

FEMALE ATHLETE TRIAD

Sports and exercise are healthy activities for girls and women of all ages. But a female athlete who focuses on being thin or lightweight may eat too little and/or exercise too much. Doing this can cause long-term damage to your health or even death. It can also hurt your athletic performance and/or make it necessary to limit or stop exercise. Three interrelated illnesses may develop when a girl or young woman goes to extremes in dieting or exercise. Together these conditions are known as the "female athletic triad":

1. **Disordered eating:** Abnormal eating habits (i.e., crash diets, binge eating) or excessive exercise keeps your body from getting enough nutrition.
2. **Menstrual dysfunction:** Poor nutrition, low calorie intake, high energy demands, physical and emotional stress or low percentage of body fat can lead to hormonal changes that stop your menstrual periods (amenorrhea).
3. **Osteoporosis:** Lack of periods disrupts your body's bone-building processes and weakens the skeleton, making your bones more likely to break.

Females at risk

Females in any sport can develop one or more parts of the triad. At greatest risk are those in sports that reward being thin for appearance (i.e., figure skating, gymnastics) or improved performance (i.e., distance running, rowing). Fashion trends and advertising often encourage women to try to reach unhealthy weight levels. Some female athletes suffer low self-esteem or depression, and may focus on weight loss because they think they are heavier than they actually are. Others feel pressure to lose weight from athletic coaches or parents. Female athletes should consider these questions:

- Are you dissatisfied with your body?
- Do you strive to be thin?
- Do you continuously focus on your weight?

If the answers are yes, you may be at risk for developing abnormal patterns of eating food (disordered eating), which can lead to menstrual dysfunction and early osteoporosis.

Disordered eating: Although they usually don't realize or admit that they are ill, people with disordered eating have serious and complex disturbances in eating behaviors. They are preoccupied with body shape and weight and have poor nutritional habits. Females are 10 times more likely to have disordered eating compared with males, and the problem is especially common in females who are athletic. The illness takes many forms. Some people starve themselves (anorexia nervosa) or engage in cycles of overeating and purging (bulimia). Others severely restrict the amount of food they eat, fast for prolonged periods of time or misuse diet pills, diuretics or laxatives. People with disordered eating may also exercise excessively to keep their weight down.

Disordered eating can cause many problems including dehydration, muscle fatigue and weakness, an erratic heartbeat, kidney damage and other serious conditions. You may not get enough calcium, which can lead to bone loss. It's especially bad to lose bone when you are a child or teenager because that's when your body should be building bone. You may also get hormone imbalances that lead to more bone loss through menstrual dysfunction.

Menstrual dysfunction: Missing three or more periods in a row is cause for concern. With normal menstruation, your body has estrogen, a hormone that helps to keep bones strong. With amenorrhea, you may not get the estrogen you need and may lose bone density and strength (premature osteoporosis). If this happens during youth, you may also get serious problems later in life when the natural process of bone mineral loss begins after menopause. Amenorrhea may also cause stress fractures and make it difficult to get pregnant if you ever want to have a baby.

Osteoporosis: Bone tissue wears away, making your skeleton fragile. Low bone mass puts you at increased risk for fractures.

Get treatment

Recognizing the female athletic triad is the first step toward treating it. See your doctor right away if you think you might have disordered eating, miss several menstrual periods or get a stress fracture in sports. Give the doctor your complete medical history including:

- What you do for physical activity and what you eat for nutrition.
 - How old you were when you began to menstruate and whether you usually have regular periods.
 - If you are sexually active, use birth control pills or have ever been pregnant.
 - If you have ever had stress fractures or other injuries.
 - Any changes (up or down) in your weight.
 - Any medications you are taking or symptoms of other medical problems.
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- Family history of diseases (i.e., thyroid disease, osteoporosis).
 - Factors that cause stress in your life.

The doctor will give you complete physical and pelvic examinations and may use laboratory tests to check for pregnancy, thyroid disease and other medical conditions. In some cases you may also get a bone density test. Treatment for the female athletic triad often requires help from a team of medical professionals including your doctor, a nutritionist and a psychological counselor.