

# Disordered Eating in Athletes

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**M**ANY RECENT STUDIES have demonstrated a higher incidence of eating disorders among athletes than among nonathletes.<sup>1-4</sup> The prevalence of disordered eating, unhealthy dieting, and distorted body image has been reported to range from 12% to 57%.<sup>4</sup> One study revealed that 20% of females and 8% of males met *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) criteria for anorexia nervosa, bulimia nervosa, and eating disorders not otherwise specified, compared with 9% and 0.5% for nonathletic females and males, respectively.<sup>5</sup> Over one third of athletes have reported to use at least one extreme dieting method, 51% have tried to lose weight in the past month, and 77% want to lose weight. Questions about dieting and weight reduction among athletes are commonplace. Early warning signs can be identified when athletes complete their preparticipation physical-exam forms. Athletic trainers are often the first to detect eating disorders in athletes and should become familiar with the signs, symptoms, and multiple diagnostic tools available.

Since the introduction of Title IX in the early 1970s the number of female college athletes has increased by more than 500%.<sup>6</sup> Many studies have reported a higher incidence of eating disorders among female athletes than among males.<sup>7-10</sup> Athletes at higher risk of developing eating disorders are those who participate in sports that use weight classification, such as rowing, judo, tae kwan do, weight lifting, and wrestling. Sports that emphasize body leanness, such as distance running, track, swimming, and cross-country skiing, are also associated with higher incidence of disordered eating.

Eating disorders have multiple psychological, physical, and social ramifications including significant weight preoccupation, inappropriate eating behaviors, and body-image distortion. These types of eating disorders can lead athletes to deny their bodies many important nutritional components at a time when they need them most. The lack of these nutrients can lead to amenorrhea, reduced body mass, reduced lean muscle tissue, fatigue, irritability, insomnia, lack of concentration, and growth failure. Many athletes with eating disorders experience depression, anxiety, and substance abuse and might be at risk for far more serious medical complications such as heart problems. The "female athlete triad" represents the correlation among disordered eating, amenorrhea, and osteoporosis. Athletic trainers need to be aware of what to look for and what questions to ask when faced with patients who have eating disorders. Because of the negative reputation and the stigma associated

with eating disorders, some athletes might adopt a defensive attitude when questioned about their eating habits. The athletic trainer might need to ask questions about nutritional habits when assessing an athlete who has suffered a stress fracture or amenorrhea or has recently lost a significant amount of weight.

## Types of Eating Disorders

Disordered eating behaviors range from the classic anorexia nervosa or bulimia nervosa that meet the criteria for clinical diagnosis by the DSM-IV-TR to the far more common and underdiagnosed disordered eating.

### Anorexia Nervosa

Anorexia nervosa is a very dangerous condition that moves individuals who are already too thin to literally starve themselves. The average age of onset is between 13 and 18 years. These patients present with an intense fear of gaining weight, history of repeated dieting attempts, and excessive weight loss. Some of the features and symptoms include high intake of caffeine-containing beverages and sugar-free gum; lightheadedness; constipation; bloating; compulsive exercising; anxiety at bedtime; preoccupation with food, calories, and weight; isolation and avoidance of food-related social activities; cutting food into small pieces; extreme sensitivity to cold; sleep disturbance; and amenorrhea. Patients believe they are overweight, and to maintain their abnormally low weight they engage in behaviors such as self-induced vomiting and use of laxatives, diuretics, or enemas. Common physical findings include very low weight, hyperactivity, distorted body image, rough and/or dry skin, vellus hair on the back and extremities, atrophy of breast tissue, low heart rate and blood pressure, and loss of scalp hair. People with anorexia nervosa are classically believed to be perfectionists and overachievers, but in reality they have very low self-esteem and self-confidence.

### Bulimia Nervosa

Individuals with bulimia nervosa suffer from uncontrolled or binge eating followed by induced vomiting; use of laxatives, diuretics, or diet pills; and excessive exercise or fasting in an attempt to burn off the large amount of food ingested. Unlike patients with anorexia nervosa, these individuals maintain normal or above-normal weights. Some of the symptoms these

patients suffer are fatigue, sore throat or chest pain, difficulty swallowing and retaining food, constipation or diarrhea, bloating and abdominal pain, irregular menses, and an obsession with their body appearance. The physical signs that can sometimes be obvious to athletic trainers are puffiness of the face caused by parotid- or salivary-gland enlargement, frequent weight fluctuations, teeth marks in the knuckles from inducing vomiting, loss of tooth enamel, and bad breath. These athletes are at high risk of suffering from heart arrhythmias because of the electrolyte imbalance that results from repetitive vomiting. They also have higher incidence of depression, anxiety, obsessive-compulsive disorder, and other psychiatric illnesses.

### Binge-Eating Disorder

Believed to be the most common eating disorder, binge-eating disorder is the most recently recognized eating disorder.<sup>11</sup> After significant weight loss from dieting, these individuals engage in uncontrolled eating that does not stop until they are uncomfortably full. Unlike bulimia nervosa, the bingeing is not followed by an attempt to get rid of the food ingested. The complications that result from this disorder are the same that result from obesity and include increased cholesterol levels, high blood pressure, diabetes, gallbladder disease, and heart disease. These patients are believed to have the highest rates of depression.

### Eating Disorder Not Otherwise Specified—Disordered Eating

Disordered eating is far more common in athletes than other disorders. It includes abnormal eating behaviors such as restrictive dieting, bingeing, or purging that occurs less frequently and less severely than required to meet full DSM-IV-TR criteria for diagnosis of an eating disorder. Athletes often engage in this type of behavior in preparation for events. Rarely does disordered eating result in significant medical complications, but these athletes are in need of professional help before they develop eating disorders.

## Conclusion

Eating disorders are best treated and have better outcomes when diagnosed early. A multidisciplinary team approach that includes a physician, a psychotherapist, a nutritionist, athletic trainers, coaches, and family members results in the best prognosis. Types of psychotherapy employed include individual and group

therapy, nutritional counseling, cognitive-behavioral therapy, and interpersonal therapy. Antidepressant medications can also become part of the therapeutic regimen. Because of the very high relapse rates of these disorders, the decision on whether an athlete continues to participate in training and in competition must depend on his or her adherence to the treatment program. ■

## Resources

- National Eating Disorders Association. Phone: (800) 931-2237. <http://www.nationaleatingdisorders.org/>
- Harvard Eating Disorders Center, Massachusetts General Hospital. ACC-725, 15 Parkman St., Boston, MA 02114. <http://www.hedc.org/>
- National Association of Anorexia Nervosa and Associated Disorders. Box 7, Highland Park, IL 60035. Phone: (847) 831-3438. <http://www.anad.org/>
- Pennsylvania Educational Network on Eating Disorders. 3277 Cedar Run Rd., Allison Park, PA 15101. Phone: (412) 366-9966.
- National Institute of Mental Health Public, Inquiries Section. 5600 Fishers Lane, Room 7C-02, Rockville, MD 20857. Phone: (301) 443-4513. <http://www.nimh.nih.gov/>

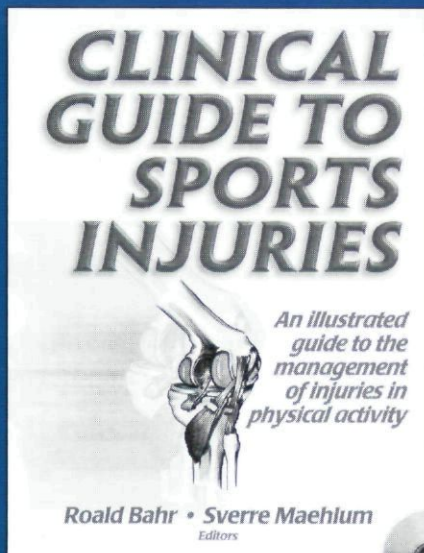
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