Low Iron May Have You Feeling Fatigued

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You are ready for your run but right from the start your legs are heavy and you have no energy. After slogging for several minutes and walk home. What's wrong? You have had enough sleep, you are hydrated, and fueled. Yet you feel blah! You could be suffering from low iron stores or even iron deficiency anemia. Despite the importance of iron to your performance, most runners do not check their body's iron levels. Over a period of time your iron levels can slowly decrease until your body just feels tired and unable to go out and run, or you press on but struggle with every workout.

Runners need iron as it is necessary for production of hemoglobin in your red blood cells. Hemoglobin carries oxygen from the lungs to the muscles. If your hemoglobin level is low, less oxygen reaches your muscles. Also iron is a part of many other substances in the body. With iron deficiency anemia your hemoglobin level is reduced. With iron depletion your hemoglobin can be normal but ferritin (iron stores) significantly decreased.

Iron is part of the hemoglobin molecule. Hemoglobin is carried through the bloodstream in red blood cells. It carries 98.5 percent of the blood's oxygen. Distance runners do most of their training aerobically, i.e. at a pace where the oxygen they breathe in is sufficient to permit the metabolic energy release for their running. Anything that decreases blood hemoglobin, such as inadequate iron absorption through the diet, or excessive blood loss through the menses, can predispose you to anemia -- the end result being fatigue and the inability to train easily at previously easy paces.

Iron is also essential for metabolism itself. More than half of the enzymes used in fuel metabolism contain iron. Part of the "get fit" process is making more iron-containing enzymes in the working skeletal muscles. Anyone in hard training needs additional iron in the diet to increase the capability for metabolism.

As a runner you should monitor your hemoglobin and ferritin. Normal hemoglobin concentration ranges from 14 to 18 grams per 100 ml of blood for men, and 12 to 16 grams per 100 ml of blood for women. But for a runner, the lower end of normal should be extended by 1-2 grams per 100 ml, due to our increased blood volume. Ferritin is a measure of your body's iron stores. Normal ferritin levels are 10-20 ng/ml for women and 10-300 ng/ml for men. Training is seriously affected when ferritin levels drop below 20 ng/ml. A blood ferritin level of 200 ng/ml is considered optimal. Most women are in the 30s and 40s which is marginally okay. Those who dip into the 20s feel excessively fatigued or no improvement in training. If your ferritin level falls, eventually your hemoglobin will decline. Low ferritin can be viewed as an early sign.

Runners and especially females tend to have low iron due to many reasons. Pre-menopausal women are at greatest risk. We lose less iron and lose more than our non-runner friends. Runners have more blood volume than sedentary folks. Due to the increased iron in our blood it is more diluted which tends to keep our hemoglobin measure on the lower normal end. Runners tend to take in more iron than men. The typical high carbohydrate, low fat, low cholesterol runner's diet often includes little or no red meat. Red meat contains heme iron, that is more easily absorbed than plant sources of iron. Foot strike hemolysis is the breakdown of red blood cells when the foot presses against the ground. Although this is not a primary cause of iron loss it can be a problem for larger runners or those who constantly train on relatively small amount of iron is lost through sweat and urine. High mileage runners training in hot, humid conditions may lose iron through the GI tract is a problem for some runners and may add up over years of running. Finally women can have iron depletion in iron with heavy menstrual periods.

How do you know if low iron is a problem and what can be done? You will be dragging most of the time. All of us have those blurry eyes and a continual worn out feeling. Your performances slide. Your pulse rate may be elevated and your enthusiasm for running is just not what it used to be. You can only confirm iron deficiency with a blood test. You should find out both your hemoglobin and serum ferritin levels. If they are low you may have to take an iron supplement.

Low iron may be the most prevalent nutritional deficiency in American runners. A lack of iron will have an immediate negative effect on your running performance. Fortunately, iron depletion and iron deficiency can be corrected, and, by following a few simple dietary precautions, prevented altogether.
However it is best to avoid this problem with proactive measures. Pre-menopausal women need about 15 mg of iron per day, menopausal women and men require 10 mg of iron per day. You have to pay attention to your diet. Good food sources of iron are lean meat, oysters, egg yolks, dark green leafy vegetables, legumes, dried fruit, and whole grain or enriched cereals and bread.

Many years ago Colleen De Reuck demonstrated to me that it is really important to eat red meat several times a week. She had eaten an evening and a big hamburger on another night. She knows that really helps keep your iron up. Coach Joe Vigil once told me that he eats more red meat than anyone he has coached. Her performances certainly indicate excellent iron stores.

Another subtle way to get more iron is to cook in cast iron pans, especially when preparing your more acidic dishes like spaghetti. Drink vitamin C-rich foods with meals to increase iron absorption. Coffee and tea reduce iron absorption so never drink either with your meals. If you can triple your iron intake if you drink orange juice instead of coffee with your cereal and whole grain toast in the morning. Take your meals and make some subtle changes. The effect can be immense.

Lastly it is probably best to take an iron supplement if you are a pre-menopausal woman. Supplements in the form of ferrous gluconate, or ferrous fumarate are best. Dr. David Martin who has tested elite runners for nearly three decades once told me that he takes expensive iron supplements and buy the "cheap" ferrous stuff. I have followed that advice for nearly three decades and only need to take my iron stores when I did a bout with being a vegetarian. I know the iron supplement and attention to your diet can keep you performing at your best for every workout.

Iron supplementation should be 1mg/kg of body weight/day and usually brings increased peopeness and energy in two to three days. The practical dynamics of iron supplementation include taking it with orange juice or some other form of vitamin C to enhance absorption. If you take it in the evening so it will not affect training as some get gut cramps if they train after taking it in the morning. Do not overdose as it can be toxic. Have routine blood chemistry and if your ferritin is greater than 60, switch to every other day supplementation. Take the cheap stuff in tablet or liquid form. Read the label and look for the milligrams of elemental iron in determining how much iron your supplement contains.

Keeping your iron up will keep you running well and having the energy to do your workouts. Check it out and see where you are at.

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