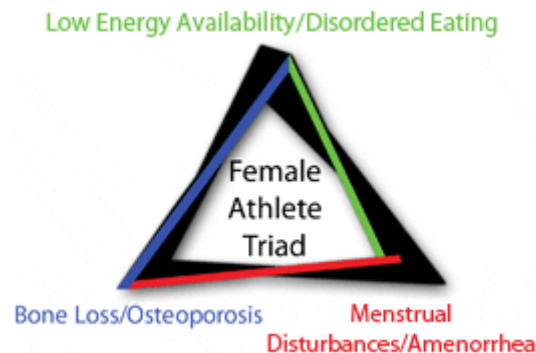


Female Athlete Triad

The Female Athlete Triad is a syndrome of three interrelated conditions that exist on a continuum of severity, including:

- Energy Deficit/Disordered Eating
- Menstrual Disturbances/Amenorrhea
- Bone Loss/Osteoporosis



The condition is most common in sports that emphasize leanness, such as cross country running, gymnastics, and figure skating.

In the past 25 years, much has been learned about symptoms, risk factors, causes, and treatment strategies for this problem. Studies involving different types of athletes have provided valuable information that has helped many physically active women avoid the health problems of this condition.

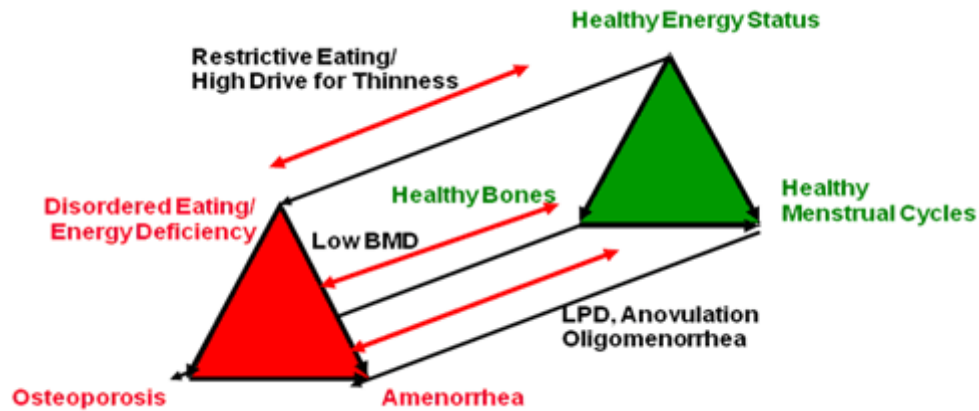
A New Model

Female Athlete Triad was first identified 25 years ago. Recently, the emergence of a new model for understanding Female Athlete Triad has greatly advanced understanding of the condition.

The three components of disordered eating, low bone mass and amenorrhea are now known to be interrelated, as energy deficiency associated with disordered eating plays a causal role in the development of menstrual disturbances, and both energy deficiency and a low estrogen environment associated with amenorrhea play a role in initiating bone loss.

In the new Triad model, these interrelationships are reaffirmed; however, each component of the Female Athlete Triad is represented as being on a continuum of severity from health to disease. At the “healthy” end of the continuums are optimal energy availability, the presence of normal ovulatory menstrual cycles, and optimal bone health. At the “unhealthy” end of the continuums are the clinical outcomes associated with each Triad component, including

energy deficiency, with or without disordered eating; abnormal menstrual cycles, referred to as functional hypothalamic amenorrhea; and bone loss, the most severe cases of which are called osteoporosis.



Another point the new model of Female Athlete Triad highlights is that many athletes may not present with the extreme ends of the continuum, but rather may display intermediate, or “subclinical,” presentations of one or more of the conditions, and, most importantly, that progression along the three continuums can occur at different rates.

For example, an athlete may show signs of restrictive eating, but not meet the clinical criteria for an eating disorder. She may also display subtle menstrual disturbances, such as a change in menstrual cycle length, anovulation, or luteal phase defects, but not yet have developed amenorrhea. Likewise, she may be losing bone, but may not yet have dropped below her age-matched normal range for bone density.

While the conditions represented by each continuum can occur independent of the other two conditions, it is more likely that, because of the clear associations between the three conditions, it is likely that an athlete suffering from one element of Triad is also suffering from the others.

Thanks to the *The Female Athlete Triad Coalition* for providing this information. The Female Athlete Triad Coalition is a US non-profit organization, representing key medical, nursing, athletic, and sports medicine groups, as well as concerned individuals who come together to promote optimal health and well-being for female athletes and active girls and women.

The Coalition developed from the international, collaborative desire to support cultures that promote healthy athletic environments, establish public policy, effect change in national and international governing bodies, eliminate inappropriate dietary treatment practices of female athletes, provide education about the Triad, and determine the scope of the problem through research. For more information check out their website below.

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