



8. Weight Control

Significance:

Optimal body composition for performance and health are unique to each individual and may change over a season as natural growth occurs. While each individual may have a specific body weight or composition in mind for optimal performance, this "optimal" weight or composition might not be optimal for health. For example, extreme weight loss could lead to amenorrhea in female athletes, while excessive weight gain by some athletes could contribute to hypertension and predispose the athlete for cardiovascular disease risk factors. Moreover, emphasis on weight or appearance related to performance, or otherwise, is a primary trigger of disordered eating that can have significant consequences on the high school athlete's health and performance.

Prevention:

- Athletes and coaches should understand that nutrition and appropriate calories are critical to optimal performance
- Weight monitoring should be discouraged, other than for
 1. Monitoring progress in a formal weight-control program (under a physician)
 2. Monitoring fluid loss
 3. Other specific medical issues
 4. Sports with weight class requirements
- Emphasis or focus on weight as a measure of performance or success should be avoided
- Coaches, administrators and parents need to be aware of athletes who are at increased risk to practice unhealthy weight-control practices, such as those seen in sports with weight classes (wrestling, martial arts, crew, weight lifting)

Management:

- Consideration of weight modification (increase or decrease) should involve consensus between the athlete, parents, coach and nutritional/medical personnel. If there is mutual agreement that weight modification is appropriate, a plan should be developed to address the degree of weight loss or gain, rate of weight loss/gain, and methods of weight loss/gain.
- Weight monitoring, when appropriate, should ideally be performed by someone other than the coach.
- When disordered eating problems are identified, the athlete should be referred for professional help.

Recognition of Unhealthy Weight Control Practices:

- Poor nutrition practices
- Cyclic dietary patterns in which athletes will eat tremendous amounts of food, but then consume very little as competition draws close.
- Excessive exercising, out of proportion of training demands, near the time of a competition
- Use of rubber suits, excessive layers of clothing during exercise in an attempt to cut weight
- Use of artificial methods of dehydration such as saunas, fluid restriction and spitting
- Use of diuretics, laxatives or stimulants to cut weight

More on Recognition, Prevention and Management of Weight Control Issues

Wrestlers and other athletes involved in sports with weight classes, often engage in patterns of weight cycling, in which they attempt to cut weight prior to a match and then proceed to gain the weight back after competition. This is of great concern in the high school athlete population, since one-third of wrestlers have reported that they engage in cyclic weight-control practices more than 10 times per season. Weight cycling or weight cutting practices usually involves one of three means: 1) interference with the laws of good nutrition, 2) excessive exercise, or 3) artificial methods of dehydration. Additionally, some athletes use pharmacological agents such as stimulants, diuretics or laxatives.

Cutting weight, by means of rapid weight loss can be detrimental to both health and performance, and result in serious physiological complications that can influence electrolyte balance and energy reserves. Potential adverse effects to health and performance associated with unhealthy weight control practices include:

- *Water loss* which can adversely impact renal function, electrolyte balance, body composition, thermoregulation, muscular strength, nutrient intake, testosterone levels, eating behaviors, and resting metabolic rate
- *Altered hormonal status*
- *Diminished protein nutritional status*
- *Altered psychological state*
- *Impaired academic performance*
- *Increased risk of pulmonary emboli and pancreatitis*
- *Reduced immune function*
- *Negative effects on cardiovascular function and electrolyte balance*

Recognition

- Be aware of athletes who *ignore the principles of good nutrition*
 - ◀ Cyclic eating patterns
 - ◀ Decreased fluid intake
 - ◀ Use of pharmacological agents such as stimulants, laxatives, or diuretics
- Be aware of athletes who are *exercising excessively* near the time of a competition
- Be aware of athletes practicing *artificial means of dehydration*
 - ◀ Saunas
 - ◀ Wearing rubber suits or excessive layers of clothing
 - ◀ Exercising in a heated room
 - ◀ Spitting on a regular basis

Management

- Athletes, parents, coaches and clinicians should be educated on the maintenance of healthy weight through sound eating behaviors and appropriate exercise.
- Athletes who demonstrate unhealthy weight-control practices should be referred to the proper professional.
- Athletes who intend to gain or lose weight should do so under the direction of a physician and follow the established principles for healthy weight reduction or gain.
- Athletes should be routinely monitored for changes in menstrual function, growth, diet, weight and body composition during the course of a season.

Prevention

- To maintain proper weight control and optimal body composition, a lifetime commitment to proper diet and regular physical activity is required.
- Discourage the use of rubber suits, steam rooms, hot boxes, saunas, laxatives and diuretics.
- Educate coaches, athletes, administrators and parents about the adverse consequences of prolonged fasting and dehydration on performance and health.
- Educate coaches, athletes, administrators and parents regarding adequate nutrition needed to maintain normal growth and development.
- Emphasize the need for daily caloric intake from a balanced diet high in carbohydrates, low in fat, with adequate protein.
- Recommended weight loss should not exceed one kilogram (approximately two pounds) per week.
- Specific to Wrestling
 - ◀ Schedule daily weigh-ins before and after practice to monitor fluid loss and dehydration and provide guidelines for adequate fluid replacement
 - ◀ Assess body composition of each wrestler prior to the start of the season; those with low body fat need to be medically cleared for participation
 - ◀ Establish minimum acceptable weights for wrestlers based on the pre-season body composition assessment