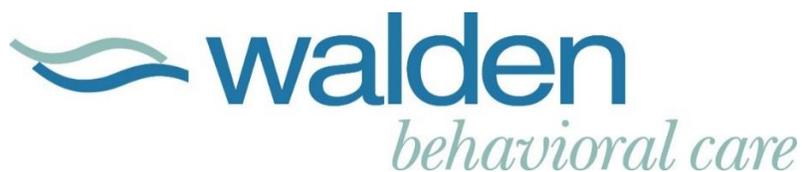




Eating Disorders in Sport

A Resource Guide for Athletes,
Coaches, and Families



What are Eating Disorders?

Eating disorders are psychological illnesses characterized by disturbances in eating behaviors, often driven by distorted ideas or thoughts related to appearance, weight and body type. An estimated 30 million Americans will have an eating disorder in their lifetime, spanning cases of anorexia, bulimia, binge eating disorder and a variety of other related conditions.

Eating disorders are not to be taken lightly – they can significantly impact an individual’s mental health, physical well-being, social connectedness and overall quality of life. Health complications can include heart failure, respiratory failure, gastrointestinal issues and even death. Many instances are accompanied by high levels of depression, anxiety and severe stress, as well as co-occurring conditions such as obsessive-compulsive disorder (OCD), post-traumatic stress disorder (PTSD) and substance abuse.

There is no single cause of eating disorders, but rather a combination of behavioral, genetic, psychological, social and environmental factors contribute to onset. Eating disorders affect individuals of all ages, genders, races, sexual orientations, socioeconomic statuses and backgrounds, including athletes.

In fact, athletes are two to three times more likely to develop eating disorders than non-athletes (1).

Eating Disorders and Athletes

Many people are surprised to learn that athletes experience eating disorders since sports participation is generally considered a positive life experience. While participating in organized sports can improve self-esteem, facilitate a physically active lifestyle and provide a sense of belonging, there are several factors in the sports environment that make athletes uniquely susceptible to developing eating disorders.

These include:

- Perfectionism
- Deep commitment to sport and a strong athlete identity
- A “win at all cost” mindset
- Perceptions related to “ideal” body types in sport
- Sports with weight class restrictions (e.g., lightweight rowing) and aesthetic sports (e.g., figure skating) where athletes experience pressure to lose weight for competition
- Performance pressures
- Dieting behaviors
- High physical demands of training and competition
- Heightened nutritional needs
- Limited access to nutrition professionals
- Targeted marketing of functional foods, fad diets and supplements to athletes
- Role modeling of rigid eating habits and restrictive dieting behaviors by teammates
- Revealing uniforms
- Being sidelined from training and competition by injuries
- Added pressures from coaches and family members

Although female athletes experience eating disorders at higher rates than males, male athletes are not immune. The exact prevalence of eating disorders among female and male athletes is difficult to estimate because so few seek treatment and so many suffer in silence. Estimates from the International Olympic Committee (IOC) found that among adult and adolescent elite athletes, up to 20% of female athletes and up to 8% of male athletes experience disordered eating (2). As is the case with eating disorder statistics relative to the general population, these estimates are known to be substantial underestimates of the true prevalence since they often only reflect individuals who seek treatment. Athletes, specifically, tend to underreport behaviors and symptoms of eating disorders.

There are several factors in the sports environment that contribute to eating disorders remaining undetected and undertreated, including beliefs and perceptions that dieting, rigid eating behaviors, overtraining and extremely lean body types are signs of commitment and dedication required to achieve an elite status in sports. Others fear that seeking help will stigmatize them as “weak” and this perception may jeopardize their viability in sport. When the pressure to perform in sport combines with the socio-cultural preferences for either the thin ideal (women) or the muscular ideal (men), strategies that manipulate diet in order to control one’s body shape or size can have devastating long-term health consequences for athletes in the setting of high nutritional needs for sport. Studies have estimated that up to 70% of athletes in weight-sensitive sports (like rowing and wrestling) diet and engage in restrictive eating behaviors to reduce weight before competition (2).

Did you know?

- Eating disorders do not discriminate; they affect athletes in aesthetic sports (like gymnastics and figure skating) as well as in ball sports (like soccer and basketball). Prevalence estimates are

conservative, reportedly affecting 17% and 2% of athletes in these subgroups, respectively (3).

- More than one third of collegiate female Division 1 NCAA athletes report attitudes and symptoms related to anorexia nervosa, the eating disorder characterized by restrictive eating and significantly low weight status (4).
- Athletes who engage in disordered eating behaviors, even if they do not meet clinical diagnostic criteria for an eating disorder, are at risk for nutritional problems, emotional and physical health concerns and sports performance deficits.
- Resources for eating disorder prevention, risk assessment, and referral and intervention are not necessarily readily accessible inside most collegiate athletic departments. There are many barriers to treatment and stigmas that keep athletes from coming forward for help. For the most part, athlete-specific treatment programs for eating disorders are rare. (see “Resources” section below)

Common Eating Disorder Diagnoses

Anorexia Nervosa is characterized by self-starvation and excessive weight loss, often driven by an intense fear of gaining weight. Those impacted are unable or unwilling to maintain adequate nutritional intake and a body weight that is expected for their age and height. Many individuals have low self-esteem largely related to poor body image, refuse to eat certain foods in fear that the foods will result in weight gain, have difficulty eating in public and deny their hunger cues. These behaviors typically lead to dramatic weight loss, severe caloric deficits and social isolation.

Bulimia Nervosa involves recurring episodes of binge eating – the consumption of large amounts of food over a short period of time – followed by compensatory behavior designed to “undo” the binge

episode. This may include self-induced vomiting, laxatives or diuretics abuse, and/or compulsive exercise. Episodes occur at least once per week, with individuals experiencing severe shame, distress and loss of control following both the bingeing and purging cycle.

Binge Eating Disorder is characterized by recurring episodes of excessive food consumption over a short period of time, accompanied by an extreme loss of control, shame and guilt. It does not involve the compensatory behavior seen with bulimia. During the binge, individuals often describe the feeling of being numb or zoned out, unaware of the magnitude of food being consumed or lacking the ability to stop. They may eat to the point of feeling uncomfortably full or sick, followed by intense mental distress and self-loathing.

Other Specified Feeding or Eating Disorder (OSFED) is a classification of eating disorders characterized by a variety of behaviors that constitute an unhealthy relationship with food and low competence for feeding oneself properly. Individuals might display behaviors associated with eating disorders such as anorexia, bulimia and binge eating disorder, but at sub-clinical levels which do not meet the official criteria for a clinical diagnosis. This includes atypical anorexia (in which a person heavily restricts food, yet is not severely underweight); a form of bulimia in which the patient purges (less frequently than the clinical standards of one day/week); and purging disorder (in which a person purges without binge eating). Individuals suffering from OSFED many times exhibit disordered eating habits, body dissatisfaction and an intense fear of weight gain.

In addition to the interpersonal characteristics discussed above that predispose an individual to an eating disorder, athletes are particularly susceptible to disordered eating behaviors when their weights are closely monitored, dieting is endorsed by important people in their circle of support (like coaches, parents or teammates), or team norms

are such that teammates exhibit body shaming practices or role model unhealthy or restrictive eating behaviors.

Orthorexia is a newly emerging subgroup of disordered eating that deserves mention as athletes are particularly vulnerable. Orthorexia is an extreme fixation over the quality and purity of food. Individuals only consume food they perceive as “healthy” or “pure,” not in pursuit of weight loss or body aesthetics, but rather superior health. Affected individuals practice extremely rigid food choice behaviors and eat diets that are quite limited in variety and in the source of the food itself.

In the case of athletes, the superior outcomes desired usually relate to sports performance, where athletes are sometimes encouraged and often willing to do whatever it takes to earn a competitive edge. In reality, athletes suffering from orthorexia can undermine their athletic performance when actively restricting what they perceive to be “unhealthy” food groups like grains (sources of gluten and carbs) or meats and dairy (opting for vegetarian or vegan diets). This often results in under fueling, nutritional deficits including anemia and vitamin D deficiency, low immunity and hormone levels, and compromised integrity of muscles and bones.

Signs and Symptoms of Eating Disorders in Athletes

Eating disorders can result in serious mental and physical health risks, negatively affect quality of life, and in some cases, cause death. They are detrimental to an athlete’s ability to properly train and compete.

Understanding warning signs can help with early diagnosis, referral and treatment to provide the greatest chance for a full recovery. Among athletes, signs and symptoms can be grouped into the following broad categories:

Emotional

- Intense fear of gaining weight
- Fear of not having the right body shape or size for sport
- Overvaluation of body shape and size as a reflection of self-worth
- Mood swings, depression, anxiety
- Fear of not being able to control eating or the food environment
- Generalized distrust of foods not prepared, purchased or chosen by themselves
- Feelings of guilt or disgust about overeating or eating “forbidden” foods
- Distorted and irrational thoughts about body and food
- Extreme “black-and-white” or “all-or-nothing” mindset
- Harshly self-critical and judgmental
- Negative self-talk
- Low ability to cope with or tolerate distress
- Difficulty communicating one’s feelings or advocating for self

Social

- Isolation from teammates, friends and family
- Avoidance of social situations with food
- Refusal or difficulty (increased distress) eating in public (team meals, etc.)
- Secretive behaviors involving food

Behavioral

- Compulsively exercising to burn calories
- Compulsively counting calories
- Irregular meals; skipping meals
- Restricting amounts, variety and/or specific foods
- Rigid rules surrounding eating: what, when, where, with whom, how much, in what order, prepared by whom, etc.

- Judging foods as “good foods” (allowed) vs “bad foods” (forbidden)
- Ritualistic eating habits like cutting food into tiny pieces, blotting foods with a napkin or not allowing foods to touch on a plate, etc.
- Binge eating and/or binge drinking
- Wearing loose or baggy clothes to hide one’s body

Physical

- Poor performance in sports training or competition
- Fatigue, dehydration and weakness
- Delayed recovery from a hard workout
- Stress fractures or recurrent and frequent injuries
- Dramatic weight loss or weight fluctuations
- Electrolyte imbalances
- Dry skin and hair loss
- Irregular or absent menstrual cycles (females)
- Low testosterone (males)
- Dizziness and fainting
- Difficulty concentrating
- Cardiac problems including low heart rate, low blood pressure and fainting
- Digestive and intestinal problems
- Anemia
- Compromised immunity
- Cold intolerance
- Presence of lanugo, a coating of fine, soft hair coating the body and limbs
- Symptoms related to purging including wearing tooth enamel, inflammation/erosion of gums, esophageal reflux, puffy cheeks and calloused knuckles

Impact of Eating Disorders on Athletic Performance

Individual athletic performance is eventually impacted when disordered eating behavior is sustained or progresses to an eating disorder. Athletes are at risk for energy deficiency, protein inadequacy, dehydration and shortages of essential vitamins, minerals, electrolytes and fatty acids. Restricting food intake can sabotage an athlete's fueling strategy, and ultimately sports performance will suffer. When nutritional intake is chronically inadequate, training intensity cannot be sustained, bones and muscles are compromised, fatigue, dehydration and anemia ensue, and hormones and immunity decline. Restrictive eating behaviors cause lethargy and weakness, increase an athlete's risk for injuries such as stress fractures, and additionally disrupt mental focus resulting in decreased performance.

Team performance is also impacted when players suffer the consequences of eating disorders. If a player is underperforming in their role on the team, or if injured or removed from participation because of an eating disorder, the team loses a competitor from its roster. When athletes isolate themselves and avoid social situations involving food, it can disrupt relationships between teammates. Similarly, when athletes role model disordered eating behaviors or body shaming commentary in the locker room, or when coaches condone a team environment where this occurs, unhealthy team norms get established and more athletes become vulnerable to the risks. Because poor communication and ineffective coping skills are often at the center of an eating disorder, conflicts with coaches and teammates may contribute to or may arise from uncontrollable mood swings, depression and anxiety for some athletes, and only serve to increase risks within the culture of sport. Teammates train and compete together, travel together, eat together and often live together. For this reason, disordered eating behaviors and eating disorders are described as

“contagious” within the high school and collegiate sports environment, providing a strong rationale to address warning signs and work to achieve a more supportive, accepting team dynamic.

Tips for Providing Support and Encouraging Treatment

Educate Yourself

- Understand the signs and symptoms (*above*) of eating disorders in sport. (*Also see a list of resources below*).
- Identify athletes who may be at risk or who engage in disordered eating behaviors so that you can intervene early.

Express Concern

- If you are concerned about an athlete, plan a private conversation with the athlete where you can show that you care and share your concerns about what you observe.
- In a non-judgmental way, express your concerns based on objective facts and observations.
- Anticipate denial of your concerns and resistance to the conversation, as these are highly personal and difficult conversations to have.
- Avoid making statements that may come across to the athlete that you are diagnosing them; instead, make a clear recommendation that they talk with their primary care doctor or, in the case of an adolescent athlete, with their parents and their pediatrician.

Guide Athletes to Qualified Providers

- Establish a referral network of experienced providers both locally and nationally.
- Encourage the athlete and the family to connect with a multi-disciplinary eating disorder treatment team that includes a physician or pediatrician, mental health professional and dietitian.

- Clinicians who specialize in treating athletes with eating disorders are particularly valuable as they understand the athlete's sport identity.

Set a Proper Vision

- Be prepared to remove the athlete from sports participation, training and exercise during the assessment and treatment phases of intervention for an eating disorder.
- Encourage, validate and support the athlete while engaged in treatment
- Let decisions about return-to-sport be made by the treatment team

Conclusion

While eating disorders affect all types of individuals, athletes are known to be among the most vulnerable group, with 2-3x more cases than the general population. Yet athletes are also quite likely to suffer in silence because treatment may be more stigmatized and less readily accessible to them.

For coaches, athletic trainers, teammates and other members of the sport community, it is imperative not only to understand the risk factors and potential warning signs, but realize your power as a first line of defense to champion intervention and help athletes get the treatment they need.

It is our hope that the content within this guide, and the resources below, will empower you to make a lasting impact in an athlete's life.

Resources

Walden Behavioral Care: The GOALS Program provides athlete-specific intensive outpatient eating disorder treatment for competitive high school, collegiate or adult athletes. For more information click [here](#).

National Eating Disorder Association provides a free, online eating disorder toolkit for athletes who suffer from body image issues, disordered eating behaviors and clinical eating disorders. To access the toolkit, click [here](#). For more general information, click [here](#).

National Institute of Mental Health provides a free, online overview of eating disorders and how these disorders relate to mental health. To access this document, click [here](#).

NCAA Manual on Mind, Body and Sport provides key insights into the unique challenges that impact the mental health of collegiate student athletes. This manual is available for free as a download [here](#).

REDS-CAT is a clinical assessment tool used to evaluate athletes who suffer from relative energy deficiency in sport (RED-S). This tool guides clinicians in decision-making related to the need for intervention and treatment and provides guidelines for when athletes need to be removed from (or can return to) participation in sport. The REDS-CAT is available for download [here](#).

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