

Dear Doctor

The runner you are seeing is requesting that serum ferritin be tested to assess total body iron stores. In my experience, there are many distance runners who are iron deficient without being anemic or microcytic and these runners are not able to perform optimally when their serum ferritins are below 30. Iron deficiency for runners is not simply an issue of having adequate hemoglobin. At least one muscle enzyme involved in lactate metabolism, alpha glycerol phosphatase, is an iron containing enzyme and inadequate levels of this enzyme make runners incapable of racing and doing hard training. The listed lower limits of "normal" for ferritin values vary from lab to lab, and are sometimes listed as low as single digits. Runners with serum ferritins below 30 do not perform well. I encourage distance runners who are running year round to test their ferritin twice a year. Testing at the end of fall cross country season and after outdoor track season is over in late spring will allow identification of runners who are deficient in total body iron stores in time to allow replenishment of those iron stores by supplementation prior to the next season of hard running. Many runners require iron supplementation while running in order to prevent the development of iron deficiency.

While iron deficiency is more common in female distance runners, male distance runners experience it as well. Hard running and racing lead to transient ischemia of distal colon and rectal mucosa with proven increased losses of iron in stool compared to sedentary controls.

In my experience, testing for the development of anemia is testing for the last thing that occurs in iron deficiency. Testing ferritin is much more helpful in detection of iron deficit in runners than testing hemoglobin alone. Certainly, testing hemoglobin, HCT, and MCV may be useful in discovery of anemia that is due to factors other than iron deficiency.

If I can clarify my opinion regarding iron in runners please feel free to contact me at coltmenk@hotmail.com.

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Runner #1

How I felt when running intervals and tempo runs:

During the actual running portion of a workout, I would feel like I was carrying extra weight. My arms and legs felt heavy, but my lungs were fine- I knew I was in shape to be hitting the times I was supposed to, but I was struggling to keep my pace consistently fast. Also, my heart wasn't racing, but my muscles didn't want to move. As the workout progressed, my eyes would also start to feel heavy. After a repeat or the end of the tempo, I would feel dizzy.

How I felt when racing:

Racing is where the effects of running with low iron was the most pronounced. Even in the first lap of a race, I could tell that I would have difficulty finishing. Again, it felt like was carrying extra weight and especially during track, I would never get second winds or be able to push the pace. During cross country, my face would become pale at the end of races, and I would have difficulty keeping my eyes open after I finished. I would feel dizzy for about 5 minutes after finishing and had a hard time walking.

How I felt on long runs:

Long runs weren't as bad. Sometimes, especially if we had a hard workout a day or two before, I would feel more tired than normal, but overall, low iron didn't seem to affect my training because I wasn't exerting myself as much as I did during speed work.

How I felt when not running:

I felt fine when I wasn't running. Going up stairs was the only thing that made me feel more tired than I should be.

Any difficulties with fatigue or focus while studying, any academic difficulties, etc.:

Low iron didn't affect my schoolwork at all. I didn't have any trouble sleeping (in fact, I probably slept better because on hard workout days I was so tired), and I didn't have trouble concentrating.

Any chewing ice or craving ice:

Nope.

Runner #2

My coaches and I have compiled a list of symptoms of low ferritin. I wanted the view point of my Coach because he too said he could notice changes when it was low.

My list --

- Tired all the time, sometimes two naps a day, accidentally falling asleep in class
- Tight calves, unstretchable
- Very overly emotional(cry over the littlest things)
- Loss of appetite
- When running pushing really hard but only able to run something that was once a recovery pace
- Sluggish
- Longer recovery time after an arduous workout or run
- Very short of breath
- lower back pain

My Coaches--

- Bad form, hunching over
- Greatly struggling during workouts
- Slow recovery