward exercise as compared to a control group; patients who learned to adjust, rather than suppress, exercise during recovery from an ED had a better long-term outcome.
- Chantler et al. (2006): Resistance exercise produced a significant increase in muscle strength in hospitalized AN patients without compromising weight.
- Cook et al. (2011): Psychological benefits conveyed by exercise were associated with reduced eating disorder risk.

Evidence for Including Exercise in Eating Disorder Treatment (cont'd)

- Hausenblas et al. (2008): (Meta-analysis) Patients with ED can safely exercise; exercise interventions can have positive effects including improved body composition, improved body satisfaction, positive mood states, and improved quality of life; exercise did not affect weight gain in AN patients.
- Campbell & Hausenblas (2009): Meta-analysis of exercise interventions on body image indicated that exercise improved body image regardless of physical (fitness) postexercise change.
- Zunker et al. (2011): Review of exercise interventions for women with AN concluded that "limited empirical findings have demonstrated a positive correlation between PA [physical activity] and weight restoration in those with AN."
- Ng et al. (2013): Meta-analysis of supervised exercise training in AN patients appears to be safe, as no detrimental effect was observed in anthropometry; strength and cardiovascular fitness were also shown to improve.

Evidence for Including Exercise in Eating Disorder Treatment (cont'd)

- Recent reviews indicating that exercise is a potentially effective adjunct to ED treatment: Moola et al., 2013; Vancompfort et al., 2013, Zschuckle et al., 2013. None of these reviews reported any adverse effects. When nutritional needs are satisfied, exercise appears to be a safe option.
- Most recent study: In a randomized controlled trial, Fernandez et al., (2014) examined the effect of high intensity resistance training with AN patients. The exercise was well tolerated; patients increased strength without a decrease in weight or BMI.
- **Conclusion: Aerobic and/or resistance exercises have resulted in improvements in body satisfaction, mood, and quality of life, as well as physiological improvements in body mass in AN, BN, and BED.**

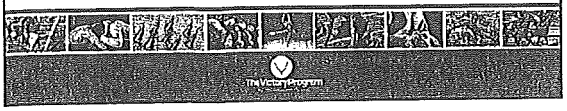
Incorporating Physical Activity into ED Treatment

How Might We Incorporate Exercise in Treatment?

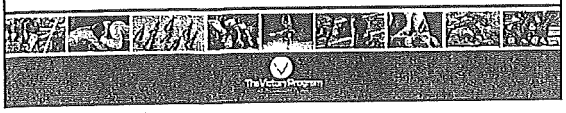
- Exercise could be considered when treatment staff members agree that such activity does not increase the medical or psychological risk to the patient.
- Ideally, exercise would be prescribed for each individual by an exercise specialist in consultation with treatment staff.
- Patients would have to agree to comply with dietitians' recommendations regarding an increase in caloric intake to account for increase in activity, including fueling before and after exercise.
- Exercise should be tied to treatment progress and implemented gradually.
- Exercise could be used to motivate the patient and can be withdrawn at any time at the recommendation of treatment staff.

Physical Activity in Treatment: Which Patients Should Participate?

- Patients for whom healthcare team does not view exercise as increasing either the medical or psychological risk to the patient.
- Patients for whom exercise has not been an integral ED symptom; that is, for whom it has not been the only or primary means to weight control.
- Patients who agree to comply with dietitians' recommendations regarding an increase in caloric intake to account for increase in activity.
- Patients who are "re-educated" regarding exercise and who at a minimum successfully complete a group or training related to the "psychology" of exercise.



Re-education and Training Regarding Physical Activity



"Normal" Healthy Exercise: What is it?

- **Physical Activity Guidelines for Americans (2008):** Most health benefits occur with at least 150 minutes a week of moderate intensity activity. More benefits occur by moving to 300 minutes per week.
- **American College of Sports Medicine (ACSM):** ACSM recommends 3-5 days/wk of aerobic activity at 55-90% of maximum heart rate for 20-60 minutes (duration is dependent on intensity) for cardiorespiratory fitness and body composition and 2-3 days/wk of resistance training (1 set of 8-10 repetitions for each major muscle group) for strength and endurance.
- **National Collegiate Athletic Association (NCAA):** An athlete is allowed a maximum of 4 hours per day and 20 hours per week of training and competition and must be given one day off. However, the athlete can "volunteer" to do more.

Specific Signs/Symptoms of Unhealthy/Unbalanced Exercise*

- Signs/symptoms of Exercise Abuse (Raglin & Moger, 1999):
  - Exercise is the individual's primary means of coping
  - Exercise occurs despite injury
  - Withdrawal effects (i.e., sleep and appetite disturbance, negative shift in mood, decreased concentration, etc.) occur when exercise is withheld
- Overuse injuries
- Stress fractures
- Menstrual irregularity in females or a decrease in testosterone levels in males
- Loss of bone density
- Decreased immunity
- Frequent colds and/or upper respiratory tract infections
- Inflexibility of exercise schedule (i.e., cannot alter schedule; cannot decrease exercise; cannot NOT exercise)
- Decrement in sport performance
- "Overtraining Syndrome" (Staleness) in athletes

* Powers & Thompson (2008)
** No one sign/symptom necessarily indicates a problem, but the likelihood increases as the number of signs/symptoms increases.

The Victory Program

Recommendations Regarding Exercise During/Following ED Treatment

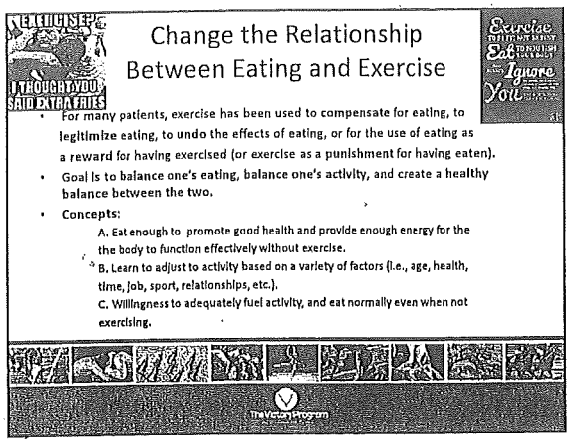
- Person must be ***cleared*** for exercise; that is, the healthcare team does not view exercise as increasing patient's medical or psychological risk.
- Person is ***at least 90%*** of expected body weight, is willing to ***maintain an energy balance*** consistent with the treatment plan, and appears able to ***exercise non-symptomatically.***
- In the beginning, exercise is ***varied, occurs for 15-20 minutes, occurs no more than one time per day*** and ***no more than 5 times per week***, is performed at ***low intensity*** (no more than 60% of maximum heart rate), is performed ***with another person*** who is a normal, healthy exerciser, and ***does not occur for at least 2 hours after eating.*** If successful, then frequency, duration, and intensity can be increased.

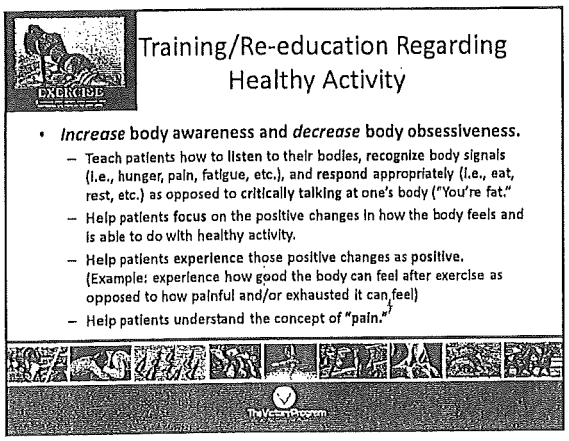
The Victory Program

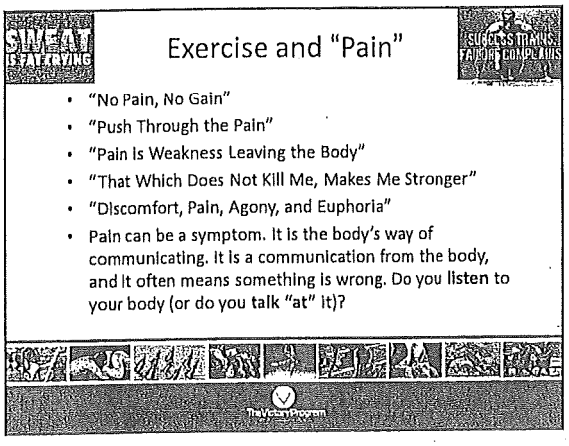
Training/Re-education Regarding Healthy Activity

- **Change the patient's attitudes, beliefs, and thinking about exercise.**
  - Exchange the term "exercise" for "physical activity" because the old term meant exercising too much, primarily for unhealthy reasons, and doing it alone.
  - Provide accurate information on "healthy" vs. "unhealthy" activity.
  - Emphasize that healthy activity needs a healthy body which requires good nutrition.
  - Emphasize that healthy activity is for health, enjoyment, and preparation for sport as opposed to the management of emotion or the obsessive purpose of burning calories/losing weight.

The Victory Program


Change the Relationship
Between Eating and Exercise
For many patients, exercise has been used to compensate for eating, to legitimize eating, to undo the effects of eating, or for the use of eating as a reward for having exercised (or exercise as a punishment for having eaten).
Goal is to balance one's eating, balance one's activity, and create a healthy balance between the two.
Concepts:
A. Eat enough to promote good health and provide enough energy for the the body to function effectively without exercise.
B. Learn to adjust to activity based on a variety of factors (i.e., age, health, time, job, sport, relationships, etc.).
C. Willingness to adequately fuel activity, and eat normally even when not exercising.
The Victory Program


EXERCISE
Training/Re-education Regarding
Healthy Activity
Increase body awareness and decrease body obsessiveness.
Teach patients how to listen to their bodies, recognize body signals (i.e., hunger, pain, fatigue, etc.), and respond appropriately (i.e., eat, rest, etc.) as opposed to critically talking at one's body ("You're fat."
Help patients focus on the positive changes in how the body feels and is able to do with healthy activity.
Help patients experience those positive changes as positive. (Example: experience how good the body can feel after exercise as opposed to how painful and/or exhausted it can feel)
Help patients understand the concept of "pain."
The Victory Program


Exercise and "Pain"
"No Pain, No Gain"
"Push Through the Pain"
"Pain Is Weakness Leaving the Body"
"That Which Does Not Kill Me, Makes Me Stronger"
"Discomfort, Pain, Agony, and Euphoria"
Pain can be a symptom. It is the body's way of communicating. It is a communication from the body, and it often means something is wrong. Do you listen to your body (or do you talk "at" it)?
The Victory Program

Changing Unhealthy Exercise Needs

- Assist patients in meeting needs previously met by, or associated with, unhealthy exercise.
  - Unhealthy exercise may serve several functions, purposes, and needs for a particular patient.
  - Determine what functions, purposes, and needs unhealthy exercise served for the patient.
  - Assist the patient in developing strategies for meeting those functions, purposes, and needs previously met by unhealthy exercise in ways that do not directly involve eating, food, or weight. Without this change, the patient will likely resort to old ways.

TheVictoryProgram

Cautions Regarding Re-Introduction of Exercise

- Exercise may:
  - Get out of control (patient may be unable or unwilling to stop when instructed to do so)
  - Trigger other eating disorder symptoms
  - Decrease appetite
  - Increase appetite

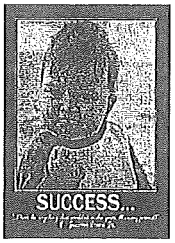
TheVictoryProgram

Exercise in the Treatment of Eating Disorders: A Review of the Literature and Proposal of Therapeutic Protocols*

*Cook et al. (Manuscript under review by the *International Journal of Eating Disorders*)

TheVictoryProgram

Questions



Questions