

The "Iron Issue" Simplified

1. The Issue:

Too many runners train and race on low serum ferritin (iron) stores. Your body uses ferritin to make hemoglobin, which binds oxygen to red blood cells. Low ferritin thus deprives your muscles of oxygen and makes you slower than you should be! It's a handicap that you may be suffering from right now- especially if your mileage is higher than normal for you.

"Anemia" and "iron depletion" are not identical conditions (though either will hurt your performance). When runners are tested for "anemia," hemoglobin and hematocrit are measured. When a tired runner requests a blood test these numbers often turn out normal, and when this happens, many doctors tell the athlete they have no problem. However they typically neglect the iron depletion (ferritin) blood test, thereby failing to diagnose the problem.

I don't mean to disparage doctors, but in my experience many "family" doctors don't understand running well enough to give college athletes the correct advice. That is why I need you to read this outline thoroughly and advocate for yourself so this doesn't ruin your season!

2. Symptoms:

Low serum ferritin stores can be hard to diagnose because the symptoms mimic the symptoms of hard training:

- Unusual fatigue during or after workouts, or throughout the day.
- Slow recovery from hard sessions.
- Decrease in performance for no clear reason.
- Legs that ache more than normal after hard sessions.
- More lactate production ANY time the oxygen system is taxed.
- Lethargy and often decreased motivation.
- Increase rate of OVERUSE INJURIES- because iron deficient runners "train tired" more than their teammates, they get hurt more. The sore tired muscles don't absorb force as well and the runner's weakest link turns into an injury.

3. Why is it so common in RUNNERS (and not stick-and-ball athletes)? So much of what runners do depletes stored iron:

- Iron is lost through sweat- we sweat a lot.
- Iron is lost through footstrike when red blood cells are destroyed (yes, this happens).
- INCREASING your training volume taxes your iron stores.
- Women are vulnerable because of menstruation.
- Runners in hard training have higher BLOOD VOLUME requiring ADDITIONAL stored iron.
- A lot of runners try to cut meat out of their diet. This can be a direct cause of the problem.
- Some runners experience mild GI bleeding without knowing it. These athletes are losing iron.
- A lot of runners take anti-inflammatories like ibuprofen and naproxen sodium (Advil and Aleve). These also can cause mild GI bleeding, and therefore iron loss.

4. How much stored iron/ferritin do you need? "Safe" numbers vary among individuals. In general:

- Many men start having problems under 50ng/ml. Most men feel it if they drop below 40 and almost all men are slowed when the reading is less than 30.
- The "safe" number for women is also at least 40-50. Most will have problems under 35 and anyone will be affected if the number is less than 20. Single digits indicate essentially no stored iron and a dramatically reduced ability to bind oxygen.
- My wife lost two entire years of her college career because neither her doctor, nor her coach understood what was happening to her. Once learning about it, she began supplementing and being tested regularly. She set all her PRs after graduating from college because she was finally HEALTHY. She has learned over the years that when she's feeling good and running well, her ferritin is around 80.

5. A blood test is the only way to accurately diagnose this problem. How can you get the blood test? It can be a hassle because a lot of caregivers are so misinformed about this problem. I have seen some absurd obstacles thrown in front of athletes who are trying to deal sensibly and proactively with iron issues. You need to know the following:

- You must ask your doctor to **specifically** prescribe the test for serum ferritin. Asking for "bloodwork" usually means you are tested for hemoglobin and hematocrit only. Be prepared to embellish the symptoms of anemia in order to get your doctor to cooperate. Some doctors don't understand that **an athlete can have normal hemoglobin and hematocrit but have low ferritin.**
- When the test is done, you must request a copy of the results. **YOU NEED TO SEE THE NUMBERS WITH YOUR OWN EYES.** I have had countless athletes told their numbers were "normal" when in fact they were entirely too low for endurance training. Please understand that "normal" to a hospital only means you don't need to be admitted. MANY

caregivers consider numbers in the teens to be “low-normal,” but not problematic. I once had a male athlete told his ferritin was within the “normal range,” and did not need to supplement. His struggles continued for two more weeks before I suggested he demand a copy of the numbers be faxed to him. His ferritin level was 6, within their “normal range” of 5-300. So, two weeks he could have been supplementing were gone and ultimately his season was ruined.

- I cannot stress this enough: what is “normal” for a non-runner can be completely inadequate for a college athlete. Yet, you can expect a phone call telling you “everything’s fine!” You must demand the numbers.

6. If you are below the “safe” numbers above, you need to supplement with generic liquid iron. Go to the pharmacist and ask for a bottle of FerroSul or something like it. I get it for \$4.76 a bottle at CVS, and one bottle lasts 3 months. Follow the directions on the bottle. **If they don’t know what you’re talking about, tell them the NDC number is 0904-1465-16.** They can look it up and order it by number for you.

Don’t waste your money on any of the overpriced GNC stuff. Also, don’t waste your money on pills, which are much more expensive per dose and absorb very poorly. Pills are better than nothing, but most people get better and faster results with liquid.

7. Do’s and Don’ts:

- DO take it with vitamin C (or OJ), which enhances absorption.
- DO eat lots of fresh fruits and veggies (you should anyway) because iron can be constipating. A little shredded wheat at breakfast time never hurts.
- DO try to get iron from your diet. It absorbs BEST from lean red meat. Dark green veggies are also an important source of iron.
- DON’T drink a lot of coffee, especially when you’ve just taken iron. Caffeine inhibits iron absorption
- DON’T take it when you’ve had dairy products because calcium inhibits absorption as well. Many people think they are getting enough iron because they get it in a multi-vitamin. This is usually false because, again, iron in pill form absorbs very poorly, and the calcium in the multi-vitamin will inhibit iron absorption. Fortified cereals are usually a poor iron source because they are eaten with milk.
- Don’t overdo the anti-inflammatories (such as naproxen sodium, ibuprofen) because they lower ferritin by causing small amounts of gastric bleeding.

8. Stories:

- When I was coaching in WI a few years ago I had a young woman who looked like she felt awful and ran that way too. In mid-September she was barely in our top 20 (out of 28 athletes). I convinced her to get tested, and her ferritin was 2. She began supplementing immediately and by the end of the season she was our #2 runner and 45th at NCAAs. She went on to qualify for the NCAA Indoor Championships 5k by running 17:21 and the outdoor 10k by running 36:13. She had been unable to break 19:30 the year before. The following fall she became an All-American in cross country.
- The same team I coached at UW-Eau Claire had a first-year who had been recruited as a 400/800 runner, and who ran XC mainly for fitness. She had a hard time beating ANYONE on our team. When track season came, she was excited about improving her high school PR of 2:23, but she felt terrible and couldn’t break 2:30. I convinced her to get tested in March and ferritin was 3. After a few weeks of supplementation she began to improve and wound up running 2:21 in our championship meet. But the real excitement came last fall- after 6 months of supplementation; she discovered she was capable of running XC after all. She wound up the number 5 runner on the team that was the NCAA champion in 2009.
- And just to prove it can affect men: A lot E’town athletes don’t know that Dave Berdan struggled trying to qualify for indoor NCAAs during his senior season. After a pretty bad attempt at 5k during an indoor last chance meet, he had his ferritin tested, and it turned out to be 14. He saw the light, supplemented, and wound up a double All-American (10k/5k) at the NCAA Championships 2 ½ months later.

I put all this on paper, because I don’t want low iron stores to ruin your season, and by extension, your teammates’ and my season. If you have read all this and you don’t think it can, you are the type of athlete who is most vulnerable. Low-ferritin is particularly frustrating to me, as your coach, for the following reasons:

- Most everyone already knows how and WHY you get it.
- Most everyone does exactly what causes you to get it, yet thinks they’re not vulnerable; it’s always SOMEONE ELSE’S problem.
- YET, everyone is surprised when the test shows they have it, though there was every reason to assume they do.
- It’s so easy to avoid, you have to ask yourself why anyone has it all.

ANY QUESTIONS? PLEASE, LET’S NOT ALLOW THIS TO HURT OUR TEAM!