

DIETS GONE TOO FAR

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Dieting is most often associated with weight loss; however, there are other reasons people “diet.” Some diets are therapeutic, required by a medical diagnosis, and must be overseen by medical personnel, including a registered dietitian (RD). Popular diets such as paleo, raw, vegetarian, as well as gluten-, grain-, lactose- and soy-free diets have become common, especially in high school and collegiate populations. Some of these diets are driven by misperceptions about food and nutrition, personal values or an unhealthy obsession with “eating right.” Eating well is important, especially for student-athletes who need to fuel heavy training demands. However, like any behavior, too much of a good thing can generate negative results. A preoccupation with healthy eating can lead to a form of dysfunctional eating called orthorexia. Simply put, it is a fixation on righteous eating. Student-athletes may use the words “pure” or “correct” to describe their food choices. Individuals may become obsessed with eating healthfully to the point that it creates unhealthy outcomes. Orthorexia is on the rise, with athletic populations at greater risk.

Student-athletes feel a great deal of pressure to perform well. Sometimes, student-athletes looking for an untapped performance boost will turn to improved nutrition or weight loss. Improving the quality of an athlete’s diet to meet specific needs is an important part of reaching peak performance; however, there comes a point at which obsessing over every bit of food eaten can be a detriment to performance. Unrealistic, perfectionistic thinking regarding food intake is a form of disordered eating. Orthorexia is defined as an unhealthy preoccupation with perfect or healthy eating.

Coaches or athletic trainers may encourage dieting to meet sport-related weight restrictions, the aesthetic expectations of a particular sport’s culture or to enhance performance. However, extreme dieting or disordered eating, like orthorexia, leads to reduced performance, physical and psychological injury, and in some cases, diagnosed eating disorders.²

Although it may be desirable for a student-athlete to improve dietary intake to prevent unwanted weight, being told to simply lose weight without proper guidance may create a harmful domino effect. When a student-athlete has no idea how to go about adjusting his or her diet for weight loss, he or she may resort to restricting kilocalories and/or restricting macronutrient categories (such as fat) that cause rapid weight loss or a dietary intake that is not compatible with health and performance objectives. Student-athletes with a predisposition toward perfectionistic thinking or obsessive compulsive disorder (OCD) may overthink their diets and food choices, leading to orthorexia. It is well known that in predisposed individuals, restriction and weight loss can activate a set of hormones and genes that lead

to the development of anorexia nervosa. Since it is not possible to detect who might be genetically predisposed, serious caution should be used when addressing weight changes.

Long-term low energy availability can lead to micronutrient deficiencies, chronic fatigue, increased risk of infections, and/or low thyroid stimulating hormone, all of which affect performance. Medical complications can include compromised cardiovascular, gastrointestinal, endocrine, reproductive, skeletal, renal and central nervous system functions. Stress, depression, and anxiety are common psychological consequences of energy restriction.

Coaching Points for Weight Loss

Despite the dangers associated with dieting, several groups of researchers did find that carefully controlled weight loss was not associated with increased development of pathology^{3,4}. Therefore, it is important to understand and utilize appropriate approaches to helping student-athletes manage weight or body composition.

If it is deemed necessary for a student-athlete to change weight or body composition for health reasons or for a weight-restricted sport, the “diet” of choice should be promoted as an adjustment to intake to promote health and optimize performance. Student-athletes should not attempt to lose weight during heavy training or competition periods. The student-athlete’s usual dietary intake should be analyzed with respect to eating patterns, food and beverage intake and supplement use. Deficiencies and misunderstandings can then be addressed and corrected. This intervention is best undertaken by a RD, preferably a Certified Specialist in Sports Dietetics (CSSD), and overseen by a physician. Metabolic monitoring during intake adjustment can include complement component 3 (C3), leptin, thyroid stimulating hormone (TSH) and other thyroid hormones, sex steroid hormones, and vital signs. These are more sensitive measures of health and nutrition status than weight alone.

Progress should be assessed by monitoring appropriate nutrient intake relative to a student-athlete’s activity level. Suggested controlled weight loss strategies have been described and include:

1. Consume sufficient energy to avoid menstrual irregularities in female athletes (>30 to 45 kcal/kg/day) and support a gradual weight loss of approximately 0.5 kg/week. To achieve a weight loss of 0.5 kg/week, an energy deficit of about 500 kcal/day is needed, but there will be individual differences in how this is achieved.
2. It has been suggested that the proportion of body fat should be no lower than 5 percent for men and 12 percent for women after weight loss. These values serve as guides since there is not a gold standard for measuring body composition or a reliable way to determine the tolerable or healthy level of body fat in various individuals.³

Coaching Points for Dealing with Orthorexia

1. While concern with nutrition is important and useful for athletes, orthorexia is not. It is frequently found in individuals with obsessive compulsive disorder. The obsession with perfect eating can dominate one's life.
2. Orthorexia can become a distraction for the team, leading to a higher prevalence of eating and body image issues for teammates. The diet of one student-athlete should not become a central topic or theme of discussion for the team, and should not cause disruption of team meals, training table or post-workout recovery. It may be advisable to prohibit discussion of anyone's personal diet.
3. The student-athlete's nutritional needs should be accommodated at team meals, within reason, such that the team can enjoy the bonding experience a group meal offers. Sometimes, a "strict" diet regimen is a socially acceptable way to avoid eating with others, to mask an eating disorder or to gain attention for following a "pure" or "clean" diet. If a student-athlete is unable to eat along with his or her teammates, orthorexia or an eating disorder may be the underlying cause.
4. Modeling positive fueling behaviors and reinforcing balanced, practical choices is optimal for all teams. Stressing healthy choices and behaviors over weight or aesthetic outcomes is recommended for all student-athletes. Remind student-athletes that nutrition is only one aspect of reaching their full athletic potential.

Conclusion

The dieting mentality and nutrition concerns are common in the college-aged population and in collegiate student-athletes. Orthorexia is one form of disordered eating that can disrupt not only an individual student-athlete's quality of life but the team as well. Athletic trainers, coaches and administrators should be aware of any current dietary fads, whether there is a "team mentality" fueling the fads, and which student-athletes are displaying an unhealthy obsession with food.

Coaches and athletic trainers may fuel obsessions with dieting by suggesting a certain body type – achievable for some but not all – as best for a certain sport. Research is needed to identify whether traditional assumptions about whether a certain body type is necessary to excel at a sport, and the safest ways to promote adjustments to dietary intake.⁴

Student-athletes feel a great deal of pressure to perform well and sometimes turn to nutrition for a performance boost. However, performance is a recipe of many different variables. Nutrition is one, but it cannot replace or supplant any other variable. Food preoccupations force student-athletes to choose food over their sport. Orthorexia is more about the individual's feelings of self-esteem and other underlying conditions than it is about food and nutrition. The controlled weight loss strategies outlined in this article are conservative, support health and value quality improvements to the whole diet rather than focusing solely on body weight.

Author

Written by SCAN/CPSDA Registered Dietitians (RDs). For advice on customizing an eating plan to meet your nutrition goals, consult an RD who specializes in sports, particularly a Board Certified Specialist in Sports Dietetics (CSSD). Find a qualified RD at www.scandpg.org or www.sportsRD.org

References

1. Janas-Kozik M, Zejda J, Stochel M, Brozek G, Janas A, Jelonek I. Orthorexia-A new diagnosis. *Psychiatr Pol.* 46(2012):441-50.
2. Mehler PS, Anderson AE. *Eating Disorders: A Guide to Medical Care and Complications.* Baltimore: The John Hopkins University Press, 2010.
3. Sundgot-Borgen, J. Garthe I. "Elite athletes in aesthetic and Olympic weight-class sports and the challenge of body weight and body compositions." *J Sports Sci.* 29(2011):S101-14.
4. Huovinen HT, Hulmi JJ, Isolehto J, Kyröläinen H, Puurtinen R, Karila T, Mackala K, Mero AA. "Body Composition and Power Performance Improved After Weight Reduction in Male Athletes Without Hampering Hormonal Balance". *J Strength Cond Res.* 2014 Jul 15. [Epub ahead of print]
5. Sundgot-Borgen J, Meyer NL, Lohman T, Ackland TR, Maughan RJ, Stewart AD, Müller W. How to minimize the health risks to athletes who compete in weight-sensitive sports: review and position statement on behalf of the Ad Hoc Research Working Group on Body Composition, Health and Performance, under the auspices of the IOC Medical Commission. *Br J Sports Med.* 47(2013):1012-22.
6. Waterhous T, Jacob MA. *Nutrition Intervention in the Treatment of Eating Disorders: Practice Paper of the Academy of Nutrition and Dietetics.* Available at: file:///C:/Users/Carolyn/Downloads/Practice_Paper_Nutrition_Intervention.pdf. Accessed March 4, 2014.

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