

Weight Loss in Wrestlers

For more than a half century, rapid weight loss in wrestling has remained a concern among educators, health professionals, exercise scientists and parents. Since ACSM first published the Position Stand "Weight Loss in Wrestlers" in 1976, numerous research articles have been published on this topic. On a weekly basis, rapid weight loss in high school and collegiate wrestlers has been shown to average 4-5 lbs. and may exceed 6-7 lbs. among 20% of the wrestlers. One-third of high school and collegiate wrestlers have been reported repeating this practice more than 10 times in a season. These practices have been documented over the past 25 years, and during that time, there appears to be little change in their prevalence.

Wrestlers often justify their choice of weight class with the belief that they have excess fat to lose.

However, studies show that in the off-season, high school wrestlers have 8-11 percent body fat, well below their high school peers who average 15 percent. In season, wrestlers typically have 6-7 percent body fat. Consequently, loss of fat would contribute minimally to the rapid weekly weight reduction while the primary methods for weight loss (e.g., exercise, food restriction, fasting, and various dehydration methods) affect body water, energy stores, and lean tissue. These weight loss techniques are used by one-quarter to two-thirds of wrestlers.

Most wrestlers practice these weight-loss techniques believing their chances of competitive success will increase. Ironically, weight cutting may impair performance and endanger the wrestler's health. The combination of food restriction and fluid deprivation creates an adverse physiological effect on the body, leaving the wrestler ill-prepared to compete. In addition, forms of dehydration, such as sweating and catharsis (laxatives and forced vomiting), contribute to the loss of electrolytes as well as water. Wrestlers hope to replenish body fluids, electrolytes, and glycogen in the brief period between the weigh-in and competition. Reestablishing bodily fluids, however, may take 24-48 hours; replenishing muscle glycogen may take 72 hours, and replacing lean tissue might take even longer. In short, weight cutting appears to influence the wrestler's energy reserves, fluid levels, and electrolyte balances.

Despite repeated warning by the medical community, weight cutting (rapid weight reduction) remains popular among amateur wrestlers. Weight cutting has significant adverse consequences that may affect competitive performance, health, and normal growth and development. To enhance the educational experience and reduce the health risks for the participants, the American College of Sports Medicine (ACSM) recommends the education of coaches and wrestlers toward sound nutrition and weight control behaviors to curtail weight cutting and the enactment of rules that limit weight loss.

Because of the questionable benefits and the potential health risks caused by the procedures used for weight cutting by wrestlers (particularly adolescents), ACSM makes the following recommendations:

- 1) Educate coaches and wrestlers about the adverse consequences of prolonged fasting and dehydration on physical performance and physical health.
- 2) Discourage the use of rubber suits, steam rooms, hot boxes, saunas, laxatives and diuretics for weight cutting.
- 3) Adopt new state or national governing-body legislation that schedules weigh-ins immediately prior to competition.



4) Schedule daily weigh-ins before and after practice to monitor weight loss and dehydration. Weight loss during practice should be regained through adequate food and fluid intake.

5) Assess the body composition of each wrestler prior to the season using valid methods for this population. Males 16 years old and younger with body fat below 7 percent or those over 16 with a body fat below 5 percent need medical clearance before being allowed to compete. Female wrestlers need minimal body fat of 12-14 percent.

6) Emphasize the need for daily caloric intake obtained from a balanced diet high in carbohydrates (>55% of calories), low in fat (<30% of calories) and adequate protein (15-20% of calories, 1.0-1.5 g/kg body weight) determined on the basis of RDA guidelines and physical activity levels.

The minimal caloric intake for wrestlers of high school and college age range from 1,700 to 2,500 kcal/day. Rigorous training may increase the requirement by an additional 1,000 calories per day. Wrestlers should be discouraged by coaches, parents, school officials, and physicians from consuming less than their minimal daily needs. Combined with exercise, this minimal caloric intake will allow for gradual weight loss. Once the minimal weight has been attained, caloric intake should be increased to support the normal development needs and training of the young wrestler.

The American College of Sports Medicine encourages:

- Permitting more participants per team to compete by adding weight classes between 119 and 151 lbs. or by allowing more than one representative at a given weight class just as in swimming and track meets.
- Standardizing the eligibility rules for championship tournaments so that severe, rapid weight loss is discouraged at the end of the season (e.g., a wrestler dropping an extra weight class).
- Cooperative efforts between coaches, exercise scientists, physicians, dietitians and wrestlers to use research and education to determine the best medically sound system for selecting a weight class.

Through this Current Comment, ACSM hopes to further the sport of wrestling by providing a positive educational environment for the primary, secondary, or collegiate wrestler. ACSM believes these recommendations will enable the athlete to better focus on skill acquisition, fitness enhancement, psychological preparation, and the social interactions offered by the sport.

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Current Comments are official statements by the American College of Sports Medicine concerning topics of interest to the public at large.

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