



‘Female athlete triad’ hurts performance

Passage of Title IX of the Education Amendments of 1972 triggered a massive increase in the number of women participating in sports. Renamed the Patsy T. Mink Equal Opportunity in Education Act in 2002, Title IX may have done more to benefit the health of women in the United States than any other legislation in recent history.

In this column we have frequently written about the health benefits of physical activity. But just like everything else that is good for you, there are limits. Coaches, trainers and physicians are becoming increasingly aware of serious problems that develop when an athlete's nutrition lags behind the demands of intensive training. This can lead to the so-called overtraining syndrome, but in women it leads to a condition commonly called "female athlete triad." Not only can this seriously impair athletic performance, but it has the potential to adversely affect lifelong health.

Question: What is the female athlete triad?

Answer: The three components of the triad are disordered eating, disrupted menstrual cycle and osteoporosis. The disordered eating component is mainly related to low calorie intake and poor food selec-

tion. The inadequate calorie intake can be inadvertent, intentional or psychopathological.

Associated with calorie intake lagging behind the energy demands of exercise is a disruption in hormonal balance that leads to loss of the menstrual cycle. Along with infertility, the hormonal changes induce rapid bone loss, premature osteoporosis and bone fractures.

Q: What is the main cause of the triad?

A: Most experts consider "low energy availability" to be the main cause. The thinking is that athletes manage to get enough calories to support their bouts of training but run low on overall calorie needs for other daily activities and basic body functions. What ends up suffering the most is the reproductive system and the bones.

Q: How can the triad be treated?

A: Prevention is a preferred option to treatment. Coaches, athletic trainers and parents of young athletes should be sensitive to the warning signs of unexplained weight loss and frequent weight fluctuations, along with sudden increases in training volume and obsession with exercise. These signs often are linked with excessive concern about body image, disturbance in perception of one's own body, and extreme and bizarre

eating habits.

Once athletes start going down this path, it will eventually lead to declining performance in their sport and subsequent physical and mental health problems that might not be entirely reversible. The primary aim of treatment is to increase energy availability by increasing calorie intake and/or reducing exercise. However, treatment can require a multidisciplinary team of health care professionals who can deal with the medical, nutritional and psychological complexities of the condition.

Some health consequences of the triad are difficult to reverse. Restoring a disturbed menstrual cycle can take a great deal of effort and time. One study of women who had lost their menstrual cycles reported that 30 percent of the women in their study still had not recovered their cycle after eight years of treatment. Bone loss that occurs in the teens and 20s might be partially recovered, but bones never fully recover from this insult, leaving a woman to be a strong candidate for painful osteoporosis later in life.

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