

NationalEatingDisorders.org



Coach & Trainer TOOLKIT

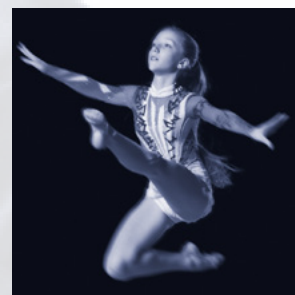




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Introduction



The benefits of sport are well recognized: organized athletics builds self-esteem, promotes physical conditioning, enhances skills, teaches the value of teamwork, and sets a foundation for lifelong physical activity. Athletic competition, however, can also cause severe psychological and physical stress. When the pressures of sport competition are added to cultural ideals that emphasize thinness or a certain body type, the risks increase for athletes to develop disordered eating (irregularities in eating patterns and behaviors that may or may not develop into an eating disorder).

Body image problems, disordered eating and full-blown eating disorders are common among athletes, a fact that only in recent years has become more widely recognized. A study of Division 1 NCAA athletes found that more than one-third of female athletes reported attitudes and symptoms placing them at risk for anorexia nervosa. Athletes who engage in disordered eating but fall short of the diagnosis of a full-blown eating disorder are still at risk for serious health consequences, and disordered eating itself is a risk factor for a full-blown eating disorder.

Though most athletes with eating disorders are female, male athletes are also at risk—especially those competing in sports that tend to emphasize diet, appearance, size and weight. In weight-class sports (wrestling, rowing, horseracing) and aesthetic sports (bodybuilding, gymnastics, swimming, diving) about 33% of male athletes are affected. In female athletes in weight class and aesthetic sports, disordered eating occurs at estimates of up to 62%.

These risks and consequences, however, should in no way be misconstrued to suggest that girls and women, or any susceptible person, for that matter, should avoid sport participation. Because the many and varied benefits of sport listed above outweigh its risks, it is not sport participation that should be avoided, but rather the risks to disordered eating that are too often a part of the sport environment.

As coaches and trainers, you play a pivotal and influential role in the lives of young athletes and are ideally positioned, along with their families, to detect these risks—or an eating problem in its early stages—and serve as positive influences in turning around such a situation.

Eating disorders are challenging and difficult enough for trained professionals to deal with, so we know how important it is to provide you with resources to help you to handle disordered-eating situations that may arise. Experts in the field have contributed to the Coach and Trainer Toolkit, which we hope will provide the information and resources you need to confidently face any situation involving disordered eating or an eating disorder in your sport environment.

SOURCES:

Ron Thompson, PhD, FAED, psychologist specializing in the treatment of eating disorders, co-author, *Eating Disorders in Sport*, (Routledge, 2010).

Johnson, C. Powers, P.S., and Dick, R. Athletes and Eating Disorders: The National Collegiate Athletic Association Study, *Int J Eat Disord* 1999; 6:179.

Sport Nutrition for Coaches by Leslie Bonci, MPH, RD, CSSD, 2009, Human Kinetics.

Byrne et al. 2001; Sundot-Borgen & Torstviet 2004



Prevention



Types of eating disorders

Compiled for the National Eating Disorders Association by Kathryn Ackerman, MD MPH, internist, endocrinologist and sports medicine specialist, Children's Hospital Boston and Massachusetts General Hospital; instructor, Harvard Medical School; team physician, US Rowing and Community Rowing, Inc.

Anorexia nervosa is defined as a serious life-threatening disorder characterized by deliberate self-starvation and the following:

- Refusal to maintain body weight at or above a minimally normal weight for age and height (< 85% expected)
- Intense fear of gaining weight or becoming fat, even though underweight
- A disturbance in the way one's body weight/shape is experienced (self-evaluation, denial)
- Amenorrhea (absence of at least 3 consecutive periods)

Anorexia nervosa is then subdivided into a restricting type and a binge eating/purging type.

In addition to general disordered eating signs and symptoms, athletes suffering from anorexia often become so thin that they develop lanugo (fine hair on their body, often on the face, to help keep the body warm). They may suffer from extreme electrolyte and hormonal imbalances, cardiac arrhythmias, low blood counts, and anemia.

Bulimia nervosa is a serious life-threatening disorder characterized by recurrent episodes of binge eating usually followed by self-induced vomiting or some form of purging as a means of controlling weight (ex. vomiting, laxatives, diuretics, other medications, fasting, excessive exercise). One of the reasons that bulimia is common and sometimes hard to detect in athletes is that an intense training regimen can mask and coincide with purging. The ease of avoiding detection may keep the athlete in denial as well.

Bulimia nervosa is subdivided into purging and non-purging types.

Athletes suffering from bulimia nervosa may have some or all of the general disordered eating signs and symptoms, but also are at higher risk for esophageal tears from vomiting, gastrointestinal complications such as diarrhea or constipation, dental caries, and calluses on their hands from induced vomiting.

Eating Disorder Not Otherwise Specified (EDNOS) is a term used in the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders to describe eating disorders that do not meet the criteria for the more strictly defined disorders anorexia nervosa or bulimia nervosa. A diagnosis of EDNOS can mean:

- All the criteria for anorexia are met, but the individual has regular menses
- All the criteria for anorexia are met, but despite significant weight loss, current weight is within normal range
- All the criteria for bulimia nervosa are met, but purging occurs less frequently than twice a week for 3 months
- Repeatedly chewing and spitting out food

Binge Eating Disorder (BED) is now considered a type of Eating Disorder Not Otherwise Specified. However, it will be formally recognized as a distinct eating disorder diagnosis with the publication of the fifth edition of the American Psychiatric Association's Diagnostic

and Statistical Manual of Mental Disorders (DSM-V), to be published in 2013. BED is characterized by recurrent binge eating without the regular use of compensatory measures to counter the binge eating.

In addition, there are some *unofficial* terms, some of which have been popularized by the media that are sometimes used in the sports community:

- **Anorexia athletica:** a term used for sub-group of athletes with eating disorder symptoms that do not permit a diagnosis of anorexia nervosa or bulimia nervosa to be made and would therefore fall within EDNOS.
- **Orthorexia nervosa:** a term used to describe individuals who take their concerns about eating "healthy" foods to dangerous and/or obsessive extremes.
- **Diabulimia:** the manipulation of insulin by diabetics for the purpose of losing weight.
- **Drunkorexia:** self-imposed starvation or bingeing and purging, combined with alcohol abuse.

While **anorexia nervosa** and **bulimia nervosa** are terms most people have heard of, there is a growing body of research that points to the destructive consequences of **disordered eating**. An athlete may not meet the criteria for full-blown anorexia nervosa or bulimia nervosa, but his/her habits and patterns can negatively affect performance, team dynamics, and health.

Disordered eating may consist of food restriction, excessive avoidance of certain types of food, or consuming fewer calories than needed for basic daily functions and sports activity. Disordered eating may include bingeing and purging, the abuse of medicines and supplements, such as laxatives, diuretics, stimulants, and appetite suppressants. Athletes suffering from disordered eating can experience chronic and substantial distress and impairment.

We know that some people can be **genetically more susceptible to anorexia nervosa and bulimia nervosa** than others. However, there are many people who suffer from disordered eating who do not have this susceptibility.

A word about **obesity**: The increased attention on the high rate of obesity in America has raised some troubling questions. While reducing childhood obesity is an important goal, it needs to be done in a manner that does not increase risk for eating disorders and weight stigmatization, or provoke anxiety among children about weight, size and shape. Try to shift the paradigm to promote health and fitness rather than a desirable size or shape. For more information on this topic, read the Academy for Eating Disorders' [position paper on childhood obesity prevention programs](#).



Eating disorder signs and symptoms specific to an athletic setting



Compiled for the National Eating Disorders Association by Whitney Post, Women's Sports Foundation's GoGirlGo! Boston Director and Kathryn Ackerman, MD, MPH

As coaches and trainers, you are on the front lines of your athletes' lives, and often the first to notice subtle changes in mood, behavior and performance that may indicate an eating disorder. The following information will help you more readily identify an athlete with an eating disorder and know what steps to take to address the problem.

It is important to identify disordered eating or an eating disorder as soon as possible, as early detection is one of the best predictors of full recovery. Including the athlete's parent or guardian in a discussion about this is recommended. The longer an eating disorder persists, the more difficult the recovery. Another reason for early intervention is that if not addressed early on, disordered-eating habits can become pervasive on a team.

Symptoms you may notice include

- Decreased concentration, energy, muscle function, coordination, speed
- Increased fatigue and perceived exertion
- Longer recovery time needed after workouts, games, races
- More frequent muscle strains, sprains, and/or fractures
- Slowed heart rate and low blood pressure
- Reduced body temperature and being sensitive to cold—cold hands and feet
- Complaints of light-headedness and dizziness, abdominal pain
- Poorer interaction with coaches/teammates
- Perfectionism
- Increased impatience, crankiness
- Increased isolation
- Difficulty with days off and tapering
- Avoidance of water or excessive water intake
- Preoccupation with one's own food
- Preoccupation with other people's food
- Ritualistic eating and/or avoidance of certain foods
- Excessive concern with body aesthetic
- Prolonged or additional training above and beyond that required for sport (e.g. extra sit-ups and laps, extra workouts)
- Athletes on the team reporting concern about an individual

Athletes may also work very hard to hide their struggles. Personality shifts may occur, ranging from being more withdrawn and isolated to acting excessively upbeat in an attempt to mask the problem.



Factors that protect or put athletes at risk for eating disorders



Listed below are recognized risk factors to be watchful for in the athletic environment, as well as protective factors to be promoted:

Specific sports that can create risk for developing an eating disorder

- Gymnastics, swimming, diving, rowing, bodybuilding, and wrestling, because athletes must “make weight” or maintain a certain body size to stay competitive.
- Aesthetic or endurance sports such as gymnastics, figure skating, dance, diving or track and field because they focus on appearance and on the individual rather than on the entire team.

Personal factors that may create risk for an athlete

- Inaccurate belief that lower body weight will improve performance. In fact, under-eating can lead the athlete to lose too much muscle, resulting in impaired performance.
- Imbalance between energy input and output resulting in weight loss. This is especially a risk for athletes who burn high levels of energy in their sport, such as distance runners.

- Low self-esteem or self-appraisal, dysfunctional interpersonal relationships, a genetic history of eating disorders/addiction, chronic dieting, history of physical or sexual abuse or other traumatic life experiences, peer and cultural pressures to be thin.
- Coaches who focus only on success and performance rather than on the athlete as a whole person.
- Performance anxiety, fear of failure. Athletes who feel they are not performing at their peak capability may turn to altering their body composition to bridge the gap. If no improvement in performance results, they may believe they didn't lose enough weight or body fat they may step up their efforts even more.
- Social influences, including family and peer pressure about athletic ability and performance.

Factors that protect athletes from developing eating disorders

- Positive, person-oriented coaching style rather than negative, performance-oriented coaching style.
- Social influence and support from teammates with healthy attitudes towards size and shape.
- Coaches who emphasize factors that contribute to personal success such as motivation and enthusiasm rather than body weight or shape.

SOURCES:

Karin Kratina, MA, RD

Leslie Bonci, MPH, RD, CSSD, (2009) Sport Nutrition for Coaches, Champaign, IL, Human Kinetics, pp. 148-149.



The physiological impact of eating disorders on athletic performance



The physiological impact of an eating disorder is related to its severity and duration, as well as the athlete's overall health, body stature and genetics.

An appropriately lean physique allows athletes to maximize speed. Yet often athletes are not taught that ideal body fat levels are not a one-size-fits-all formula. The athlete's own body type, genetics, and fitness level should all be considered. It is important to convey to athletes that a thin athlete is not necessarily a strong athlete. In fact too much weight loss can result in the athlete's loss of power and strength.

An athlete suffering from an eating disorder may suffer from the following physiological conditions:

- Fatigue
- Malnutrition
- Dehydration
- Electrolyte imbalance
- Osteoporosis
- Loss of endurance
- Loss of coordination
- Loss of speed
- Muscle cramps
- Overheating

Athletes often strive for a low level of body fat, and in the case of women, even levels that are too low to support monthly periods. The result is what is known as The Female Athlete Triad (*See pp. 7–8 for more on the Female Athlete Triad.*) It is important that you help educate your athletes so that their goal body-fat composition and physiques are both realistic and healthy.

Even short-term weight loss can hurt performance

Some athletes may only engage in eating-disordered behaviors during their competitive season. Even a short period of weight loss, though, will often result in a decrease in water weight, and this can leave the athlete dehydrated. When athletes in weight-class sports restrict carbohydrate intake to make weight goals, they may suffer a decline in strength, speed, or stamina. Tell your athletes that restricting fluid or food intake to make weight does not optimize performance, and in fact can hurt it.

Medical problems that can arise from specific eating disorders

Although the following medical complaints may not all affect athletic performance they are further signs that an athlete may be suffering from an eating disorder and is in a compromised medical state.

SOURCES:

Ryan, Monique, *Sports Nutrition for Endurance Athletes*, Velo Press, 2007.
Bonci, Leslie, MPH, RD, CSSD, *Human Kinetics*, 2009.

ANOREXIA NERVOSA

- Heart failure. This can be caused by slow heart rate and low blood pressure. Those who use drugs to stimulate vomiting, bowel movements, or urination are also at high risk for heart failure. Starvation can also lead to heart failure, as well as brain damage.
- Brittle hair and nails; dry skin. Skin may dry out and become yellow, and the affected person can develop a covering of soft hair called lanugo.
- Mild anemia
- Swollen joints
- Reduced muscle mass
- Osteoporosis

BULIMIA NERVOSA

- Erosion of tooth enamel from the acid-produced by vomiting
- Inflammation of the esophagus (the tube in the throat through which food passes to the stomach)
- Enlarged glands near the cheeks (giving the appearance of swollen cheeks)
- Damage to the stomach from frequent vomiting
- Irregular heartbeat
- Heart failure
- Electrolyte imbalances (loss of important minerals like potassium) that can lead to sudden death
- Peptic ulcers
- Pancreatitis (inflammation of the pancreas, which is a large gland that aids digestion)
- Long-term constipation

BINGE EATING DISORDER

- High blood pressure
- High cholesterol
- Fatigue
- Joint pain
- Type II diabetes
- Gallbladder disease
- Heart disease



The Female Athlete Triad

By Kathryn Ackerman, MD MPH



The Female Athlete Triad (the Triad), a term coined in 1993 by the American College of Sports Medicine, refers to a syndrome commonly seen in athletic women. It involves the interrelated symptoms of **disordered eating, menstrual irregularity and low bone mass**. Although the exact prevalence of the Triad is unknown, studies have reported disordered eating in up to 62% and amenorrhea (absence of menstrual cycles) in up to 66% of female athletes.

The idea of the Triad has evolved to include different stages of a continuum, on which many of our athletes live. At one end of the spectrum are athletes with mildly disordered eating (e.g. missing certain nutrients, skimping on calories), who have irregular periods (oligomenorrhea) and/or possibly experienced a stress fracture. At the other end are women who have eating disorders such as anorexia or bulimia, have long-standing amenorrhea, and have bone density in the osteoporosis range. Low bone mass results in bones that are easily fractured. For an athlete, besides being painful, such injuries can impair or even put an end to a promising athletic future.

The interrelationship between food intake, menstrual dysfunction, and poor bone health is still being elucidated. In general, when an athlete eats too few calories, it causes brain hormone levels to change, disrupting signals to the ovaries to produce estrogen, which helps build and maintain bones. Studies are being done to find safe treatments for severe cases, but for now, a safe and proven method of restoring health is diet and exercise modification.

This is particularly important in adolescent girls, as 90% of peak bone mass is attained by age 18, with only mild gains up to age 30. This means that disrupting the menstrual cycle during adolescence and early adulthood has a profound effect on bone health. If caught early, however, some of the deleterious effects of the Triad on bone may be corrected. Through their 30s, women's bone density tends to plateau if diet and exercise are adequate. Bone density then declines abruptly around menopause and usually remains on a modest decline through the rest of the lifespan. If young female athletes begin good habits early, their peak bone mass is expected to be higher than their sedentary counterparts, thus greatly reducing the risk of osteoporosis later in life.

Causes of the Triad

- **Competitiveness and perfectionism:** competitive athletes rely on precision and “perfect” execution of planned movements, behaviors, and training rituals in order to succeed and win. For athletes who believe lower weights will lead to faster times or better performance, these instincts can lead to a dangerous degree of food restriction.

- **Psychosexual implications of being a female:** Most athlete role models are men (with the exception of aesthetic sports such as dance, cheerleading, synchronized swimming). The female athlete may feel more pressure to masculinize her body and become more muscular. She may also seek to avoid menstruation, with its inherent cyclical fluctuations affecting her body and mood, since stability, consistency, and control are important for athletic performance and success.

How do you detect the Triad?

The signs and symptoms of Triad are very broad, and involve all of its three components: eating and exercise habits, menstrual irregularity, and poor bone health.

Disordered eating (See “Types of Eating Disorders,” p. 3 for more information.)

Menstrual irregularity is not usually detectable by a coach, but it is important to let your athletes know that missing menstrual cycles is not normal and they should feel comfortable going to student health or a specialist to have this addressed. Missed cycles in athletes are not always an indication of the Triad, so it is important to have the athlete evaluated by a doctor for other medical problems that may cause amenorrhea (e.g. polycystic ovarian syndrome, pituitary tumor, etc.). This evaluation involves various laboratory tests and sometimes imaging. Once other causes are ruled out, treatment can proceed with dietary and exercise adjustments.

It is important to keep in mind that women taking oral contraceptive pills (OCP) who get their monthly cycle may still have a hormonal imbalance. While getting some estrogen from “the pill” is likely better than none, the pill does not reproduce the same fluctuations in hormones that a natural cycle creates, and so bone formation and maintenance can remain compromised. Simply masking and/or treating underlying hormonal irregularities do not correct the underlying condition. It may be a temporizing measure, but not a long-term solution.

Low bone mass may manifest as stress fractures, or full fractures (e.g. in a long bone such as the tibia or fibula, or as a compression fracture in the spine). While some stress fractures are secondary to overuse and sports technique (such as an uneven running gait), they often are early signs of low bone density. Other low bone mass risks include a history of malabsorption (e.g. Crohn's disease, ulcerative colitis, celiac disease), low calcium and/or vitamin D intake, excessive alcohol consumption, steroid use, and those with either or both of the other two aspects of the Triad. Low bone density can be detected by a dual x-ray absorptiometry (DXA) scan.



Female Athlete Triad patient sample scenarios and how prevent or respond to them:

- A college freshman cross-country runner increases her mileage abruptly but does not increase her caloric intake to compensate for increased training. She is also experiencing stresses in school. She suffers a tibial stress fracture
 - Changes in routine and new stresses, both mental and physical, can take a toll on an athlete. Talk to new team members early on about the changes they may experience and how to cope with them. If you know an athlete is under mental or physical stress, encourage her to make use of your school's counseling services and/or suggest sports nutrition counseling, both of which can help alleviate the need for coping mechanisms such as restrictive eating habits.
 - Prevent this situation by gradually increasing training during the preseason, as well as encouraging dietary adjustments to account for the increase in caloric expenditure.
 - Send the athlete to a medical professional to assess her fracture as well as review her diet, menstrual history, and fracture history. A doctor may decide a DXA scan is warranted, depending on other risk factors present.

- You overhear some seniors on your high school volleyball team discussing one of their teammates, who has never gotten her menstrual cycle.
 - Send the athlete for a medical evaluation. No cycle by the age of 16 is considered primary amenorrhea (versus secondary amenorrhea, where a female has begun menses that later stop).
 - If a medical cause such as a tumor or polycystic ovarian syndrome is discovered, it can be managed by a doctor such as primary care doctor, endocrinologist, or ob/gyn.
 - If delayed menses due to extreme exercise and/or diet (the Triad) is diagnosed, the athlete's physician and a dietitian should address the problem immediately, as she is missing important estrogen exposure and dietary support for skeletal development and bone density.

What are the Triad treatments?

Therapy for the Female Athlete Triad involves a multidisciplinary approach that includes coach, parents, medical professionals, psychological support (e.g. psychiatrist, psychologist, therapist), and sometimes teammates.

The basis of all Triad treatment is diet and exercise modification. The athlete needs to gain an understanding of the relative number of calories she is burning and the types of nutrients her body needs.

She may also need counseling to help resolve the underlying causes of her disordered eating habits. Are there body image concerns, stresses at home, competitive drives that are misdirected? Often Triad issues can spread from one member of a team to another, so addressing Triad issues generically to the group without betraying a specific athlete's trust by sharing personal information can be helpful to open a dialog. Having professionals speak to your team when you are not in the room can often facilitate a more honest conversation.

At the extreme end of the Triad spectrum, some medicines may help, such as anti-depressants, hormonal pills, and osteoporosis medicines. The most important help you as a coach can provide is to recognize the warning signs and know where to go to for help.

SOURCES:

American College of Sports Medicine (ACSM) (2007). Position stand: The female athlete triad. *Medicine & Science in Sports & Exercise*, 39(10), 1867-1882.

Beals, K.A. and N.L. Meyer, Female athlete triad update. *Clin Sports Med*, 2007. 26(1): p. 69-89.

Kimberly Dennis, PhD, medical director, Timberline Knolls residential treatment center.

Ron Thompson, PhD, FAED, psychologist, private practice in Bloomington, IN, specializing in the treatment of eating disorders, co-author, *Eating Disorders in Sport* (Routledge, 2010)

<http://www.femaleathletetriad.org/>



Encouraging healthy and appropriate exercise and training for athletes



Successful athletes are motivated by a desire to excel. Proper coaching can build on this motivation by helping young people develop good training habits, hone technical skills, and work as part of a team. Because top athletes are often driven perfectionists, however, it is not uncommon for them take practices and workouts to unhealthy extremes. Such behavior can mark the first steps on the road to an eating disorder. Initial weight loss after beginning a sport is not uncommon. If the athlete resets weight goals to a lower weight, however, or weight drops to a level lower than necessary for adequate sports performance, be vigilant; those can be signs of trouble. Other signs and symptoms that bear watching:

- Training more than coach recommends
- Overuse injuries
- Muscle weakness
- Exercising seemingly without enjoyment
- Training in dangerous situations, such as running alone at night or when injured or sick
- High level of anxiety when unable to practice or train
- Frequent weighing
- Negative comments about weight or being “fat”

The following are tips on how to promote healthy and appropriate practices and workouts among your athletes.

- Tell your athletes that several factors can improve their athletic performance—genetic gifts, muscle mass and motivation among them—but that these can have an even greater effect when teamed with good nutrition and proper hydration.
- Remind athletes that sports should be for fun, fitness, and healthy competition. Additional reasons to participate or compete include improved health and learning to be a team player.
- Promote realistic goals to avoid physical and mental burnout. Motivate your athletes to make the most of their ability and their sport experience by encouraging good nutrition and healthy training.
- Encourage athletes to view sports as a lifetime pursuit, which means caring for their bodies over a lifetime. Remind them that they have only one body, so it behooves them to take good care of it.
- Healthy and appropriate exercise should improve your athletes’ alertness and ability to relax, not exhaust them.
- Encourage flexibility in scheduling workouts and training sessions. Athletes need to stick to a regular practice schedule but sometimes unforeseen events occur, and missing a practice or two is inevitable. Encourage your athletes to strive for balance between exercise and other activities, and also between exercise and eating.
- Encourage athletes to learn how to do their chosen activity properly, and to rely on you, their coach, trainer or other trusted sources for information.

SOURCES:

“Healthy Within” http://www.healthywithin.com/athletes_and_ed.htm From *Eating Disorders: The Journal of Treatment and Prevention*, Vol. 7, No. 3 Written by Pauline Powers, MD

Powers, Pauline, & Thompson, Ron, “The Exercise Balance,” Carlsbad, CA: Gurze; 2008.

Thompson, Ron, & Sherman Robert, “Eating Disorders in Sport,” New York: Routledge, 2010.

How Did This Happen?: A Practical Guide to Understanding Eating Disorders, Park Nicollet Health Services, second edition, 2006.



Eating disorders prevention and the middle or high school athlete



Lois M. Neaton, PT, is a physical therapist who has worked with many young eating-disordered athletes. Because athletes are now being groomed at a younger age for varsity sports, Neaton believes it is important to start thinking about prevention at the middle school level. Here is her advice to coaches and trainers of young athletes:

- The more activities a child is exposed to, the broader his or her physical and mental development will be. Instead of locking the sixth grader into basketball year round, keep your eyes open to the actual interests of the child. Explore lots of different activities.
- When girls who are in 8th grade are being invited to participate on varsity sports, especially in speed sports such as cross country or skiing, you are putting the burden of a high level of training on an immature skeleton. Be aware of this, as well as the social aspect of putting a middle schooler in with high school athletes, and adjust your demands accordingly.
- Younger team members may worry that although they are fast now, going through puberty will slow them down. Reinforce that it is normal for athletes to have menstruation and growth for a healthy life.
- Be observant. Are your athletes developing? Some of the kids I see have not grown in a year; an athletic 13-year-old who is losing weight when she or he should be growing is a travesty. When the gang is going out for pizza, do your players all eat? What is the conversation about at the table? In the locker room?
- Get to know your athlete outside of your sport. When I ask eating-disordered athletes “what would have made a difference?” this is the comment I hear most often: “My coach has no clue about the rest of my life.” Do you know their other life interests? Do you know their parents or guardians?
- Give every player equal attention and meet with them individually at the beginning of the season. Make direct eye contact when you speak to them, if culturally appropriate. Find out what they want to work on. Make training about succeeding both in their sport and in their life beyond sport. Often it is the players who feel overlooked who are overachieving; they want to be noticed.
- Be specific and precise in defining your expectations. Instead of telling a player “run on the weekends,” or “don’t eat junk food,” spell out exactly what you mean. There is going to be the kid who decides, “if it’s not organic, it’s junk,” or the kid who decides he needs to run 5 miles, or 20 on the weekends
- Be vigilant if you have an athlete who is always doing “extra.” He or she is the one who, whenever everyone else is doing 5 laps, is doing 6.
- Tell your athletes what “going too far” means. Give them limits.
- Respect your athletes’ bodies and teach them to do the same. If a coach says, “This is the point in training where you are going to feel nauseous,” kids believe this is the gold standard of training. Help them know what overtraining looks like and how to avoid it.
- Be clear about the need for sleep and rest days and explain how it improves performance.
- Follow up on any injuries. Shin splints and stress fractures should not be shrugged off as an expected hazard of a runner.
- Coaching should be about performance, not perfection. Explain that it’s not about weighing 10 pounds less; it’s about extending the foot another half inch to get that extra speed, or ways to strengthen mental focus.
- Many athletes get so hooked on the cardio aspect of their sport they are afraid of bulking up through strength training. Explain that core training will not make them overweight, but stronger competitors. Challenge their perception of the ways they can excel, beyond just speed or weight.
- Know when to drive a point home in the heat of the moment, but balance that with hanging back and getting your athletes’ feedback when possible. Remember building mutual respect is the foundation of a healthy coach-athlete relationship.
- If you have concerns about nutritional support, act on your instincts and seek professional help. Focus on guiding the athlete to outside resources, and make those available.
- Be aware of your own food and fitness attitudes and behaviors. If you are struggling in these areas, keep those struggles to yourself both in word and in deed before your athletes.



Early intervention



The potential role of the coach



The potential role of the coach

As a coach or trainer, you play a significant role in the physical and psychological health of your athletes. You are a key figure in creating training environments conducive to successful athletic performance as well as emotionally rewarding sport experiences. Often it is coaches or trainers who first notice physical changes or shifts in unhealthy attitudes and behaviors, before friends or even family do. If you think an athlete might be at risk for disordered eating or in the midst of an eating disorder, you are in a position to help. Remember to involve the athlete's family members whenever appropriate. Take warning signs and eating-disordered behaviors seriously. Cardiac arrest and suicide are the leading causes of death among people with eating disorders.

What should you do if you are concerned about an athlete?

Don't try to manage the situation alone! People and resources to involve:

- **Health Services at your school.** (Ideally there is a designated physician or nurse who is educated in these matters.) They can help by:
 - Connecting the athlete with a doctor for examination
 - Monitoring an athlete for weight and vital signs
 - Weighing in athletes for weight-restricted sports
 - Giving a talk to your team
- **Mental Health Services.** (Psychology/psychiatry/social work.) They can help by:
 - Connecting the athlete with a therapist
 - Talking to the team if there is a designated specialist
 - Informing you of the school's policy on eating disorders
 - Aid in handling athletes who refuse to seek treatment or address the problem
- **Nutritionists.** They can help by:
 - Giving an athlete a meal plan
 - Talking to the team about healthy eating for performance
- **Trainers.** They can help by:
 - Having a good enough rapport with athletes to sit a player down and express concern
 - Giving a talk on the importance of nutrition in strength and endurance building



Tips on how to positively intervene



- Approach your athlete sensitively and in private, while being as direct and straightforward as possible; cite the evidence you see for disordered eating, the impact of his or her behaviors on both individual and team performance, while also expressing your concern for the athlete's health and well-being.
- Do not judge or criticize your athlete. The goal is to help the athlete tell his or her parent/caregiver about the disordered eating, if he or she has not already done so.
- Seek help as soon as possible. Make a prompt and appropriate medical referral to a healthcare specialist familiar with treating eating disorders (e.g., physician, therapist, eating disorder specialist, or dietitian). Voice your concerns to a responsible family member or caregiver and to the school's student assistance program or health services. Early detection increases the likelihood of successful treatment, as well as decreases the likelihood of serious or long-term medical and psychological consequences; left untreated a problem that begins as disordered eating may progress to an eating disorder.
- Encourage your athlete to seek treatment. Ideally, an athlete can stay involved in his or her sport while seeking treatment; however, when physical health is at risk, be prepared to encourage the athlete to abstain from participation until given a doctor's permission to return to sport participation. Consider the whole person when making decisions about an athlete's level of participation in sport: physical and emotional/mental health.
- If your athlete is noncompliant with treatment recommendations, consult with the treatment team about suspending participation until the athlete is willing to comply. This course of action may seem harsh. Tell the athlete that the suspension may feel like a punishment but is actually a protective action to guard against possible physical and psychological harm. It is a communication that says that health is more important than sport. Even though this communication is a positive one, it still should be approached cautiously. Reassure the athlete that his position on the team will not be jeopardized by seeking treatment.
- Be open and cooperative with the treatment team. The most effective treatment for an eating disorder is to utilize a collaborative treatment approach consisting of a team of health professionals (e.g., physician, therapist, dietician, etc.). As a coach, your support of, trust in, and cooperation with, the team's treatment plan will be critical to your athlete's successful recovery.
- As a coach, your involvement and positive communications are very important for your athletes. Be a source of support. Try to maintain open lines of communication with athletes dealing with eating issues and support them in their recovery. Ask what they need, what might be helpful in their recovery. Be as sensitive and understanding as you can. With adolescent athletes, be alert to changes in self-esteem that can make their recovery effort more difficult.

Sample conversation with an athlete you are concerned about

"Sarah, I really value you as a team member and appreciate x, y, and z about you. I am concerned because I have noticed you are having a hard time focusing, you aren't as social with your teammates, and I'm worried that you are becoming overly restrictive in your eating and are training to the point of diminishing returns. I think you could really benefit from seeing a nutritionist and someone at health services for an evaluation to determine if there is a problem. Would you be willing to explore this idea with me?"

Make it clear to the athlete that you are concerned, that the conversation will not stop here, and that you will be taking your concerns further. The athlete may agree or may deny that there is a problem. Either way, as a coach you can be helpful. If he/she denies a problem, simply say that you hope he/she is correct, but that the only way to know for sure is to be evaluated by an appropriate healthcare professional. Tell the athlete that you hope the evaluation indicates that there is no cause for alarm. In that case, you as the coach and everyone concerned about him/her will breathe a sigh of relief. Add, however, that if the evaluation indicates a problem, you very much want the athlete to seek appropriate treatment.

If an athlete continues to deny a problem and refuses to get help, options include contacting your school's psychological services or an eating disorders specialist to guide you through the next steps. Sometimes withholding sport participation until the athlete has been evaluated will motivate him or her to have the evaluation. Withholding such participation indicates to the athlete that his/her health is more important than sport participation. An evaluation should also include a decision regarding whether training and competition can continue without increasing the risk to the athlete. That decision is made by the treatment team and can be adjusted as necessary as the athlete's treatment progresses.

It is important for you, the athlete, the parents, and the team to realize that there are resources and support networks to help. *(For more on this topic, see How to approach an athlete on your team whose eating behaviors are disrupting the team, p. 26.)*



Tips on how to provide a healthy sport environment conducive to recovery



- Provide athletes and their families with accurate information on eating disorders as well as healthy weight, good nutrition (and the impact of bad nutrition), and sports performance. Information should include common myths about eating disorders and challenges to unhealthy practices but should not emphasize specific eating disorder symptoms. Such an emphasis can actually make athletes aware of pathogenic weight control methods that they might then try. Stay with the positives of good nutrition and health.
- If you have access to a dietitian who specializes in treating eating disorders, ask her or him to speak to your athletes about healthy eating to maximize performance. For the eating-disordered athlete, a dietitian can provide a meal plan and nutritional counseling.
- Make use of your school's mental health services, if available. They can help by connecting your athlete with a therapist; assigning a specialist to talk to the team; informing you of the school's policy on eating disorders, and aiding in handling athletes who refuse to seek treatment.
- Make use of local health professionals with expertise in eating disorders and athletics who can help educate athletes. Consider posting a referral sourcebook listing centers where they can seek help; they may be more comfortable first addressing the issue on their own, outside of school. Keep this list available for you to use when discussing the need for evaluation and treatment with an athlete. A referral to a specific person you have recommend is more apt to be accepted.
- Be aware of and banish negative messages your sport environment communicates about weight/size/appearance and dieting to your athletes. This will create a healthier environment for your disordered eating athlete and aid in preventing relapse and future cases.
- Emphasize the health risks of low weight, especially for female athletes with menstrual irregularities or who have stopped having periods completely. Refer athletes for medical assistance in these cases.
- Be especially vigilant if your sport is high-risk for the development of disordered eating (e.g., sports with weight classifications, aesthetic judging or endurance variables). Work especially hard to counter triggering messages.
- Be aware of possible discomfort on the part of your female athletes regarding their uniforms. Some sport attire is revealing, either in terms of their form fitting nature or in amount of skin exposed. Such uniforms may increase body consciousness and body dissatisfaction, as well as facilitate unhealthy body comparisons.
- Pay attention to your own comments and behaviors about size/shape, as well as those of team members, especially body comparisons between/among athletes. Eliminate derogatory comments or behaviors about weight—no matter how subtle, light, or “in good fun” they seem. Understand your role in promoting a positive self-image and self-esteem in your athletes.
- Coaches should strive not to emphasize weight for the purpose of enhancing performance, for example by weighing, measuring body fat composition, encouraging dieting or extra workouts. Even the slightest comment, direct or indirect, made by an influential coach to an athlete suggesting that the their weight is too high can motivate an athlete to engage in unhealthy dieting behaviors. Performance should not come at the expense of the athlete's health.
- In sports where weigh-ins are required, such as wrestling or crew, they should be done in an open and transparent manner, in a supportive environment where athletes are provided nutrition and eating disorders prevention education. Athletes should understand that engaging in eating-disordered behavior will not be tolerated.
- Discourage dieting, which is the primary precursor to disordered eating. Being stuck in a pattern of disordered eating can create mental and emotional turmoil. This can easily offset any potential performance enhancement that might be achieved through a reduction in body weight or fat.
- Look for ways of enhancing performance that do not focus on weight, for example strength, endurance and physical skills training, as well as mental and emotional aspects of performance.
- Enlist the help of trainers, who often have good rapport with athletes, and may be the best person to first sit an athlete down to express concerns. Qualified trainers may also be able to talk to athletes about the importance of nutrition in strength and endurance training.
- Avoid comparing athletes' bodies to one another, especially if the athlete of comparison has an eating disorder. This kind of dialogue can trigger “competitive thinness” in some athletes.



Confidentiality issues



Issues of confidentiality can be difficult when dealing with disordered eating in athletes. You may seek accurate information about the health and well-being of your athlete and find you are not allowed access to the same information (medical records) or disclosure as that of legal guardians. Here are some tips on how to fulfill your job as coach while honoring confidentiality:

- Familiarize yourself with HIPAA (the 1996 Health Insurance Portability and Accountability Act), which protects the privacy of insured patients. Healthcare professionals are not at liberty to talk with you about an athlete's condition because they are legally and ethically bound to protect confidentiality. Confidentiality is important because it allows the athlete to be honest with their treatment team, knowing that a provider can only release information to others with the written consent of the athlete.
- Consider drafting a contract with your athlete and your athlete's treatment team detailing the specifics of what the athlete feels comfortable sharing with you and what they do not; however do not pressure them to do so. Do not be dismayed if they prefer to keep their treatment/recovery private. This may be important to their recovery. Most athletes are willing to share "treatment progress" with their coaches, but less open to sharing information related to more personal issues. If the athlete is a minor, this contract must be drafted with parental consent.
- Be willing to communicate your thoughts/observations to the treatment team even if you are not formally included in the treatment planning. This can be tough for a coach, especially if you feel you know your athlete well. Often, however, you may have important information for the treatment team on the health of your athlete and it is important to convey that, invited or not. Even though the healthcare professionals treating the athlete cannot talk with you about his/her condition or treatment, they can listen to what you have to report.
- Be accepting and understanding of the complexities and challenges of treating an eating disorder. Encourage and support appropriate treatment.

A useful resource for coaches who have an athlete with an eating disorder is the [NCAA Coaches Handbook: Managing the Female Athlete Triad](#).

SOURCES:

- Carlin M. Anderson, PhD
Whitney Post, Boston Director, GoGirlGo!
Kathryn Ackerman, MD, MPH
Chopak, J. S., & Taylor-Nicholson, M. (1991). Do female college athletes develop eating disorders as a result of the athletic environment? In: D. R. Black. (Ed.). *Eating disorders among athletes: Theory, issues and research*. Reston, VA: American Alliance for Health, Physical Education, Recreation, and Dance, 87-95.
Garner, D.M., Rosen, L.W. & Barry, D. (1998). Eating disorders among athletes: Research and recommendations. *Child & Adolescent Psychiatric Clinics of North America*, 7, 839-857.
Johnson, M.D., (1994). Disordered eating in active and athletic women. *Clinical Sports Medicine*, 13, 355-369.
Rosen, L.W. & Hough, D.O. (1988). Pathogenic weight-control behaviors in female college gymnasts. *The Physician & Sportsmedicine*, 16, 141-144.
Rosen, L.W., Mckeag, D.B, Hough, D.O, & Curley, V. (1986). Pathogenic weight control behavior in female athletes. *The Physician & Sportsmedicine*, 14, 79-86.
Ryan, R. (1992). Management of eating problems in athletic settings. In: Brownell K.D., Rodin, J., Wilmore, J.H., (Eds.) *Eating, Body Weight, and Performance in Athletes: Disorders of modern society*. Philadelphia, PA. Lea & Febiger, 344-362.
Sherman, R.T. & Thompson, R.A. (2001). Athletes and disordered eating: Four major issues for the professional. *Psychologist, Professional Psychology: Research & Practice*, 32.27-33.
Sundgot-Borgen, J. (2002). Disordered eating. In: Ireland, M.L, Nattiv, A. (Eds.) *The Female Athlete*. Philadelphia, PA. WB Saunders, 237-247.
Sundgot-Borgen, J. & Bahr, R. (1998). Eating disorders in athletes. In: Harries, M., Williams, C., Stanish, W.D., Micheli, L.J., (Eds.) *Oxford Textbook of Sports Medicine*. New York, NY. Oxford University Press, 138-152.
Thompson, R.A, & Sherman, R.T. (1993). *Helping Athletes with Eating Disorders*. Champaign, IL. Human Kinetics, 123-146.



Replace negative weight talk with fueling education, two-way communication



COACHES' OWN STORIES

Talking with:

Joshua D. Adam, Assistant Coach,

Women's Rowing, Indiana University

Like long-distance running, rowing emphasizes athletes who are very tall, very lean and yet extremely powerful. Not surprisingly given these demands, eating disorders can become a serious problem among lightweight and open-weight rowers.

"Lightweight women have to be very, very careful about how much food they take in, and whether they are taking in enough food," says Joshua D. Adam, assistant women's rowing coach at Indiana University. "They get extremely careful about food intake, almost always to a fault." (Although women's lightweight rowing is not an NCAA sport, many schools field varsity lightweight women's rowing teams.)

The nature of the sport puts enormous pressure on coaches to be vigilant to signs of eating issues on their teams and to promote healthy eating. Adam explains that while the calorie needs of rowers are enormous, many athletes don't know how to fill those needs, and how much food is enough.

"Talking openly and candidly about fueling gives the athlete an opening to say, 'Hey coach, I don't think I'm getting enough food,' or feeling comfortable saying, 'I eat three bowls of cereal a day, is that enough?'" says Adam. "Sometimes it just comes down to ignorance."

A rigorous week of training, for example, might include a 20-minute morning warm-up followed by 12 kilometers of high-intensity rowing, 10 minutes cool-down, then a 50-minute afternoon weightlifting session of mid-weight, high-repetition sets. "The caloric expenditure for a workout like this could go as high as 1,800 calories," explains Adam. "Add that number to a person's basal metabolic needs and you have a large demand for calories that some athletes just do not fulfill."

Emphasizing proper fueling to create a healthy, high-performing athlete can take the place of negative talk about weight. Comments such as, "Well, we might be moving faster if you weren't so big," can cause the athlete "to get stuck inside their own head," and body image issues can take over the athlete's thoughts, Adam warns.

One athlete Adam worked with felt safe enough to bring up her eating problems in the context of the pressure of her first year at college. Adam arranged for her to see the athletic trainer, who brought in a nurse.

"Most of the time, it's the athletic trainer who is going to be having that conversation with the athlete" and then they will inform the coach, he notes.

Blood values revealed that the athlete was experiencing kidney and liver failure due to her eating disorder. She was immediately benched and told that until her blood work improved, she would not be rowing. Adam, the athletic trainer, the nurse and the athlete's therapist all kept in close contact and put together a treatment plan.

"It was humbling from the point of view of the coach. I can't fix this so I have to be open to learning," recalls Adam. "So many times we as coaches are so controlling. We want to fix and take care of events. As coaches, we know we have to learn to stay competitive. And it helps to take on the aspect of learner: if I approach this to learn, I may keep one or two athletes I might have otherwise lost."

Another point Adam makes is that "if an athlete walks away from a very successful program and you're painted as humane, that's going to help you in recruiting. Kids are going to go back and tell their club and their old classmates, 'Hey, this is a nurturing environment.'"

Joshua Adam's tips for preventing eating disorders among athletes

- Strive to create a culture of trust on the team; open the lines of communication.
- Educate athletes on the fueling demands of your sport; emphasize good nutrition.
- Make clear a zero-tolerance policy for eating disorders.
- Set up a system where athletes come in just to chat with you at the beginning of the season.
- Approach the conversation from a caring standpoint.



No one is blaming your sport!



COACHES' OWN STORIES

Talking with:

*Keith Jefferson, Head Rowing Coach,
Seattle Pacific University*

For Keith Jefferson, it was important to come to grips with the criticism his sport has faced for its weight restrictions. “The idea that gymnastics is just evil, or that lightweight rowing should not be allowed, I didn’t buy that,” says Jefferson, head rowing coach at Seattle Pacific University. A coach for 22 years, he has seen the evolution of awareness about eating disorders over time. In the early days of eating disorders prevention activity, it was not always made clear to coaches that the risks found in the sport environment were the problem, not the sport itself.

“When I learned that this is an actual disorder,” he says, “it was a relief to know that my sport in and of itself was not evil.” He learned that anorexia, bulimia, binge eating and even eating disorders grouped under the vague term Eating Disorders Not Otherwise Specified (EDNOS) are actual mental disorders not *caused* by his sport.

“It’s important for coaches to know that right off the bat because you’re not going to be highly motivated to solve a problem when somebody tells you your sport is wrong and bad. When you start from the proper posture, you can bore down to what the issues really are,” Jefferson says. Through his university’s eating disorders awareness events, Jefferson has learned that our culture, which glorifies thinness and sets up unrealistic body ideals for both women and men, has a lot to do with triggering eating disorders. He realized that the problem was bigger than just sport. “There’s an epidemic going on in our dorms,” he notes, and not just among athletes concerned about meeting weight restrictions.

Jefferson has also learned from experience that disordered eating and eating disorders don’t just materialize when an athlete joins his team. In every case he’s seen among athletes, he says, “there was to some extent a pre-existing condition”—psychological, social, or relational—that would “eventually reveal itself” in the team setting.

“Once you have the context” of eating disorders right, Jefferson notes, “you can deal with the problem at its basis rather than trying to fiddle around with the symptoms. That was helpful for me. It allowed me to get over the fear of eating disorders, because when you see it for the first time on a team, the coach’s first reaction is often one of fear: You’re responsible for these athletes, and when you spend enough time with them, you love them.”

Jefferson likens the discovery that an athlete on his team is struggling with an eating disorder with experiences he has had dealing with a difficult athlete whom he later learned suffered from ADHD (attention-deficit/hyperactivity disorder). “When I found that out, I was suddenly relieved, I could understand why he or she was giving me these weird behaviors. Instead of getting mad, I could put it into context.”

Keith Jefferson’s tips for dealing with a weight-based sport:

- Be clear with athletes that in a sport like rowing that is a performance sport, not a skill sport, you might be able to hide an eating disorder for a short while, but the performance degradation that will result from poor nutrition and fueling habits will eventually make disorders apparent. If the treating doctor advises it, the eating-disordered athlete should be relegated to the bench as the athlete, coach and the treatment team work together to meet treatment goals.
- Make sure your team captains are well-informed about the dangers of eating disorders, are in agreement with you that there is no place on the team for such disorders, trust you and are trusted by their teammates. Have them monitor team members who you think may be at risk.
- Focus on performance from a health and nutrition perspective rather than from a weight perspective.



Preventing eating disorders among dancers



COACHES' OWN STORIES

Talking with:

Kate Thomas, Director, The School at Steps Dance School, New York City

About three years ago, we had an outbreak, almost an epidemic of eating disorders. Almost every other day, it seemed, a teacher would come in and say, "I want you to come in and look at this kid." Girls who left in the spring rosy cheeked would come back gaunt, with their shoulder blades sticking out. Of course, their friends' reaction was, "You look so great," which was completely supportive of this behavior. In some cases, I had to contact the parents because the child was so weak.

If a student is too thin and teachers know they lack the strength and muscle to handle our rigorous programs, they will be eliminated during auditions. Parents can get defensive, but we will not let students join our program until they have reached a healthy weight. In some cases being told that being underweight will not help the child in her attempts to turn professional will trigger the motivation to get better.

Kate Thomas's tips for promoting self-esteem and healthy body image among dancers

- Never tell a dancer to lose weight. Instead, say, "There are a lot of ways to dance. Let's find a dance style that fits your body, instead of trying to force your body to fit the dance style."
- Promote the goal of "be the best that your body can be, not the best that ever walked the stage."
- Studies have shown that artists or those with artistic natures are often riddled with self doubt. Train dancers to take disappointment well. It's going to be a long haul; help your dancers learn healthy coping skills.



Coaches guide to sports nutrition

Compiled for the National Eating Disorders Association

by Andrea Kurilla, RD, LD, MPH and Marcia Herrin, EdD, MPH, RD



Coaches play an influential role in the way his or her athletes think about nutrition, body weight and the way they eat. When presenting nutritional messages avoid judgmental statements such as “good” or “bad” food. Emphasize that “all foods fit!” Athletes should never restrict their eating or be advised to eat only low-fat or fat-free foods, count their calories or lose weight. Keep information simple and remind athletes that proper nutrition is intended to prevent illness and injury, speed recovery between workouts, maintain a healthy body weight and composition, and improve performance.

Nutrition for physical activity

Athletes do not always experience the hunger cues telling them to consume enough calories to compensate for their level of exercise. Remind athletes that:

- They must have at least 3 meals a day and a snack or meal within an hour before or after exercise. Many athletes do best with 3 meals and 3 snacks a day.
- Glycogen, which the body makes from carbohydrates found in foods such as breads (bagels, granola bars) milk products (yogurt), and fruits, is the stored form of energy and primary fuel of muscles.
- Food choices before and after activity need to be tailored to individual tolerances.

Eating before practice/competition

Athletes need to remember that food and drink consumed before exercise is a source of readily available energy. Performance is compromised when energy stores are low. Recommend that:

- An hour before exercise, athletes eat a snack that is primarily carbohydrate (grain, fruit or dairy) but also includes a small amount of protein, and drink at least 1 cup of water, juice or sports drink.

Eating after practice/competition

After exercise, muscle and liver glycogen stores need to be replenished in order to repair and provide energy for future exercise. Eating within 15 to 60 minutes is the ideal time to replenish glycogen stores. Adding protein after exercise helps repair muscle, particularly after high intensity exercise. Information for athletes:

- Repairing muscle and restoring glycogen is most important when athletes have more than one training session per day or the next training session is within 8 hours.
- 15 to 60 minutes after exercise, they should eat a snack or meal that is primarily carbohydrate but also contains protein.

Snack ideas for before and after practice/competition

- Bagel or toast with peanut butter (honey or jam can be added on top of but not as a substitute for the peanut butter)
- ½ cup oatmeal with milk or nuts
- Yogurt with fruit
- 1-2 cups chocolate milk
- Granola or energy bar containing nuts, if possible
- Yogurt and granola
- Dried fruit and nuts mix

Meal ideas

- Pasta with meat or meat sauce
- Peanut butter and jelly sandwich



Hydration

Adequate hydration is critical for cooling the body and maintaining normal physiological functions. Our bodies are more physically stressed during exercise and impaired performance (i.e. decreased heart pumping capacity, slowed pace, less endurance) may result. Hydration can counter these impairments.

Symptoms of dehydration

- Thirst
- Muscle cramps
- Nausea
- Weakness
- Dizziness
- Fatigue

Tips for rehydrating

- Drink fluids regularly during exercise.
- Rehydrate after exercise.
- Good sources of fluid include water, sports drinks, juices, soups, smoothies, fruits and vegetables.
- Rehydrate following exercise by drinking enough water or sports drinks to replace fluid lost during exercise.
- For short duration (<60 minutes), low to moderate intensity activity, water is a good choice to drink before, during, and after exercise.
- Sport drinks containing 6-8% carbohydrates are good options for moderate- to high-intensity activity lasting longer than 60 minutes, especially if your goal is to replace carbohydrates and electrolytes.
- For those who experience high sodium losses during exercise, include salty foods in pre-exercise meals or add salt to sports drinks consumed during exercise.
- Replace fluid and sodium losses with watery foods that contain salt (soup, vegetable juice).
- Replace fluid and potassium losses by consuming fruits (including juices and smoothies) and vegetables.

It is not recommended that athletes calculate their sweat rate to determine the amount of fluid that should be replaced after exercise. This may put an emphasis on weight and/or weight loss from exercise. A sports dietitian can help athletes develop a personalized hydration plan that considers thirst, urine color and body weight changes if needed, especially for those who engage in high intensity or long-duration exercise in hot and humid environments.

Some athletes take advice to “eat healthy” to extremes, which can then lead to eating problems. Remind athletes that moderation is a key part of their regimen.

SOURCES:

Powers, P. and Thompson, R. The Exercise Balance. 2008, Gürze Press.

Sports, Cardiovascular, and Wellness Nutrition (SCAN) Dietetic Practice Group of the American Dietetic Association Website: <http://www.scandpg.org/factsheets.php>

Dunford M (ed). Sports Nutrition: A Practice Manual for Professionals, 4th ed.

SCAN dietetic practice group, American Dietetic Association, 2006: ISBN: 0-88091-411-4

Dunford M. and Doyle A. Nutrition for Sport and Exercise. Thomson/Wadsworth, 2008: ISBN-13: 9780495014836



Dealing with weight, weight limits, and recruiting in the athletic setting



NUTRITION STORIES

Talking with:

Marcia Herrin, EdD, MPH, RD, Founder, Dartmouth College eating disorders program and co-author, The Parent's Guide to Eating Disorders: Supporting Self-Esteem, Healthy Eating & Positive Body Image at Home

In sports where there are weight restrictions, I like the approach that one small New England liberal arts college takes. Coaches hold unscheduled, random weight checks so that an individual athlete might get weighed once or twice a season. The weight check only evokes a response from the coach if the athlete is losing weight. This approach is positive (to safeguard the health of athletes) and not punitive (to punish them for their weight); athletes know it's just a routine check that is part of being on the team.

Even in sports with no weight limits, my advice to coaches is to be so careful and circumspect about broaching the topic of size and weight that before you approach the athlete, you ask yourself whether the athlete's current body size makes them a good fit for the team. If you feel the athlete weighs too much, she may be in the wrong boat, or the wrong sport.

Weight is what it is, and it's up to the coach to position athletes appropriately, instead of having athletes strive to manipulate their weight.

Another approach for coaches to consider, if you haven't already, is to find out before you recruit an athlete whether or not that athlete has an eating disorder. Some universities simply don't recruit athletes with known eating disorders. Putting an eating-disordered athlete on a team is usually not good for the athlete, the team or the school, especially in these times of limited resources. Colleges can recruit athletes who never really compete because of their disorders and the injuries that they are more prone to.

Although eating disorders are in part genetically determined, meaning one can inherit a predisposition to them, there can also be a kind of "contagion effect," a spreading of eating-disordered behaviors among teammates. What I see even more than this, though, is the kind of stress an eating-disordered member can create on the team. I see team members really worried about a fellow athlete. They may be asked to keep secrets, or cover for the eating-disordered person in some way. This can be very anxiety-producing for team member and is another reason to carefully consider adding an eating-disordered member to your team.



Reconciling an eating disorders recovery meal plan with athletic life, the dangers of weigh-ins

NUTRITION STORIES

Talking with:

Andrea Kurilla RD, LD, MPH

One of the hardest parts of battling an eating disorder for athletes is following a meal plan when the athlete has not talked about the problem with his or her coach and teammates. Our meal plans are pretty structured and include at least one dessert a day, which helps to normalize eating and de-stigmatize forbidden or “binge” foods. Often, though, this directly contradicts the coach’s nutritional advice to the team to cut out sugar in an effort to enhance performance. Athletes are caught between the conflicting philosophies of their treatment team and their coaches. Team dinners, where there is constant talk and comparison made about food and eating, can also be hard.

The best thing for you as a coach or trainer to do is foster an environment where an athlete feels safe and able to—if not openly share his or her eating disorder with the team—at least have your support. You might not feel able to tell your team, as we do, that “no food is forbidden,” but you can at least support your athlete in following his or her meal plan.

As a former college lightweight rower, I know that in some sports weigh-ins are inevitable. If that is the case with your sport, try to keep them as free of stigma as possible. An athlete may just need to lose a few pounds to make the team, but it’s very easy to slip into a dangerous mentality about food and weight. A health professional or a trainer should initiate and monitor weigh-ins, and also food records, if they are part of team protocol. Although I believe food records are more dangerous than not, if

you do use them, make sure that it is not a teammate who is monitoring them, but a trainer or dietitian.

There is a difference between promoting healthy eating and promoting restriction; a trained expert can counsel athletes who are not getting adequate amounts of iron, protein or fat, or calories in general. Young female athletes in particular often don’t believe their calorie requirements are as high as they are. Try setting a minimum standard for food intake rather than a punitive upper limit.

Although access to trained health professionals can be difficult in some situations, there are an increasing number of sports dietitians. If there is no such professional affiliated with your team or school, look for someone in your community who is a board-certified specialist in sports dietetics (CCSD) or an RD, and make this reference available to your athletes. The SCAN (Sports, Cardiovascular Wellness and Nutrition) website, www.scandpg.org, which represents members of the American Dietetic Association who specialize in sport, will help you find an expert in your area.

Effects of Insufficient Intake of Calories

DECREASES IN	INCREASES IN
Strength	Preoccupation with food and body
Endurance	Anxiety
Speed	Agitation and irritability
Coordination	Fear
Motivation	Risk of injury
Confidence and self-esteem	Risk of upper-respiratory tract infections
Growth and development	Fractures
Reproductive function	Impaired bone health in later life
Achievement of performance goals	

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Treatment



How to work effectively with your athlete's treatment team



PSYCHOLOGISTS' STORIES

Talking with:

Carlin M. Anderson, PhD

For coaches used to being the primary guiding force in athletes' lives while they are engaged in their sport, the sudden intrusion of other professionals into the picture can be off-putting and difficult to adjust to. This is the frequent scenario the coach or athletic trainer encounters when an athlete is diagnosed with an eating disorder: the athlete's meal plan, training, playing schedule and priorities are often altered dramatically, upsetting the natural coach-athlete relationship.

Carlin M. Anderson, PhD, is a health educator who works frequently with eating-disordered athletes, their coaches and families.

Having an athlete in treatment for an eating disorder can be both a relief and a challenge for a coach. It can be a relief that your athlete is getting help, but also difficult to know how to work with your athlete's treatment team. Trust issues between coaches and eating disorder specialists are more common than many people realize. When I work with coaches, one of the first things I talk about is where they fit in and the role they can play in their athlete's recovery. It's hard when the coach feels left out of the process and/or unsure how treatment might affect the athlete's performance.

An athlete in recovery from an eating disorder needs both a treatment team and a management team. The first is composed of health care professionals, and might include a therapist, dietitian, physical therapist, family members and medical doctor. The second includes the coach, athletic trainer, and family, who help manage and carry out the plan of the treatment team. Although many medical doctors and therapists do not include coaches in management of the athlete, if you are able to establish a rapport with the treatment team, you can play an important role in the management of your athlete's recovery.

There are different degrees of sharing with the management team that an athlete will feel comfortable with. Most athletes are willing to share treatment progress, such as, "I'm meeting with my therapist twice a week, and things are going okay," but they are usually less comfortable sharing personal details, such as body image concerns, feeling unmotivated at school, or dealing with depression. I try to encourage athletes to clarify what they feel comfortable sharing with their coach in a release of information form, so that the coach can be kept up to date on the athlete's progress, without the athlete feeling as though his or her confidentiality is being jeopardized. For example, if your athlete is not showing up for a therapist's or doctor's appointment, the coach is informed. This way, the coach can come back to the athlete and talk to him or her about it, as one might about missing an appointment with an academic tutor.

It can be extremely hard for coaches to make training decisions for an athlete with an eating disorder when they are not privy to the decisions of the treatment team, and I sometimes see coaches who feel frustrated and shut out. You might feel that treatment providers have forgotten about your important role in the athlete's life, or that they think you won't understand the medical issues. Often legal confidentiality issues prevent you as coaches from having the degree of access you would like. (See p. 15 for more on confidentiality.) However, if you are aware of the legal constraints from the beginning, it is possible to forge a good relationship with the treatment team.

The best approach is to be proactive in your efforts to work with your athlete's treatment team. Good rapport with the treatment team will make it easier to get the information you need. Voice an interest in his or her treatment plan. Find out more about the professionals on your athlete's treatment team. Ideally, a member of the treatment team will talk to the athlete's coach to learn more about the sport and its demands, and to the athletic trainer for discussions on how the athlete should be training. If you are a trainer, you may feel you need more information in order to tailor practices for your athlete. Ask questions. Should you have him or her run as hard as everyone else? To what degree can you push your player and what can you expect from this person in a game or meet?

If your athlete's eating disorder is serious, the treatment team may inform you that your athlete is in danger and needs to stop participating for a while. You may feel that the athlete is performing better than ever. There are situations where, yes, an eating disordered athlete's performance improves in the short run, but the behaviors the athlete is engaged in will eventually result in impaired performance and potentially serious physiological problems.

Pulling an athlete from a team is a difficult decision. I have never worked with a treatment team that takes this decision lightly. If your athlete is young and still growing, the team may be more cautious in allowing continued participation, whereas with a collegiate athlete on scholarship, the team may want to keep him or her in as long as possible. In general, however, the decision should be made on an individual basis.

Rewards, or incentives such as telling an athlete, "You can't drop below a certain weight or you won't be participating in the next game," can be effective in the short term since athletes will usually do the bare minimum to stay on the team. Although this is usually not a long-term solution, it is a strategy that allows you as coach to collaborate with the treatment team.

I recommend that athletes be open with their teammates if possible, and make them a source of support. If an athlete is missing practice, not doing everything that the rest of the team is doing, there needs to be some sort of communication with the team to explain why this is happening. You may want to take this opportunity to educate your team about disordered eating and how the rest of the team can help in their teammate's recovery.



Finding the right balance between weight and performance: tips from a sports psychologist

PSYCHOLOGISTS' STORIES

Talking with:

Sandy Dupcak, PsyD, sports psychologist

Dr. Dupcak works with athletes, coaches and parents on issues related to performance enhancement, confidence, anxiety, and self-esteem. Struggles with depression and eating disorders are commonly embedded in these performance issues.

Both disordered eating (i.e. poor food choices and inaccurate beliefs about weight loss) as well as clinical eating disorders are common among athletes. However, disordered eating that goes unidentified is far more common than full-blown eating disorders. The distorted thoughts about food, weight, and body image may be more dangerous than actual poor eating behaviors.

Actual eating disorders, however, stem from this kind of distorted thinking. Coaches can unwittingly contribute to this transition from distorted thinking to distorted eating behaviors by making comments such as, "So-and-so does this so much faster," or "So-and-so has the perfect body for this sport." An athlete will twist even casual coach remarks, apply it to him or herself, and all of a sudden you've got a new set of problematic eating behaviors.

Complicating matters is that young athletes generally do not have the appropriate knowledge. They are often not directed to a nutritionist, so their attempts to lose weight can make the athlete weaker and compromise his or her performance. As this happens, athletes can become more confused and vulnerable to additional distorted thinking about weight, performance, and body image.

One of the most challenging aspects for coaches and athletes is finding the right balance between weight and performance. Every athlete has a different muscle composition, and there's no simple formula that tells you what an optimal weight is. It is the level at which the athlete is healthy in terms of looking good, feeling his or her strongest, and able to execute the sport skills to his or her maximum ability. Finding that balance can be a challenge for both coaches and athletes, and may often involve a bit of experimentation with optimal weight and performance.

Dr. Dupcak's tips for middle and high school coaches concerned about disordered eating

- Recognize the enormous power you have over your athletes. Coaches chronically underestimate the power and influence they have over the decision making and behavior of their athletes.
- Know your athletes. Be especially careful with athletes who have low self-esteem, are highly perfectionist, or self-critical. They will distort your comments and do what they think they need to do to please you.
- After speaking with your athlete about your concerns, sit down with his or her parents to get everyone working together as a team.
- Be aware of the secretive nature of eating disorders. Athletes will try to hide their disordered eating behaviors. Resist the temptation to look the other way when you suspect there is a problem. This is especially true if the behaviors have not yet begun to negatively affect performance. The earlier an eating disorder is treated, the better the chances of recovery.



Eating disorders and the team dynamic

By Whitney Post, Women's Sports Foundation's GoGirlGo! Boston Director



When one or two athletes on a team are struggling with an eating disorder, it can dramatically affect the whole squad. A coach may feel unsure about how to address this issue, which involves the sensitive topics of weight and body size. As hard as it is, it is best to discuss your concern with the athlete, for the following reasons:

- The contagion effect. Studies have shown that eating disorders and disordered-eating patterns can be contagious—especially in groups of young women and girls. Teams often eat together, change together, and the body size and meal portions of teammates are constantly being observed, sometimes even scrutinized.
- Athletes who are showing signs of an eating disorder may assume that what they are doing is okay if an adult does not intervene and tell them otherwise. Other athletes may interpret a coach's silence the same way.
- Athletes are highly attuned to their teammates and gossip is a common pastime on teams. Often athletes will discuss their concerns about a team member to other athletes. They may become distracted by their worry about their teammate(s) and their uncertainty over how to deal with the problem. This takes their focus away from their sport and athletic goals.
- Athletes struggling with disordered eating may put themselves at risk for injury.

How to approach an athlete on your team whose eating behaviors are disrupting the team

- Arrange a meeting with the athlete and let her or him know your concern. Talk about behaviors and performance rather than the athlete's weight and eating habits. Example: "I've noticed that you don't have as much energy and your performances aren't what they used to be. You are a valuable member of this team and I'm concerned." Refer her/him to health services for an assessment. *(For more on this topic, see p. 13, "Sample conversation with an athlete you are concerned about.")*
- Communicate directly with the health providers. Sometimes athletes will not be truthful about following through on appointments, in hopes that they can maintain both their eating disorder and a spot on the team. Follow up to make sure they are complying with your recommendations
- Treat the eating disorder as you would an injury on the team, for example a fractured rib or a torn ACL (anterior cruciate ligament), instead of viewing it as an emotional issue. Explain to the athlete that you cannot let her or him practice unless she/he is healthy.
- Come up with clear boundaries about athletic participation and make being in good standing with nutritionists or doctors on the team a prerequisite for practicing and competing with the team. *(For more on broaching the subject of an eating disorder with an athlete, see pp. 13–14, "Tips on how to positively intervene.")*

Captains and communication

If eating concerns are present on your team it can be helpful to create a team policy or a plan around it at the beginning of the year or season. Try to involve captains, who are often the people team members will report or discuss a concern with first. A team policy might look like this:

- Anyone concerned about a teammate should let the captain know about it.
- The captain will then either talk to the athlete or see if anyone close to her/him has.
- If the athlete of concern is approached and denies a problem or refuses to seek help, the captain can then approach the coach with her/his concern.
- The coach addresses the problem from there.

There are many variations on this but if your plan is created in collaboration with the team at the beginning of the season and each team member agrees to it, it will be much more powerful when you need to enforce it.

Notes on recovery

For many athletes, recovering from an eating disorder is both difficult and scary, in part because the athlete's weight, shape and physicality are often closely tied to his or her identity. The idea of having to give up control of training and weight can be terrifying. Recovery also involves addressing underlying feelings, fears and insecurities that the eating disorder served to distance them from. Eating-disordered athletes may find the recovery experience overwhelming at first.

For all these reasons, it is important to be sympathetic, and to connect at-risk athletes to services and support systems that will help them recover. It is also important to keep them connected to their teammates. Very often their team is one of their primary support systems. Even if an athlete is not competing, it is a good idea to involve her or him in the day-to-day life of the team as much as possible.



The stigma of male eating disorders: Disorders can happen in “non-high-risk” sports, too

ATHLETES' OWN STORIES

Talking with:

Patrick Bergstrom, eating disorders advocate, speaker and writer, founder of I Chose to Live

As a star high school lacrosse player, Patrick Bergstrom stood out, on and off the field. He was handsome and excelled academically and socially as well as athletically. Coaches told him he was too small to play college lacrosse, but he was determined to prove them wrong. He set numerous records in lacrosse and weightlifting, played on the Maryland Senior All-State team and was nominated for the award of Maryland Public School Player of the Year.

“When I wasn’t training, I was the life of the party,” Bergstrom recalls. I had a boyish charm and confidence that could win over any girl. There wasn’t ever a time where I wasn’t dating an eye-catching female. I loved attention, popularity and stardom.”

All of that changed when he went off to college. Bergstrom suffered a string of injuries, went through five different coaches at two universities and drank to excess to numb the pain of his fall from athletic grace. In an effort to regain his high school magic, he began to work out more and eat less. Yet because he was still excelling in class and producing on the field, no one seemed to notice the pain he was in. The death of his coach and mentor in a freak accident during his sophomore year accelerated Bergstrom’s fall and triggered his eating disorder. His new coach didn’t believe in his ability and kept Bergstrom on the bench for most of his final season. “That was devastating to me,” he recalls.

He continued abusing alcohol, living off energy drinks, and began eating less than a meal a day, all while juggling two girlfriends. His playing began to falter and his life he says, “kind of went chaotic from there.” College, he adds, “is the ideal place for an athlete to have an eating disorder.” Athletes find themselves on their own for the first time. Many know little about nutrition, and intensive training, partying and studying can allow room for disordered eating or an eating disorder to thrive.

Two years after graduating, a therapist diagnosed alcohol abuse and depression, and Bergstrom began seeing a counselor. He assumed he was fixed, yet the true cause of his poor health—his eating disorder—had not even been diagnosed yet. Bergstrom thought marriage might set him straight. By then he was pale, weak, and experiencing fainting spells. A month before his wedding was to take place, he found himself lying on the ground, crying out for help. Two weeks later, after four

years of suffering from anorexia nervosa, he was finally given a proper diagnosis. He entered an eating disorders treatment center and his fiancée walked out of the relationship.

Bergstrom is an eating disorders activist, speaker and writer, and heads an educational and advocacy organization, I Chose to Live. He’s heard from hundreds of men and boy athletes suffering from eating disorders. Most of the time, he says, the stories are similar to his own: perfectionist, popular, athletic, and smart people whose identities and self-esteem are completely tied up with their success as athletes. Bergstrom is also proof that any athlete, not just those in high-risk sports such as gymnastics or rowing, can become eating disordered.

Bergstrom notes that in two important ways, however, his own story is typical of male athletes with eating disorders: First, “I wanted to be bigger, stronger, faster,” says Bergstrom. The “ripped six-pack and a muscular build” are the typical body ideal for the male athlete. Second, his disorder was diagnosed very late, when it had reached a crisis stage and hospitalization was essential. The extreme stigma males with eating disorders face makes them expert at covering up the disease, and their denial of the problem extreme. My biggest fear, he says, “was the reaction others would have when they found out I had an eating disorder.”

Patrick Bergstrom’s Tips for Coaches

- Coaches are athletes’ greatest teachers.
- Coach to instill life lessons in your athletes that will help them succeed of the field.
- Teach athletes to accept failure, to learn from their losses.
- Coach to win but also teach athletes that sport does not equal life; they need to cultivate other sources of self-worth and satisfaction.
- Encourage athletes to play hard, but without losing sight of the fun of sport.
- Remember that most athletes aren’t going to continue their sport after high school or college; be sensitive to the whole athlete, including academics and non-athletic interests.
- Teach athletes to know the difference between “being the best you can be” and “being the best.”



A runner's story



ATHLETES' OWN STORIES

Talking with:

Diane Israel, former triathlete and star of the documentary film, Beauty Mark

Diane Israel was a highly successful triathlete for 15 years, the Colorado mountain running champion and a world-class racer. She was also anorexic from about the age of 12 until well into her twenties. She did not have a period until she was 30, and as a result, her bones weakened, leading to 17 stress fractures. Diane knew what she was doing to her body. Yet the combination of the teen's belief that she was invincible and her fear that the added weight of womanhood would put an end to her running greatness made it easy to ignore the warning signs of a serious eating disorder. The 2007 documentary film *Beauty Mark* told Diane's story and looked at the effects of popular culture on different athletes' self-images.

The truth for Diane and for many eating-disordered athletes is that, "we don't know how to handle being and staying a great athlete as our body changes," says Diane, who is now a practicing psychotherapist in Boulder, Colo. Coaches, she believes, must be educated so they can help the eating-disordered athlete "make the transition into adulthood while remaining a great athlete."

At the root of all eating disorders, Diane believes, is a "lack of a sense of self," what she calls the "self-esteem piece." She didn't feel okay about who she was; finding something she could control—how much she ate—numbed her feelings of self-hate and made her feel safer. It helped her make order out of what felt like a chaotic life.

Diane urges coaches to learn more about eating disorders so that they can avoid the mistakes her own coaches made. She likens the tremendous influence that a coach has over an athlete to a parent-child or sibling relationship. Many coaches "have this belief that if you're thinner you'll be better, in gymnastics, swimming, running," Diane says. "We have to teach coaches that thinner doesn't mean better."

She counsels coaches to learn how to view the athlete as a complete person, not just as an athlete who must be groomed to perform. The coach needs to care about the athlete's family life, his or her emotional state, and service to the planet, in other words, "to honor the whole human being," not just the athletic being, according to Diane.

The coach also has to be able to voice concern over worrying symptoms. "If somebody had come up to me in the locker room and said, 'I'm really worried about you,'" says Diane, "I probably would have denied [being anorexic] but I would have known that at least someone cared about me. Nobody ever did that for me." She urges coaches, and any loved ones to "speak from your own immediate pain. Don't focus on their problem. Don't say, 'You look so sick or skinny.' Say, 'I'm worried about you. Fear comes up for me when I think of you.'"

Another pointer: "A huge thing when you are sick is that you feel crazy," says Diane. The athlete needs to hear from a coach, family member or friend, "There is support, and you are not crazy."



Hidden in plain sight: A champion rower's quest for perfection and a sense of belonging leads to bulimia

ATHLETES' OWN STORIES

Talking with:

Whitney Post, Director of the Women's Sports Foundation's GoGirlGo! Boston, an initiative that uses physical activity and sport to promote health and self-esteem for Boston's underserved girls

From the outside, my life looked like an athletic success story. I was captain of my open-weight college rowing team, which placed third at the NCAA Division I national championships. As a lightweight athlete I became a four-time US Rowing national team member, a four-time national champion, a world champion, and an alternate for the 2000 Olympic team. During this entire time, I struggled with an eating disorder.

As a girl and young woman, I struggled to feel that I fit in. At a young age I began wishing my body was smaller, more "acceptable." Around the time I went to college my mother developed breast cancer and underwent multiple surgeries, my parents got divorced, and my father disappeared. I arrived at college hungry; hungry to belong, to be noticed. I found what I was looking for in rowing, and along with it, a workout regimen to aid me in my desperate pursuit of thinness. I fell in love with the sport. I excelled at it and my ability to perform earned me a place in a community of which I desperately wanted to be a part. I dated a star of the men's rowing team; I had the loudest laugh; and I got good grades. I did it all with an eating disorder.

Despite the thrill of rowing, deep down I felt lost, unseen, angry, and depressed. I found solace on the water and in the dining hall. Each day was about surviving until dinner. I knew nothing about nutrition. I thought protein made you fat, that lunch was for people who had a lot of time on their hands. I exhausted myself each day at practice and looked forward to rewarding myself with a warm, soothing, filling dinner. The beliefs that organized my world were played out through my body: thinness is rewarded by society; food relaxes and soothes me; the more I work out, the more I can eat; the more I work out, the better I am at my sport. The problem with this formula was that the more I worked out, the more food I needed to restore energy and numb the pain. The result: bulimia.

I was never confronted by anyone on my team about my disorder, but I worried constantly that my secret would be discovered. I was deeply ashamed of it. My coach did comment occasionally that I didn't look well, or noticed when my strength waned as I lost weight for lightweight competitions, and he would appropriately call me out on it. It meant a lot to me that he noticed, and his comments would scare me into eating disorder-free periods. As soon as it began, I sought therapy for my eating disorder at the school counseling center. Because my therapist didn't specialize in eating disorders and knew nothing about athletes' struggles with them, however, the sessions did little to stop the disorder. Most people, including me, thought my overtraining was the normal behavior of a driven athlete.

My college and post-college rowing years on the national team remain murky memories. When I should have been enjoying the athletic results of my hard work and the adventures and opportunities it afforded me, I was too distracted by my disorder and my underlying unhappiness. In retrospect, what would have helped me is access to resources—information, referrals, support—and permission to use those resources. An acknowledgement that, "Hey, this is something you may be struggling with and here is where you can get some help for it," would have gone a long way toward helping me get better. It is terrifying to seek help within the culture of one's sport because there is so much shame and judgment associated with eating-disordered behaviors. My deep fear was of not belonging or being valuable to the team. Bringing resources to the team increases the chance that a struggling athlete will get help.

Another important piece, especially for weight-restricted sports, is to talk about the weight-making process. Educate your athletes and provide resources outlining the best ways to make weight. Alert them to the physiological consequences of doing it the wrong way. Some weight-making processes adhere to secretive practices unofficially passed on among athletes and coaches. Everyone wants to make it look easy, so they downplay the extremes they put their bodies through.

I know I would have performed significantly better as an athlete and made different life choices after my competitive rowing career was over had I not been trapped in the physical, mental and emotional quagmire of an eating disorder. For coaches, athletes and teammates, eating disorders are messy, complicated, and confusing; it is easier to avoid addressing the problem. The disorder will not go away by itself, though, and most people are not equipped to tackle these issues alone. As a coach, the best thing for you to do is to take action: start asking questions, find professionals who can help, and show that you care.



The challenge of making it to the top in an aesthetic sport

ATHLETES' OWN STORIES

Talking with:

Former competitive diver and 2004 Olympian Kimiko Soldati, an elite athlete who struggled with an eating disorder and is now involved in the sport from the coaching side. She is married to Purdue University head women's and men's diving coach Adam Soldati, and serves as volunteer assistant coach for the Purdue teams.

From where I am now, looking back, I see how horribly entrenched my eating disorder was; it was like being sucked into something and struggling just to breathe. I dealt with bulimia and excessive exercise for about 10 years. In diving, you're out there by yourself in a swimsuit being judged by what you look like. As in gymnastics and other aesthetic sports, your body is your tool and your means of performance and the goal is perfection. Being in a sport like that, my body was constantly at the forefront of my mind. It definitely contributed to developing an eating disorder, and it was exhausting.

It is difficult for athletes and coaches to draw that line between being as physically fit as you can, maintaining peak performance, but keeping on this side of obsession and compulsion. For me that line was completely blurred. Any athlete with an eating disorder has the attributes coaches love: they are coach pleasing; they have high pain tolerance; they are driven to succeed; they are perfectionists and control freaks. They are very coachable, and coaches love that. It's frightening for coaches to think, "If I change this person, it's going to change those characteristics, and I really like those traits." Coaches are in the hardest position, because their job is to produce champions.

Eating disorders in my sport are more prevalent than even statistics show. You have the diving competition, and then you have the underlying body competition: who's skinny, who's fat, who's five pounds over. It's the first thing that comes to divers' minds when they walk into the pool.

While I never thought my eating disorder was affecting my performance, I look back and realize it did. I struggled with injuries my whole career, underwent five shoulder surgeries and did not heal properly. I was also an emotional train wreck because my identity was totally wrapped up in my sport. Seeking treatment with a therapist and the strength I drew from my faith eventually helped me overcome my disorder.

My coach didn't know about my disorder at first. I remember being terrified before I told him. I felt like I was letting him down, I was embarrassed. But it was a road we traveled together, and it helped for me to communicate to him what was helpful to me and what wasn't. Here are some helpful strategies that my coach used during my recovery that helped me, and some that my husband, who was with me throughout my recovery, now uses with his diving teams:

- Validate your female athletes' feelings, *a lot*. It will feel redundant and obvious to say, "I understand how you're feeling," or to point out daily areas an athlete is doing well in, not just those that need improvement. But your athlete will be better equipped to do the hard work you are asking of her if she feels understood and appreciated.
- If you notice odd behaviors, ask how your athlete is doing. "What's going on? Are you stressed about a meet?" Try to go deeper than just focusing on the behaviors themselves. Ask, "What can I do to help you relieve the anxiety?"
- Be honest with yourself. Are you in this sport for yourself, or for your athletes? Obviously, you want to win, but are you willing to compromise an athlete's emotional and physical well-being to attain those results?
- Take the time to speak one-on-one with your athletes about their goals. If meeting those goals will require a reduction in weight, talk about how to do this gradually, with the help of a sports nutritionist, and in a way that will not trigger unhealthy behaviors.
- When you do deliver a critique or comment touching on weight, size or shape, follow it up with, "How did you interpret what I just said?" You may be shocked at how a female athlete has completely misinterpreted your remark.
- Enlist team leaders to help create a healthy eating environment so athletes aren't competing to see who can eat the least. When it comes to healthy eating and body image, peer communications are often better received than coaches' pronouncements.



Running in the family: together, a family fights eating disorders

ATHLETES' OWN STORIES

Talking with:

The Walker Family:* Athletes Emma and Sharon talk with their mother Laura about competition, eating disorders and how coaches can help athletes struggling with eating problems.

Sisters Emma and Sharon Walker are both three-sport athletes. Both also battled eating disorders that began with their attempts to “eat healthy” in order to maximize their performances in running, cross-country skiing and soccer. Cutting out meat was easy after Emma became concerned about slaughterhouse practices. Her weight loss was gradual and went undetected for many months.

Emma, like many athletes, was “so competitive and perfectionistic,” she says, “that I didn’t want to do anything that was going to hurt my performance.” But her good intentions spiraled into self-starvation, amenorrhea and extreme fatigue. Eventually her running times began to suffer, and Emma would faint occasionally after races.

Sharon became eating disordered later, ironically, as she tried to help her sister recover, reading books on nutrition and becoming overly careful about her own food intake. Laura didn’t notice the gradual changes in her daughters’ eating habits. First they cut out sweets, which she thought was healthy. Next, they cut out fats, and eventually reduced carbs and protein as well, until they were eating mostly fruits and vegetables.

“The top runner on our team was extremely thin and I equated being thin with being fast,” explains Emma. She adds, “The biggest thing coaches need to know is that this doesn’t happen to athletes because they want to be skinny; they want to perform better.” She would like coaches to tell their athletes “that you don’t have to be stick thin to be a great athlete; proper nutrition is what is going to make you a strong athlete.”

“It’s a psychological more than a physical thing,” Emma explains. The under-eating “starts to become normal to you, and you’re not even aware that there’s anything wrong.”

What helped her was her coach’s emphasis on the need for her to become stronger by fueling herself properly. “He used the analogy of a car, and how if it doesn’t have gas in it, it’s not going to run. It was the same with an athlete, he said. If you don’t fuel properly, you’re not going to be able to compete at the level you want to. My motivation for recovering was mostly that I wanted to be able to compete well.”

The Walker family suggests:

Words for coaches to use in training athletes

- Being a great athlete is about being strong, not about being thin.
- Losing weight might make your times faster initially but the fatigue and weakness that result will eventually make your times fall apart.
- There are no “good foods” and “bad foods.” It’s fine to eat sugary foods in moderation.
- Missing regular periods is not acceptable.

Approaches for coaches to take with athletes

- Focus on the decline in performance that results in weight loss, not the weight loss itself, which can encourage athletes to want to lose more.
- Educate athletes about the long-term consequences of amenorrhea.
- Use the athletes’ natural desire to compete and win as leverage to motivate them to recover from an eating disorder.
- Be vigilant on the off-season; eating-disordered athletes often have a harder time motivating themselves to eat enough when there is no sport they need to fuel for.

*Names have been changed to protect our sources’ anonymity.



More information





Frequently asked questions



What is an eating disorder?

Eating disorders are serious, but treatable illnesses with medical and psychiatric aspects. The eating disorders most commonly known to the public are anorexia and bulimia. There are also other eating disorders, such as binge eating disorder. Some eating disorders combine elements of several diagnostic classifications and are known as “eating disorder not otherwise specified.” Eating disorders often coexist with a mental illness such as depression, anxiety, or obsessive-compulsive disorder. People with an eating disorder typically become obsessed with food, body image, and weight. The disorders can become very serious, chronic, and sometimes even life-threatening if not recognized and treated appropriately.

Who gets eating disorders?

Males and females from seven or eight years old on up may get eating disorders. While it’s true that eating disorders are more commonly diagnosed in females than males and more often during adolescence and early adulthood than older ages, many cases are also being recognized in men and in women in their 30s, 40s and older. Eating disorders affect people in all socioeconomic classes, although it was once believed that they disproportionately affected upper socioeconomic groups. Anorexia nervosa ranks as the third most common chronic illness among adolescent U.S. females. Recent studies suggest that up to 7% of U.S. females have had bulimia at some time in their lives. At any given time an estimated 5% of the U.S. population has undiagnosed bulimia. Current findings suggest that binge eating disorder affects 0.7% to 4% of the general population.

Can eating disorders be cured?

Many people with eating disorders who are treated early and appropriately can achieve a full and long-term recovery. Some call it a “cure” and others call it “full remission” or “long-term remission.” Among patients whose symptoms improve—even if the symptoms are not totally gone (called a partial remission)—the burden of the illness can diminish a lot. This can open the way for healthier relationships with food, improved quality of life, and happier and more productive patients. Treatment must be tailored to the individual patient and family.

Controversy exists around the term “cure,” which can imply that a patient does not have to be concerned with relapse into the disorder. Many clinical experts prefer the term “remission” and look at eating disorders as a chronic condition that can be very effectively managed to achieve complete remission from signs and symptoms. Patients may, however, be at risk of a relapse at some future point in life. Many patients in recovery agree that remission more accurately describes their recovery, because they continue to need to manage their relationship with food, concepts about body image, and any coexisting mental condition, such as depression.

If someone I know intentionally vomits after meals, but only before big events—not all the time—should I be concerned?

Yes. Anyone who feels the need to either starve or purge food to feel better has unhealthy attitudes about one or more issues, such as physical appearance and body image, food, and underlying psychological issues. This doesn’t necessarily mean the person has a diagnosable eating disorder, but expressing concern to a friend about the behavior is warranted. If he or she denies the problem or gets defensive, it might be helpful to have information about what eating disorders actually are. Contact the National Eating Disorders Association’s HELPLINE for immediate help and excellent resources to help you learn how to talk to someone you care about. Toll free number: 1-800-931-2237. Or visit www.nationaleatingdisorders.org, and look for the Information and Resources section for more information.

I know someone who exercises every day 3 or 4 hours a day. Is this considered a sign of an eating disorder?

Perhaps. If the person is not training for a rigorous athletic event (like the Olympics) and if the compulsion is driven by a desire to lose weight, despite being within a normal weight range, or if the compulsion is driven by guilt due to bingeing, then, yes, the compulsion to exercise is a dimension of an eating disorder. If you know the person well, talk to him/her about the reasons he or she exercises this much. If you are concerned about weight or the rationale behind the excessive exercise regime, lead the person to information and resources that could help.

I’m noticing some changes in weight, eating habits, exercise, etc., with an athlete, but I’m not sure if it’s an eating disorder. How can I tell?

Unless you are a physician, you can’t make a diagnosis, but you can refer the athlete to appropriate resources that might help. Keep in mind, however, that denial is typically a big part of eating disorder behavior and an athlete may be unreceptive to the suggestion that anything is wrong. Often it takes several conversations before the athlete is ready to listen to your concerns.

What if I say the wrong thing and make it worse?

Family, friends, school staff and coaches often express concern about saying the wrong thing and making the eating disorder worse. Just as it is unlikely that a person can say something to make the eating disorder significantly better, it is also unlikely that someone can say something to make the disorder worse.

See p. 13 of this toolkit for a sample conversation with an athlete you are concerned about.





A group of athletes is dieting together. What should we (coaches/trainers) do?

Seeing an athlete develop an eating issue or disorder can sometimes lead other athletes to feel confused, afraid, or full of self-doubt. They may begin to question their own values about thinness, healthy eating, weight loss, dieting, and body image. At times athletes may imitate the behavior of their teammates. Imitating the behavior may be one way of dealing with fear, trying to relate to the teammate with the eating disorder, or trying to understand the illness. In other cases, a group of athletes dieting together can create competition around weight loss and unhealthy habits. If dieting is part of the accepted norm of the team, it can be difficult for any athlete seeking peer acceptance to resist joining the behavior. Approaching an athlete who is imitating the behavior of a teammate with an eating disorder should be similar to approaching an athlete with a suspected eating problem.

What should be done when rumors are circulating about a student with an eating disorder?

If a student has an eating disorder and other students are talking about it to the point where the student with the eating disorder is very uncomfortable coming to school, a strategy to deal with the gossip is in order. When a student is suspected of having or is diagnosed with an eating disorder, fellow students may have different reactions. Rumors often develop that further isolate the student experiencing the eating disorder. Rumors can also be a form of bullying. Here are some suggested strategies:

- Assess the role of the rumors. Sometimes rumors indicate students' feelings of discomfort or fear.
- Demystify the illness. Eating disorders can sometimes become glamorized or mysterious. Provide accurate, age-appropriate information that focuses on several aspects of the illness such as the causes as well as the social and psychological consequences (not only the extreme physical consequences).
- Work privately with students who are instigating and/or perpetuating rumors: talk about confidentiality and its value. For example, promote the idea that medical information is private and therefore no-one's business. Without identifying the students as instigators of the rumors, encourage them to come up with ways of dealing with the rumors by establishing a sense of shared concern and responsibility. For example, "Can you help me work out a way of stopping rumors about (student's name), as he/she is finding them very upsetting?"

SOURCES:

American Psychiatric Association <http://www.healthyminds.org/factsheets/LTF-EatingDisorders.pdf>

Victorian Centre of Excellence in Eating Disorders, The Royal Melbourne Hospital, Australia <http://www.rch.org.au/ceed/>

Andrea Vazzana, PhD, Clinical Assistant Professor of Child and Adolescent Psychiatry NYU Child Study Center. <http://www.aboutourkids.org/files/articles/nov.pdf>

Are the issues different for males with an eating disorder? What do I say?

Some aspects may be different in males. Important issues to consider when talking to or supporting a male who may have an eating disorder include the following:

- Stigma. Eating disorders are promoted predominantly as a female concern. Males may feel a greater sense of shame or embarrassment.
- It may be even more important not to mention the term "eating disorder" in the discussion, but rather focus on the specific behaviors you have noticed that are concerning.
- Keep the conversation brief and tell him what you've observed directly and why it worries you.
- Eating disorder behavior presents differently in males. Although the emotional and physical consequences of eating disorders are similar for both sexes, males are more likely to focus on muscle gain, while females are more likely to focus on weight loss.

What's the difference between overeating and binge eating?

Most people overeat now and then, but binge eating is distinguished by eating an amount of food within a specified time that is larger than the amount that most people would consume during a similar time and circumstance, and feeling out of control over eating during the binge. Sometimes, detailing daily eating patterns can be helpful in decreasing food consumption. However, it may be insufficient in addressing the underlying emotional or psychological components of an eating disorder and consequences of binges.

Can't people who have anorexia see that they are too thin?

Most cannot. Body image disturbance can take the form of viewing the body as unrealistically large (body image distortion) or of evaluating one's physical appearance negatively (body image dissatisfaction). People with anorexia often focus on body areas where being slim is more difficult (e.g., waist, hips, thighs). They compare their other body parts then, and believe they have "proof" of their perceived need to strive for further weight loss. Body image dissatisfaction is often related to an underlying faulty assumption that weight, shape, and thinness are the primary sources of self-worth and value. Adolescents with negative body image concerns may be more likely than others to be depressed, anxious, and suicidal.

I know someone who won't eat meals with family or with friends at or outside school. How can he/she not be hungry? Does he/she just not like food?

Most likely, the person is overwhelmingly preoccupied with food. A person with an eating disorder does not like to eat with others, does not like anyone questioning his/her food choices, and is totally consumed with refraining from eating. Is the person hungry? Yes! But the eating disorder controls the person.



Common myths about eating disorders

This information is intended to help dispel all-too-common misunderstandings about eating disorders and those affected by them. If your athlete has an eating disorder, you may wish to share this information with others (i.e., family members, friends, teachers, family physician).

Myth #1: Eating disorders are not an illness

Eating disorders are complex medical/psychiatric illnesses. Eating disorders are classified as mental illnesses in the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Health Disorders (DSM-IV)*, are considered to often have a biologic basis, and co-occur with other mental illnesses such as depression, anxiety, or obsessive-compulsive disorder.

Myth #2: Eating disorders are uncommon

They are common. Anorexia nervosa, bulimia nervosa, binge eating disorder, and subclinical, but very concerning eating disorders and disordered eating behaviors affect many young people in the United States and worldwide. Among U.S. females in their teens and 20s, the prevalence of clinical and dangerous, but not full-blown anorexia may be as high as 15%. Anorexia nervosa ranks as the third-most-common, chronic illness among adolescent U.S. females. Even though it is the rarest, and most severe of eating disorders, it affects approximately 1-in-200 young girls. Recent studies suggest that up to 7% of U.S. females have had bulimia at some time in their lives. At any given time an estimated 5% of the U.S. population has undiagnosed bulimia. Current findings suggest that binge eating disorder affects 0.7% to 4% of the general population.

Myth #3: Eating disorders are a choice

People do not choose to have eating disorders. They develop over time and require appropriate treatment to address the complex medical/psychiatric symptoms and underlying issues.

Myth #4: Eating disorders occur only in females

Eating disorders do occur in males. Few solid statistics are available on the prevalence of eating disorders in males, but the disorders are believed to be more common than currently reflected in statistics because of under-diagnosis. An estimated one-fourth of anorexia diagnoses in children are in males. The National Collegiate Athletic Association carried out studies on the incidence of eating-disordered behavior among athletes in the 1990s, and reported that of those athletes who reported having an eating disorder, 7% were male. For binge eating disorder, preliminary research suggests equal prevalence among males and females.

Incidence in males may be underreported because females are more likely to seek help, and health practitioners are more likely to consider an eating disorder diagnosis in females.

Differences in symptoms exist between males and females: females are more likely to focus on weight loss; males are more likely to focus on muscle mass. Although issues such as altering diet to increase muscle mass, over-exercise, or steroid misuse are not yet criteria for eating disorders, a growing body of research indicates that these factors are associated with many, but not all, males with eating disorders.

Myth #5: Men who suffer from eating disorders tend to be gay

Although gay men are at increased risk for eating disorders compared to other men; straight men get eating disorders too.

Myth #6: Anorexia nervosa is the only serious eating disorder

All eating disorders can have damaging physical and psychological consequences. Although excess weight loss is a feature of anorexia nervosa, effects of other eating disorders can also be serious or life threatening. A person with bulimia can be at high risk for death because of purging and its impact on the heart and electrolyte imbalances. Laxative use and excessive exercise can increase risk of death in individuals who are actively bulimic.

Myth #7: Dieting is normal adolescent behavior

While fad dieting or body image concerns have become "normal" features of adolescent life in Western cultures, dieting or frequent/extreme dieting can be a risk factor for developing an eating disorder. It is especially a risk factor for young people with family histories of eating disorders and depression, anxiety, or obsessive-compulsive disorder. A focus on health, well-being, and healthy body image and acceptance is preferable. Any dieting should be monitored. Ironically, dieting has also been found to predict excessive weight gain and obesity in adolescents.

Myth #8: Eating disorders are about appearance and beauty

Eating disorders are a mental illness and have little to do with food, eating, appearance, or beauty. This is indicated by the continuation of the illness long after a person has reached his or her initial 'target' weight. Eating disorders are usually related to emotional issues such as control and low self-esteem and often exist as part of a dual diagnosis of major depression, anxiety, or obsessive-compulsive disorder.

Myth #9: Only people of high socioeconomic status get eating disorders

People in all socioeconomic levels have eating disorders. The disorders have been identified across all socioeconomic groups, age groups, both sexes, and in many countries in Europe, Asia, Africa, and North and South America.



Myth #10: Recovery from eating disorders is rare

Recovery can take months or years, but many people eventually recover after treatment. Recovery rates vary widely among individuals and the different eating disorders. Early intervention with appropriate care can improve the outcome regardless of the eating disorder. Although anorexia nervosa is associated with the highest death rate of all psychiatric disorders, research suggests that about half of people with anorexia nervosa recover, about 20% continue to experience issues with food, and about 20% die in the long term due to medical or psychological complications.

Myth #11: Eating disorders are an attempt to seek attention

The causes of eating disorders are complex and typically include socioeconomic, environmental, cultural, and biologic factors. People who experience eating disorders often go to great lengths to conceal it due to feelings of shame or a desire to persist in behavior perceived to afford the sufferer control in life. Eating disorders are often symptomatic of deeper psychological issues such as low self-esteem and the desire to feel in control. The behaviors associated with eating disorders may sometimes be interpreted as “attention seeking;” however, they indicate that the affected person has very serious struggles and needs help.

Myth #12: Purging will help lose weight

Purging does not result in ridding the body of ingested food. Half of what is consumed during a binge typically remains in the body after self-induced vomiting. Laxatives result in weight loss through fluids/water and the effect is temporary. For these reasons, many people with bulimia are average or above-average weight.

Myth #13: You're not sick until you're emaciated

Only a small percentage of people with eating disorders reach the state of emaciation often portrayed in the media. The common belief that a person is only truly ill if he or she becomes abnormally thin compounds the affected individuals' perceptions of body image and of not being good at being “sick enough.” This can interfere with seeking treatment and can trigger intensification of self-destructive eating disorder behaviors.

Myth #14: Kids under age 15 are too young to have eating disorders

Although it is true that the average age at onset for anorexia nervosa is 17 years and bulimia nervosa is usually diagnosed in mid-to-late teens or early 20s, eating disorders have been diagnosed in children as young as seven or eight years of age.

Myth #15: Achieving normal weight means the anorexia is cured

Weight recovery is essential to enabling a person with anorexia to participate meaningfully in further treatment, such as psychological therapy. Recovering to normal weight does not in and of itself signify a cure, because eating disorders are complex medical/psychiatric illnesses.

SOURCES:

- ECRI Institute Feasibility Study on Eating Disorders Awareness and Education Needs. March 2004; p. 24
- An Eating Disorders Resource for Schools, The Victorian Centre of Excellence in Eating Disorders and the Eating Disorders Foundation of Victoria (2004); pgs 11-12.
- Eating Disorders: A Time for Change.
- Russell, Michael. 2006; Myths About Eating Disorders. EzineArticles (December 02), <http://ezinearticles.com/?Myths-About-Eating-Disorders&cid=374760>
- U.S. Department of Health and Human Services; Office on Women's Health; Eating Disorders
- American Psychiatric Association Diagnostic and Statistical Manual for Mental Disorders-IV



Glossary



Aesthetic Sports Sports usually thought of as “appearance” sports in which the sport participant’s appearance, as well as her/his sport performance is being judged. Included in this group are diving, figure skating, gymnastics, and synchronized swimming.

Amenorrhea Absence or cessation of at least three consecutive menstrual cycles. Amenorrhea is either primary (menstruation has not occurred by age 16) or secondary amenorrhea (cessation of menstruation).

Ana Slang for anorexia or anorexic.

ANAD (National Association of Anorexia Nervosa and Associated Disorders) A nonprofit organization that seeks to alleviate the problems of eating disorders, especially anorexia nervosa and bulimia nervosa.

Anabolic Of, or related to, the synthetic phase of metabolism.

Anabolic Steroid Hormone related to testosterone that increases protein synthesis in cells, resulting in increased cell tissue in the muscles.

Anorexia Athletica Disordered eating in female athletes involving fear of gaining weight/ becoming fat when underweight and weight loss of at least 5% of body weight due to dietary restriction and excessive exercise. Binge eating and the use of pathogenic weight control methods (i.e., self-induced vomiting, or use of laxatives or diuretics) may be present.

Anorexia Nervosa Eating disorder in which the patient weighs less than 85% of expected weight, has an irrational fear of being fat, has body image disturbance, and is amenorrheic.

Anovulation Menstruation without ovulation; a condition in which the ovary does not release a ripened egg each month as part of a women’s normal cycle during her reproductive years. Anovulation is a prime factor in infertility.

Antiemetics Drugs used to prevent or treat nausea and vomiting.

Antigravitation Sports Sports whose primary activity involves jumping (i.e., high jump, long jump, pole vault, etc.).

Anxiety Disorders The predominant symptom for this group of disorders is anxiety and/or fear (i.e., Panic Disorder, Phobias, Obsessive-compulsive Disorder, Post Traumatic Stress Disorder, etc.). A type of mood disorder. (See Mood Disorders.)

Arrhythmia An alteration in the normal rhythm of the heartbeat.

Atrial Fibrillation The most common cardiac arrhythmia that involves the two upper chambers (the atria) of the heart. Its name comes from the fibrillating (i.e. quivering) of the heart muscles of the atria, instead of a coordinated contraction.

Binge Eating Disorder (also Bingeing) Consuming an amount of food that is considered much larger than the amount that most individuals would eat under similar circumstances within a discrete period of time. Also referred to as “binge eating.”

Body Dissatisfaction Most eating disorder patients experience body dissatisfaction, either with the entire body or certain body parts. Typically, the dissatisfaction relates to the belief that their body or body parts are to “too big” or are “fat.” Body dissatisfaction usually plays a critical role in the development and maintenance of an eating disorder.

Body Image Disturbance Most eating disorder patients experience body image disturbance in that they (mis)perceive their bodies or body parts as being larger than they actually are.

Body Mass Index (BMI) A formula used to calculate the ratio of a person’s weight to height. According to Kathy Kater, LCSW, of BodyImageHealth.org, “BMI is a highly heritable trait. NIH Clinical Guidelines state that genetic influence accounts for as much as 70 percent of the influence for size and shape and pre-determines the ‘wiring’ for internal hunger and weight regulatory systems. A host of other internal and external variables outside of our control play a role as well. Legitimate concerns about environmental factors that have led to a rise in the rate of obesity do not alter this fact. Well fed, metabolically fit bodies with no elevated health markers will come in diverse sizes ranging from very thin to very fat.”

Bone Mineral Density Refers to the strength of bone as represented by calcium content.

Bone Resorption The breaking down process of bone metabolism and remodeling of bone.

Bradycardia A slow heart rate.

Bulimarexia A term used to describe individuals who engage alternately in bulimic behavior and anorexic behavior.

Bulimia Nervosa Eating disorder in which a patient binges on food an average of twice weekly in a three-month time period, followed by compensatory behavior aimed at preventing weight gain. This behavior may include excessive exercise, vomiting, or the misuse of laxatives, diuretics, other medications, and enemas.

Cardiac Arrhythmias A term for abnormal electrical activity in the heart. There are two main types of arrhythmias: those of rate (for example too rapid or too slow) and those of rhythm (any of many irregular patterns).

Coachability Sport participant’s willingness to do what his/her coach wants.

Cognitive Behavior Therapy (CBT) A treatment that involves



three overlapping phases when used to treat an eating disorder. For example, with bulimia, the first phase focuses on helping people to resist the urge to binge eat and purge by educating them about the dangers of their behavior. The second phase introduces procedures to reduce dietary restraint and increase the regularity of eating. The last phase involves teaching people relapse-prevention strategies to help them prepare for possible setbacks. A course of individual CBT for bulimia nervosa usually involves 16 to 20, hour-long sessions over a period of 4 to 5 months. It is offered on an individual, group, or self-managed basis. The goals of CBT are designed to interrupt the proposed bulimic cycle that is perpetuated by low self-esteem, extreme concerns about shape and weight, and extreme means of weight control.

Cognitive Therapy (CT) A type of psychotherapeutic treatment that attempts to change a patient's feelings and behaviors by changing the way the patient thinks about or perceives his/her significant life experiences. Subtypes include cognitive analytic therapy and cognitive orientation therapy.

Co-morbid Conditions Multiple physical and/or mental conditions existing in a person at the same time. Compensatory behaviors/purging behaviors that are used by eating disorder patients to compensate ("undo") the effects of eating to prevent weight gain (e.g., induced vomiting, use of laxatives, diuretics, enemas, or emetics, fasting, exercise, etc.).

Competitive Thinness A competition usually between or among females regarding who is thinner. The perception of a person being thinner can generate the perceiver to experience body dissatisfaction and "motivate" her to attempt to lose weight through a variety of weight loss methods.

Confidentiality The maintenance of a patient's privacy. Patient records are released only with the patient's consent to individuals with a specific and legitimate need to know.

Contagion Effect Social pressure in a group (team) can lead group members to engage in behaviors that are consistent with the norms or expectations of the group (i.e., dieting among team members).

Cortisol A hormone produced by the adrenal gland. It is involved in stress and is sometimes called a "stress" hormone. It can negatively affect blood pressure and immune function.

Dental Caries Tooth cavities. The teeth of people with bulimia who using vomiting as a purging method may be especially vulnerable to developing cavities because of the exposure of teeth to the high acid content of vomit.

Depression (also called Major Depressive Disorder) A condition that is characterized by one or more major depressive episodes consisting of two or more weeks during which a person experiences a depressed mood or loss of interest or pleasure in nearly all activities. It is one of the mood disorders listed in the DSM-IV-R. (See Mood Disorders.)

DXA/DEXA Dual-Energy X-ray Absorptiometry; a method for determining bone mineral content.

Diabetic Omission of Insulin A non-purging method of compensating for excess calorie intake that may be used by a person with diabetes and bulimia.

Disordered Eating A term probably first used regarding the Female Athlete Triad; a spectrum of eating behaviors used to lose weight or achieve a lean appearance, ranging in severity from restricting food intake to clinical eating disorders.

Drunkorexia Slang for behaviors that include any or all of the following: replacing food consumption with excessive alcohol consumption; consuming food along with sufficient amounts of alcohol to induce vomiting as a method of purging and numbing feelings.

DSM-IV The fourth (and most current as of 2006) edition of the Diagnostic and Statistical Manual for Mental Disorders IV published by the American Psychiatric Association (APA). This manual lists mental diseases, conditions, and disorders, and also lists the criteria established by APA to diagnose them. Several different eating disorders are listed in the manual, including anorexia nervosa, bulimia nervosa and EDNOS.

DSM-IV Diagnostic Criteria A list of symptoms in the Diagnostic and Statistical Manual for Mental Disorders IV published by APA. The criteria describe the features of the mental diseases and disorders listed in the manual. For a particular mental disorder to be diagnosed in an individual, the individual must exhibit the symptoms listed in the criteria for that disorder. Many health plans require that a DSM-IV diagnosis be made by a qualified clinician before approving benefits for a patient seeking treatment for a mental disorder such as anorexia or bulimia.

DSM-IV-R Diagnostic Criteria Criteria in the revised edition of the DSM-IV used to diagnose mental disorders.

Dyspnea Shortness of breath

Eating Disorder Not Otherwise Specified (EDNOS) The residual eating disorder category for disorders that do not meet full criteria for the diagnosis of anorexia nervosa or bulimia nervosa; it is the most prevalent disorder, and it includes binge eating disorder.

Echocardiogram A non-invasive ultrasound test that shows an image of the inside of the heart, which can be used to identify structural problems.

Electrolyte Any substance containing free ions that behave as an electrically conductive medium. Potassium, phosphate and magnesium are examples of electrolytes.

Electrolyte Imbalance A physical condition that occurs when electrolytes (commonly sodium and potassium) are at abnormal levels in the body. This condition can occur as a side effect of some bulimic compensatory behaviors, such as vomiting.

Energy Availability Dietary energy intake minus exercise energy expenditure, or the energy that is left (available) after the energy cost of exercise has been spent.



Energy Balance Energy (calories) ingested versus energy (calories) burned.

Estrogen Any of several steroid hormones produced chiefly by the ovaries and responsible for promoting estrus and the development and maintenance of female secondary sex characteristics.

Excessive Exercise Term that is often used to describe unhealthy or unbalanced exercise. It can be used in a quantitative sense, referring to the frequency, intensity, and/or duration of exercise. It may also be used in a qualitative sense such as a judgment of the appropriateness of exercise by a person under a specified set of circumstances (i.e., health status, age, energy balance, etc.).

Exercise Therapy An individualized exercise plan that is written by a doctor or rehabilitation specialist, such as a clinical exercise physiologist, physical therapist, or nurse. The plan takes into account an individual's current medical condition and provides advice for what type of exercise to perform, how hard to exercise, how long, and how many times per week.

Family Therapy A form of psychotherapy that involves members of a nuclear or extended family. Some forms of family therapy are based on behavioral or psychodynamic principles; the most common form is based on family systems theory. This approach regards the family as the unit of treatment and emphasizes factors such as relationships and communication patterns. With eating disorders, the focus is on the eating disorder and how the disorder affects family relationships. Family therapy tends to be short-term, usually lasting only a few months, although it can last longer depending on the family circumstances.

Fear Food Food that is typically avoided by an eating disorder patient because of fear of weight gain.

Female Athlete Triad Initially, the Triad consisted of disordered eating, amenorrhea, and osteoporosis; in the 2007 revision, the Triad was changed to spectrums of health regarding energy availability, menstrual function, and bone mineral density.

Fluoxetine/Prozac The first antidepressant medication to be FDA approved for the treatment of bulimia nervosa.

Gastroesophageal Reflux Disorder (GERD) Occurs when the valve separating the esophagus and stomach does not close properly, allowing stomach contents (i.e., stomach acid) to move up into the esophagus.

Health Insurance Portability and Accountability Act (HIPAA)

A federal law enacted in 1996 with a number of provisions intended to ensure certain consumer health insurance protections for working Americans and their families and standards for electronic health information and to protect the privacy of individuals' health information. HIPAA applies to three types of health insurance coverage: group health plans, individual health insurance, and comparable coverage through a high-risk pool. HIPAA may lower a person's chance of losing existing coverage, ease the ability to switch health plans, and/or help a person buy coverage on his/her own if a person loses employer coverage and has no other coverage available.

Hypoglycemia An abnormally low concentration of glucose in the blood.

Hypokalemia Low serum potassium levels that can result in cardiac abnormalities and complications, including death.

Ketosis A condition characterized by an abnormally elevated concentration of ketones in the body tissues and fluids, which can be caused by starvation. It is a complication of diabetes, starvation, and alcoholism.

Lean Sports Sports for which there is a weight class requirement or sports in which leanness is thought to confer a competitive advantage either from a biomechanical standpoint (i.e., moving the body through space), or from a judging standpoint based on appearance.

Low Energy Availability Low energy availability (LEA) occurs when the physically active person ingests insufficient calories to fuel physical activity and support normal bodily processes of growth and development.

Maudsley Method A family-centered treatment program with three distinct phases. The first phase for a patient who is severely underweight is to regain control of eating habits and break the cycle of starvation or binge eating and purging. The second phase begins once the patient's eating is under control with a goal of returning independent eating to the patient. The goal of the third and final phase is to address the broader concerns of the patient's development.

Medical Clearance Such clearance indicates that appropriate healthcare professionals have determined that the individual/patient/sport participant's health risks will not increase as a result of participating in a particular activity (i.e., running).

Menarche First menstrual period.

Metabolic Syndrome A combination of medical problems (i.e., hypertension, insulin resistance, obesity, etc.) that can increase an individual's risk of developing diabetes and/or cardiovascular disease.

Mia Slang For bulimia or bulimic.

Mitral Valve Prolapse This occurs when the valve between the left upper chamber of the heart (the left atrium) and the left chamber (the left ventricle) doesn't close properly and the valve's flaps bulge (or prolapse) back into the atrium.

Mood Disorders Mental disorders characterized by periods of depression, sometimes alternating with periods of elevated mood. People with mood disorders suffer from severe or prolonged mood states that disrupt daily functioning. Among the general mood disorders classified in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) are major depressive disorder, bipolar disorder, and dysthymia. (See Anxiety and Major Depressive Disorder.)



Muscle Dystrophy A preoccupation with not being muscular enough despite having very highly developed muscularity; found primarily in males.

Non-lean Sports Sports in this group usually do not emphasize the leanness or thinness of the sport participant or judge/score the sport performance based on appearance. Sports other than those regarded as aesthetic, endurance, and weight class sports are usually included in this group.

Nonpurging Any of a number of behaviors engaged in by a person with bulimia nervosa to offset potential weight gain from excessive calorie intake from binge eating. Nonpurging can take the form of excessive exercise, misuse of insulin by people with diabetes, or long periods of fasting.

Nutritional Therapy Therapy that provides patients with information on the effects of their eating disorder. For example, therapy often includes, as appropriate, techniques to avoid binge eating and refeed, and advice about making meals and eating. The goals of nutrition therapy for individuals with anorexia and bulimia nervosa differ according to the disorder. With bulimia, for example, goals are to stabilize blood sugar levels, help individuals maintain a diet that provides them with enough nutrients, and help restore gastrointestinal health.

Obsessive-Compulsive Disorder (OCD) Mental disorder in which recurrent thoughts, impulses, or images cause inappropriate anxiety and distress, followed by acts that the sufferer feels compelled to perform to alleviate this anxiety. Criteria for mood disorder diagnoses can be found in the DSM-IV.

Oligomenorrhea A reduction in number of menstrual periods and/or amount of menstrual flow.

Orthorexia Nervosa An eating disorder in which a person obsesses about eating only “pure” and healthy food to such an extent that it interferes with the person’s life. This disorder is not a diagnosis listed in the DSM-IV.

Osteopenia Bone density measured to be between 1.0 and 2.5 standard deviations below the mean of a healthy reference population.

Osteoporosis The word osteoporosis means “porous bones” and is a result of excessive loss of protein and mineral content within the bones. Osteoporotic bones break easily. Bone density measured to be above 2.5 standard deviations below the mean of a healthy reference population. This can sometimes be a complication of an eating disorder, including bulimia nervosa and anorexia nervosa.

Overtraining Syndrome This syndrome is sometimes referred to as “staleness.” Symptoms can include fatigue, amenorrhea, weight loss, sleep disturbance, depression, and a lowering of sport performance.

Psychotherapy The treatment of mental and emotional disorders through the use of psychological techniques (some of which are described below) designed to encourage communication of conflicts and insight into problems, with the goal being relief of symptoms, changes in behavior leading to improved social and vocational functioning, and personality growth.

Purging To evacuate the contents of the stomach or bowels by any of several means. In bulimia, purging is used to compensate for excessive food intake. Methods of purging include vomiting, enemas, and excessive exercise.

Residential Treatment Center A 24-hour, residential environment outside the home that includes 24-hour provision or access to support personnel capable of meeting the client’s needs.

Selective Serotonin Reuptake Inhibitors (SSRI) A class of antidepressants used to treat depression, anxiety disorders, and some personality disorders. These drugs are designed to elevate the level of the neurotransmitter serotonin. A low level of serotonin is currently seen as one of several neurochemical symptoms of depression. Low levels of serotonin in turn can be caused by an anxiety disorder, because serotonin is needed to metabolize stress hormones.

Sport Family The sport participant’s “family” that includes coaches, other sport personnel, and teammates.

Sport Management Team This team usually consists of both healthcare professionals and sport personnel. The team’s goal is the appropriate and effective management of the sport participant with disordered eating from identification through successful treatment.

Stress Fracture A fracture caused by a non-traumatic, cumulative overload on a bone.

Sub-threshold Eating Disorder Condition in which a person exhibits disordered eating but not to the extent that it fulfills all the criteria for diagnosis of an eating disorder.

Tachycardia A rapid heart rate.

Thermogenesis A process that involves calories being used to maintain fundamental body activities, such as keeping the body warm and the processing of food.

Treatment Plan A multidisciplinary care plan for each beneficiary in active case management. It includes specific services to be delivered, the frequency of services, expected duration, community resources, all funding options, treatment goals, and assessment of the beneficiary environment. The plan is updated monthly and modified when appropriate.

Trigger A stimulus that causes an involuntary reflex behavior. A trigger may cause a recovering person with bulimia to engage in bulimic behavior again.



Resources



Selected books and resources



BOOKS

Can't Buy My Love: How Advertising Changes the Way We Think and Feel (2000, Free Press) Jean Kilbourne

Disordered Eating Among Athletes: A Comprehensive Guide for Health Professionals (2004, Human Kinetics) Katherine A. Beals

Eating Disorders in Sport (2010, Routledge) Ron Thompson, Roberta Sherman

The Exercise Balance: What's Too Much, What's Too Little, and What's Just Right for You! (2008, Gürze) Pauline S. Powers, MD; Ron Thompson

Helping Athletes With Eating Disorders (1992, Human Kinetics), Ron Thompson and Roberta Sherman

Making Weight: Healing Men's Conflict with Food, Weight, Shape and Appearance (2000, Gürze Books), Arnold Andersen; Leigh Cohn; and Thomas Holbrook

Sports Nutrition: An Introduction to Energy Production and Performance (2004, Human Kinetics), Asker Jeukendrup and Michael Gleeson

Sport Nutrition for Coaches (2009, Human Kinetics) Leslie Bonci, MPH, RD, CSSD

RESOURCES

Academy of Eating Disorders (AED) The Academy's "About Eating Disorders" page contains useful information.

Athletes and Eating Disorders Compilation of advice from publications by Pauline Powers, Ron Thompson, Roberta Sherman's book, and from Healthy Within Psychological Wellness Center in San Diego, CA.

Best Bones Forever! A bone health campaign led by the Department of Health and Human Services' Office on Women's Health (OWH) and focused on fun and friendship to help girls ages 9-14 understand that this is the most important time to build strong bones for life.

Binge Eating Disorder Association

The Female Athlete Triad Coalition A nonprofit group of national and international organizations dedicated to addressing unhealthy eating behaviors, hormonal irregularities, and bone health among female athletes.

NCAA Nutrition and Performance Resources

The New York State Public High School Athletic Association's **Awareness and Prevention Program for Physically Active Females**

International Association of Eating Disorder Professionals (IAEDP)

National Eating Disorders Association (NEDA)

Annual NEDA Conference

Running on Empty: Eating Disorders in Athletes, part of Park Nicollet Melrose Institute's "Stay Healthy" online resource.

Sports Nutrition: Who Delivers? Video on the benefits of incorporating professional sports dietitian in your program from the Sports, Cardiovascular and Wellness Nutrition (SCAN) practice group of the American Dietetic Association.

Weight Management Video of the NCAA's overview of its weight management program.

CURRICULA

ATHENA (Athletes Targeting Healthy Exercise & Nutrition Alternatives), www.athenaprogram.com. An interactive prevention program for female high school athletes. This coach-facilitated, peer-led program includes eight, 45-minute scripted lessons designed for incorporation into a sport team's usual practice activities, and addresses risks for disordered eating and substance use, including media and social pressures, preventing depression, raising self-esteem, and healthy sport nutrition.

Beauty Mark: Body Image and the Race for Perfection, educational edition, Gürze. Documentary film that follows the career of triathlete Diane Israel and examines athletes' obsession with fitness and body perfection. A study guide is currently in development. For more background on the film: www.beautymarkmovie.com.

POSITION PAPERS

American Academy of Pediatrics (AAP) (www.aap.org)
Identifying and Treating Eating Disorders

The American College of Sports Medicine (ACSM) (www.acsm.org)
The Female Athlete Triad

American Dietetic Association (ADA) (www.eatright.org)
Nutrition intervention in the treatment of anorexia nervosa, bulimia nervosa and other eating disorders

American Psychiatric Association (APA) (www.psych.org)
Practice Guideline: Treatment of Patients with Eating Disorders

The International Olympic Association Consensus Statement on Periodic Health Evaluation of Elite Athletes (IOC), Clinical Journal of Sport Medicine; 19 (5), p 347-367, September 2009.

The National Athletic Trainer's Association (<http://www.nata.org/>)
Preventing, Detecting, and Managing Disordered Eating in Athletes





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