

# Iron Deficiency in Runners

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Outside of training deficiencies, low iron levels in runners is one of the most common reasons for poor results during workouts and races.

[Recent research](#) indicates that almost 56% percent of joggers and competitive runners suffer from an iron deficiency that severely hampers performance. By closely monitoring iron intake and supplementing if needed, you can quickly boost performance and prevent lulls in your training.

## Symptoms of Iron Deficiency in Runners

Determining if you have an iron deficiency can be somewhat difficult if you're a runner. The main symptom of low iron levels is fatigue and a slight shortness of breath. You can appreciate the dilemma here if you're a runner – you're always tired after a workout and shortness of breath defines our preferred mode of transportation.

If you are worried that you might be iron deficient, you should schedule an appointment with your physician for a blood test. It's a simple test that most doctors would be willing to provide if you tell them you're running a lot of miles and feeling more fatigued than usual. **Even if you are not iron deficient, you can establish a good baseline for your iron levels, which could help you identify an iron problem down the road.**

The major results of interest to runners are: hemoglobin (Hg), hematocrit (Hct), iron (Fe), total iron binding capacity (TIBC), and ferritin. In anemia, your hemoglobin and hematocrit, which are a measure of your red blood cell count, are low. In iron deficiency, your iron is low, your total iron binding capacity is high (meaning there is lots of extra room to bind more iron), and your ferritin (a measure of your iron stores) is low. In my experience coaching elite runners, a ferritin level less than 30 ng/ml in women and less than 40 ng/ml in men is often enough to reduce performance and impact your running.

## Why is Iron Important for Runners

Red blood cells, which contain hemoglobin (an iron-containing protein), transport oxygen to your working muscles when you run. If you have low iron levels, you will generate fewer red blood cells and your hemoglobin levels will decline. Therefore, less oxygen will be transported to your muscles, and running performance will suffer.

## How Runners Lose Iron

Runners lose more iron than non-runners for a multitude of reasons.

Through your feet – First, a process called foot strike hemolysis occurs in runners, especially those who run high mileage. Foot strike hemolysis is a process where red blood cells are damaged when the foot hits the ground, thus reducing your hemoglobin levels.

Through sweat – Iron is lost through sweating. While the amount of iron loss isn't staggering, for a runner working out in hot and humid conditions, the losses can easily add up.

Through the intestines – Loss of iron through the GI tract (primarily the stomach or large intestine) is a problem for some athletes. Iron loss through the GI tract is fairly

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minor, but there may be a cumulative effect over months of running that leads to iron deficiency.

Female runners – Finally, female runners have an especially difficult time maintaining proper iron levels since they also lose iron during menstruation.

## How to Supplement

As you can see, the cards are stacked against you as a runner when it comes to maintaining your iron levels. Therefore, it is important that you consciously monitor your iron intake through your diet and with supplements, if you already have low levels.

### Iron rich foods

Good food sources of iron include: lean meat, oysters, egg yolk, dark green leafy vegetables, legumes, dried fruit, and whole grain or enriched cereals and bread. If you are worried about your iron levels, avoid drinking coffee, milk, or tea with iron-rich meals, as calcium inhibits iron absorption. In addition, you should drink vitamin C with your iron rich foods since vitamin C aids in absorption.

### Supplementation

I suggest most runners be on an iron supplement unless their iron levels have tested high in the past.

- When you go to buy an iron supplement, make sure it's in the form of ferrous sulfate. Usually, you can find iron at a health store like vitamin world or a GNC. You can take iron in a pill or liquid form, whichever works best for you. Pills are often easier to find, but liquid absorbs better.
- Like when you're eating, avoid calcium an hour before and an hour after taking your iron. Likewise, take with vitamin B (a pill or orange juice) and a B-complex supplement to aid absorption.
- I suggest taking your supplement before bed. Iron supplements can sometimes cause minor stomach issues and gas. If you take them at night, it probably won't bother you. If your stomach does bother you, taking ferrous gluconate rather than ferrous sulfate can be easier on your stomach. Iron supplements can also cause constipation, so you could consider a stool softener if needed.
- If you're just looking to maintain your iron levels, supplement with 30mg of elemental iron. If you are iron deficient, supplement with 60mg of elemental iron.

By paying attention to your iron levels, getting tested if you think you may be low, and increasing your iron intake through diet or supplements, you can avoid lulls in your training and boost performance.