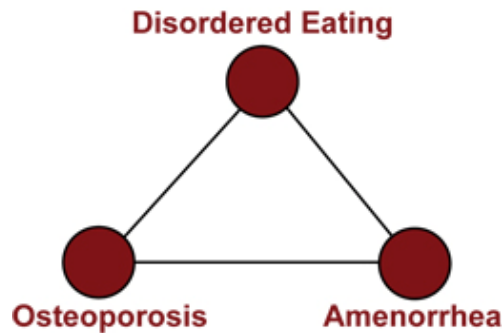


The Female Athlete Triad

Sport is a great way for girls and women to build strong, healthy bodies, increase self-esteem and develop a life-long love of physical activity. However, some female athletes participate in sport in a way that is harmful to their health and well-being. The **Female Athlete Triad** is a serious health concern that has been identified among athletes, particularly girls and women in competitive sport.



The **Female Athlete Triad** refers to three health problems that are commonly linked in female athletes:

Disordered Eating Habits

Disordered eating is when an athlete's attitudes about food, weight, and body size lead to eating and exercise habits that can put her health and well-being at risk. It may begin as a way to lose a few pounds or get in shape, but these behaviours can quickly get out of control, become obsessions, and may even turn into an eating disorder, like anorexia or bulimia.

Loss Of Menstrual Periods (Amenorrhea)

When an athlete over-trains, doesn't eat enough food or doesn't have enough fat on her body, she may lose her menstrual period or not even begin to menstruate at all. If an athlete doesn't have enough body fat (at least around 20% of her total body weight), her body won't produce the hormones it needs for regular menstrual cycles each month. If an athlete has irregular periods, has stopped having her period or hasn't gotten her first period by age 16, it could be a signal that something is wrong in her body and she should see a doctor. (Amenorrhea can also be caused by other factors like stress, and does not necessarily mean that an athlete is experiencing disordered eating.)

Weak Bones (Osteoporosis).

To make strong bones, the body produces a bone substance called bone matrix. The body needs food and energy in order to build bone matrix. Calcium then makes the bone matrix rock hard. The role of estrogen is to get the dietary calcium to the bone where it can be used. When an athlete loses her period it indicates that the body does not have enough food energy for this important function. Therefore the body is unable to absorb dietary calcium. If the body does not have enough energy for menstrual periods, it will not have enough energy to build bone matrix. The result is osteoporosis, which is a weakening of the bones that makes the athletes prone to fractures. When an athlete has osteoporosis, such fractures can even occur during lower impact activities like walking. All athletes should have healthy bones. But if an athlete's body isn't producing enough hormones (like estrogen), her body will not be able to replace old bone cells with healthy new cells. This weakening of the bones is called osteoporosis. Osteoporosis is common in older women after menopause, but young female athletes who don't eat enough food or who over-train are also at risk. When bones become weak, athletes can have stress fractures, breaks, or even spine and hip fractures later in life.



The Female Athlete Triad

Signs and Symptoms

There are many signs and symptoms of the female athlete triad. These include:

- stress fractures,
- loss of menstrual period,
- Any sign of disordered eating
- Irregular periods or no periods (Note: If an athlete uses birth control pills to make her periods regular, she may have a problem and not even know it)
- low weight,
- low body fat,
- low endurance and energy,
- fatigue,
- cold intolerance, and
- intestinal difficulties.

If you notice any of these symptoms in an athlete, involve a medical professional immediately. Ensure that they are informed about the female athlete triad and will help build a team around the athlete (coaches, parents, physicians, registered dietitians, mental health professionals) to support the recovery process.

What are the risk factors for developing the triad?

- Being a competitive female athlete
- Playing sports where you believe that your *body weight, shape and physical appearance are important*
- Exercising and training beyond the limits of your body
- Believing that winning is everything or participating in sport to please other people
- Spending all your time on your sport and not having other interests and activities in your life

How is the Female Athlete Triad Treated?

An athlete with the Female Athlete Triad or parts of the Triad should see a doctor immediately. She may also need to see a counselor or another professional to talk about her eating and training habits. If an athlete starts eating as much food and fat as her body needs and stops over-exercising, her periods should return to normal. Left untreated, the Female Athlete Triad may leave the athlete with permanent damage to her bones and reproductive system.

How You Can Prevent the Triad and Stay Healthy and Well:

- Eat a variety of foods every day- including foods with fat in them.
- Don't exercise too much. Make sure you take rest days.
- Tell your doctor about any changes in your menstrual periods.
- Ignore advice about dieting and controlling your weight.
- Get information from the BodySense program!
- Learn about disordered eating. Watch for the next issue of the BodySense Newsletter, called Understanding and Preventing Disordered Eating.



The Female Athlete Triad

Ask BodySense

Is it normal for female athletes to stop having their menstrual period because they train so hard?

There can be many reasons why a girl may have irregular periods or stop having her period. If her periods stop or become irregular because she trains too hard, it is not normal or healthy. In general, it is rare for a healthy young woman to stop having her period. Some young women who have disordered eating stop menstruating. An athlete may stop menstruating if her body fat gets too low. Missing her period is not a sign of dedicated training – it is usually a sign that she is not eating enough foods that have fat in them. She should see a doctor quickly (within 3 months) to find out what is wrong and to make sure her bones are strong and have not been damaged.

Should I worry about the Female Athlete Triad if I haven't started menstruating yet? I've heard that some female gymnasts don't get their period until they are 17 years old.

There is a wide age range for a healthy young woman to get her first period. Most women start their period between the ages of 10 and 16. If an athlete has not started her period by the age of 16, she should see her doctor to make sure she has no serious health problems. If the problem is that she has been training too hard and not eating enough, her bones could already be weakened. That is why it is very important for young growing athletes to eat enough foods to support both their training and their growth.

Look Into It

For more information on nutrition, check out these sources:

www.aafp.org/afp/20000601/3357.html Julie A. Hobart, M.D. and Douglas R. Smucker, M.D., M.P.H., *The Female Athlete Triad*, American Family Physician, June 1, 2000.

Debbie Stanley, *Understanding Sports and Eating Disorders*, Rosen Publishing Group Inc, 2000

Athletes@Risk program, Sunnybrook & Women's College Health Sciences Centre, 1-800-363-9353 or e-mail: **nancy.rocci@swchsc.on.ca**.

This is a preventative educational program for female athletes in recreational and competitive sport.