

Suggested Low Ferritin Protocol: Buchanan Distance Runners

Low ferritin is typically defined as levels below 30 ng/mL in competitive athletes. When storage levels are low, athletes must exert significantly more physical effort to maintain their usual training paces. The primary symptoms observed in our program are unexplained fatigue, heavy legs, and a distinct tingling sensation in the thighs. Because every athlete is unique, some track athletes with low ferritin have still performed exceptionally well at weekend meets—often because a reduction in training volume (tapering) in the days leading up to the event temporarily masks the deficit.

Severely depleted ferritin occurs when an athlete's levels drop below 15 ng/mL. Ferritin and serum iron levels can experience daily fluctuations based on training stress, inflammation, and sleep. Over years of monitoring distance runners, our coaching staff prefers our athletes to maintain a baseline level **above 40 ng/mL**.

Depending on the individual, levels below 20 ng/mL heavily impact performance. Generally, cross country performances suffer more noticeably than track performances due to the sustained duration of physical exertion required in longer distance races.

Iron intervention should be considered anytime an athlete drops below 30 ng/mL. If ferritin levels fall below 20 ng/mL and directed supplementation fails to raise them above 30 ng/mL within 8–12 weeks, consulting a sports medicine physician is highly recommended.

Immediate Action Steps

1. **Check Your Levels:** Getting tested is simple. Visit buchananxc.com/ferritin.html.
2. **Notify Staff:** Relay all lab results directly to the coaching staff (Coaches Simpson, Weaver, Soares, and Bartosch).
3. **Take Action:** Once you receive your baseline numbers, utilize the targeted guidelines below to raise levels safely back above 40 ng/mL.

Guidelines for FERRITIN LEVELS Below 30 ng/mL

- **Dietary Audit:** Evaluate the athlete's intake of heavy dairy and highly refined foods (white bread, processed cereals, sugary snacks, cakes, and cookies). These foods lack natural iron. While some processed foods are "fortified," this synthetic non-heme iron is poorly absorbed by the body.
- **Increase Heme Iron (Highly Absorbable):** Lean red meats and beef liver are the gold standards for easily absorbed iron. Other excellent natural sources of heme iron include chicken, oysters, canned sardines, canned tuna, eggs, and fish.

- **Increase Non-Heme Iron (Plant-Based):** Plant sources are less absorbable on their own but provide great support. Include lentils, beans, pistachios (the best nut source for iron), dark chocolate (70%+), green leafy vegetables (especially cooked spinach), pumpkin seeds, sunflower seeds, and dried fruit.
- **Cooking Technique:** Cook meals using a cast-iron skillet. Food prepared in cast iron naturally absorbs small amounts of elemental iron during the cooking process.

Guidelines for FERRITIN LEVELS Below 20 ng/mL

- **Dietary Overhaul:** Strictly adjust the athlete's daily meals to focus heavily on the heme and non-heme combinations listed above.
- **Strategic Supplementation:** Traditional sports medicine review papers often recommend high-dose, slow-release ferrous sulfate (120–200 mg of elemental iron daily). However, standard iron salts are notorious for causing stomach cramping, nausea, and severe constipation. Due to advances in supplement formulation, we focus on three highly effective alternatives that cause minimal digestive distress and require fewer strict dietary restrictions:
 1. **Iron Bisglycinate (Chelated Iron):** Incredibly easy on the digestive tract and budget-friendly. High-quality options like *Thorne Iron Bisglycinate* are excellent choices.
 2. **Heme Iron Polypeptide (Proferrin Clear):** Mimics the natural iron found in meat. It utilizes an entirely separate absorption pathway in the gut, meaning it does not cause stomach distress and its absorption is not blocked by morning coffee, tea, or calcium. *Note: Proferrin Clear must generally be ordered directly online, as Amazon availability fluctuates.*
 3. **Desiccated Beef Liver:** The most natural, whole-food approach to maintaining solid ferritin levels. It is exceptionally gentle on the stomach and packed with natural vitamin co-factors (B12, Vitamin A, and Copper) that aid blood production. However, because the iron density per capsule is low, a large number of capsules are required daily to match the therapeutic curve of a supplement like Proferrin.

Supplementation & Hepcidin Timing Schedule

- **Avoid the Post-Workout Window:** Do **not** take iron supplements immediately after a hard workout. Strenuous exercise induces an inflammatory response that causes a hormone called *hepcidin* to spike, which actively blocks iron absorption in the gut for 3 to 6 hours post-exercise, **unless you can take it within 30 minutes!!!!**

- **The Best Time to Target:** Have the athlete take their supplement **first thing in the morning** (before a morning workout) or delay **at least 6 hours after** a hard afternoon practice.
- **Weekly Cadence:** Because we typically run three high-effort sessions per week (including race days), start by supplementing on those **three specific days per week** for the first 4 weeks. Spacing doses every other day reduces hepcidin blocks and maximizes absorption. If the athlete's fatigue does not improve after a month, increase the cadence to 5–6 days a week.

Recommendations for Critical Levels (Below 10 ng/mL)

1. **Remain Calm:** Do not panic. Ferritin levels fluctuate, and identifying the deficit is the hardest part. Once targeted supplementation and tracking begin, levels will steadily rebound.
2. **Monitor closely:** Strictly track compliance with the protocol for 8 weeks.
3. **Medical Intervention (IV Infusion):** If an athlete's ferritin remains stubbornly below 15 ng/mL after 8 weeks of disciplined oral supplementation, an intravenous (IV) iron infusion should be seriously evaluated. Consult directly with a sports medicine physician or hematologist to discuss this route. The coaching staff can provide trusted local medical contacts specializing in competitive youth athletes if required.
4. For specialized medical guidance, we recommend Dr. Badrinath Kulkarni, a local pediatrician focused on athletic ferritin levels. If your current doctor is not fully up to date on protocols for competitive runners, please reach out to his office:
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