



Sports Anemia



iron deficiency anemia in female athletes and male endurance athletes is often recommended. An athlete with low ferritin and iron levels, and normal hemoglobin and hematocrit, is considered to have iron deficiency, but not iron deficiency anemia. If the athlete also has low hemoglobin and hematocrit levels, then he or she has iron deficiency anemia.

► Sports anemia Treatment ◀

Treatment is designed to prevent the loss of iron stores through a balanced food intake or iron supplements and to prevent true anemia. The effectiveness of treatment is judged by clinical and laboratory criteria. The only treatment for true anemia is iron supplementation, often with iron pills prescribed by a physician.

► Diet Therapy in Sports anemia ◀

The best way to fight with sports anemia is prevention. It can be prevented through proper nutrition that includes all the necessary ingredients, vitamins and minerals. People who exercise must have a high protein diet with high iron content.

Foods that are good sources of protein and iron are:

Red meat , Poultry , Fish , Eggs



Very intense training, especially at the outset of an exercise program
Poor iron absorption
Loss of iron through sweat
Gastrointestinal blood loss
Destruction of RBCs

► Sports anemia Symptoms ◀

Athletes with iron deficiency anemia have some symptoms such as:
Palpitation , Dyspnea , Fatigue , Weakness
Symptoms of sports anemia:
Sometimes with no signs and symptoms ,
Mild fatigue

► Sports anemia Evaluation ◀

Diagnosis is performed through taking medical history and physical exam. Lab tests may be ordered, and are particularly important in assessing iron stores in the body. These tests include the level of hemoglobin, hematocrit, ferritin and iron.
Routine screening for iron deficiency and

SPORTS ANEMIA



Sports Anemia

It occurs when trained athletes experience low hematocrit and ferritin levels.

Also, disproportionatlarge expansion in plasma volume in sports cause dilutional anemia.

Sports anemia is a false anemia and a beneficial adaptation to aerobic exercise, caused by an expanded plasma volume that dilutes red blood cells (RBCs).



▶ Sports anemia ◀

Athletes can develop two more types of anemia:

1.Acute anemia, with a sudden onset and a reduction in hemoglobin concentration and hematocrit due to an extreme increase of the physiological amount of intravascular hemolysis. This phenomenon causes a release of free hemoglobin that can result in hemoglobinuria.

2.Anemia with a gradual onset, which starts with a negative iron balance and low serum iron levels, which eventually can develop into iron deficiency anemia.

Athletes tend to have lower hemoglobin concentrations than sedentary counterparts; which generally occurs in the early phase of training. This has been called sports anemia.



Sports anemia is a term applied to three different conditions:
Hemodilution , iron deficiency anemia , foot-strike anemia

Females, children in growth age, vegetarians, endurance athletes are at high risk of sports anemia.

Sports anemia goes away by itself even with continued training; while, true anemia does not.

- ▶ Sports anemia Causes ◀
- ▶ Plasma volume expansion
- ▶ Reduced hemoglobin synthesis
- ▶ Increased destruction of RBCs

Sports anemia can also be caused by an inadequate protein intake especially in the early stages of training.

- ▶ Sports anemia Risk factors ◀

A diet that is low in iron, protein, vitamin C, vitamin B12 and/or folic acid