

Fueling the Runner: Pumping Iron

It's Not Just For The Weight Room

It makes sense that incorporating a good strength regimen would be a great way to improve fitness and help avoid injury. Have you thought much about the importance of dietary iron on your performance? Iron may seem like the last thing on your mind when you are breaking a good sweat. But you are actually losing a small amount of iron with that sweat. Ensuring that dietary iron is up to par is an important factor in performance.

So, what is it about iron makes it so important? It is an essential micronutrient – a mineral that helps red blood cells transfer oxygen to body tissues. It also plays a role in the transfer of energy within cells. Hopefully you can appreciate the need for oxygen transport and adequate energy release in your capabilities as an endurance athlete. We can't forget that iron is also needed for the production of red blood cells and it supports the maintenance of a healthy immune system. An iron depleted state can lead to iron deficiency anemia. Ultimately, iron deficiency anemia makes you less aerobically efficient and reduces your endurance capabilities – in other words, you will tire more easily.

Iron deficiency anemia is commonly associated with female athletes. However, it should be of concern for both male and female runners. Runners are different from other athletes in that we lose some iron through slight gastrointestinal bleeding on runs over 6 miles. There is additional iron loss in foot strike when blood cells burst due to pounding the pavement. Then there are the typical losses any athlete experiences, such as through sweat, urine, and blood and the greater iron turnover in tissue.

There is one other consideration to take into account as a runner. It has been coined "sports" or "athlete's anemia." Sports anemia is not a true state of iron depletion. It is basically an iron diluted state caused by high blood plasma volumes related to intense training. Studies have shown that plasma volume can remain elevated for as long as a week after an event such as a marathon. Unfortunately, sports anemia does not respond to iron supplementation. (1)

How are you to know if you are anemic? One of the most common indicators of iron deficiency anemia is a feeling of weakness or fatigue. If you suffer from unexplained fatigue for a prolonged timeframe it wouldn't hurt to visit your physician for a basic blood test. Other general indicators you might take notice of include a sense of breathlessness, a slight elevation in resting heart rate, poor appetite, recurrent infections, poor concentration, and paleness of the skin, nail beds, and lining of the eyelids. Your diet can influence the risk of iron deficiency anemia. It is always important to be sure your diet includes foods rich in iron. However, it is beneficial to know that the rate of iron absorption can be influenced by multiple factors.

First, know that there are two forms of dietary iron, heme iron and non-heme iron. Heme iron is commonly found in animal sources and is more readily absorbed. Non-heme iron is primarily found in plant sources and is not absorbed quite as easily. Iron supplements are typically a source of non-heme iron.

Various components of the food we eat can also influence how well we absorb and use iron. Let us first cover what to do to enhance or promote iron absorption:

- Eat Vitamin C rich foods such as citrus fruits, green leafy vegetables, and strawberries. These types of foods or Vitamin C supplements are great to consume with iron rich foods or an iron supplement.
- The "Meat Factor." Peptides in meat such as chicken, beef, fish, and pork enhance iron absorption.
- If well tolerated, try taking your iron supplement on an empty stomach.
- Consider using a cast iron skillet for cooking additional iron into your diet.

Try to avoid the following since they can reduce iron absorbing capabilities:

- Calcium inhibits both heme iron and non-heme iron absorption. Do not take a calcium supplement with your iron supplement, and try to avoid drinking a glass of milk with your iron supplement.
- Phytic acid or phytates are often found in legumes, rice, grains, nuts, peanut butter, soy protein, seeds, and bran. This is a tough one since you would not want to omit these foods since they are a great part of a healthy diet. Buying these types of foods fortified with iron when possible will help if your diet is otherwise low in iron.
- Strong tea and coffee, herb tea, cocoa, and red wine. It may be best to stick with water or juice when taking your iron supplement.

Some people really do not tolerate iron supplementation well. You may experience constipation, nausea, cramping, or diarrhea. If so, try taking the iron supplement with food. You could try breaking up your dosage throughout the day, or consider taking it just before bed. Also, be sure to eat a healthy diet rich in fiber and plenty of fluids.

Last, but not least, you can get too much of any good thing. Well, in a supplemental form anyway. If you think you may be experiencing symptoms of anemia please talk with your doctor before taking high dose supplements.

