

## **Iron Deficiency and Fatigue**

Many patients with fatigue as a main complaint are eventually diagnosed as having an endocrine problem. However, an often overlooked reason for fatigue in women who are menstruating is iron-deficiency. Iron is needed for thyroid hormone biosynthesis and action, including the conversion from the inactive thyroid hormone, T<sub>4</sub>, to the active hormone, T<sub>3</sub>. Women taking thyroid hormone are especially likely to benefit from treating iron deficiency. Men are unlikely to be iron deficient as the main reason for low iron in younger patients is loss through menses.

That severe iron-deficiency leads to anemia as manifested by low hemoglobin and hematocrit on a CBC blood test is well known. However, mild iron-deficiency leads to low ferritin in blood tests BEFORE a drop in hemoglobin and hematocrit occurs. An article published in the May 2003 British Medical Journal showed that patients with low ferritin, but normal hemoglobin and hematocrit, have fatigue that is reversed by iron treatment. Since Dr. Friedman's goal is early diagnosis of treatable diseases, he recommends measuring a ferritin level in all women who have fatigue. Performing a CBC is not needed.

Colon cancer can also give a low ferritin level, but it is unlikely in younger females whose main complaint is fatigue and who do not have weight loss. In men or older women, a low ferritin may warrant a colon cancer work-up, depending on evaluation by the patient's primary doctor.

The normal range for ferritin is usually between 30 and 300 ng/mL, but Dr. Friedman recommends iron treatment for everyone with a ferritin less than 60 ng/mL. The goal of treatment is to raise ferritin levels to a value between 70 and 90 ng/mL and is usually achieved with oral iron treatment, although as discussed below, a newly available iron patch is a good alternative. Raising ferritin levels to this range may be needed for patients with hypothyroidism to have an optimal response to thyroid hormone treatment. Dr. Friedman's philosophy is proper ferritin levels are crucial for good hormone health and he advocates attempting to raise them fairly rapidly in those with low levels.

Ferrous sulfate (325 mg orally, available over the counter) has usually been the recommended treatment, however this preparation is often poorly tolerated. Rather Dr. Friedman's first choice for iron supplementation is IronSorb by Jarrow's Formula. It contains Iron Protein Succinylate (IPS), 18 mg Elemental Iron in Gastric Protection Complex, an iron complex that is specially prepared to reduce irritation of the stomach in comparison to other forms of iron. IPS is gentle to the stomach because it dissolves in the intestine. There are 60 pills/bottle and the pills should be taken with meals. It can be purchased at several websites including Amazon. Dr. Friedman recommends one pill a day for a ferritin between 50 and 60 mg/dL, three pills a day for a ferritin between 30 and 50 mg/dL and five-six pills a day for a ferritin less than 30 mg/dL. Another alternative is to take Iron Protein Succinylate. It is available from Life Extension Institute (however, the price is higher for non-members) in Florida:[www.lef.org](http://www.lef.org). Dr. Friedman recommends taking Iron Protein Plus (2) 300 mg, 2-3 tablets 2 times a day. Each tablet has 15 mg iron from Iron Protein Succinylate. A secondary choice is Feosol made by GlaxoSmithKline.

Dr. Friedman recommends taking 1 to 3 pills a day of Feosol with Carbonyl iron which is a pure form of iron. It has 45 mg of elemental iron equivalent to 225 mg ferrous sulfate.

Ascorbic acid (vitamin C) at a dose of 250 mg helps with the absorption and can be taken with the iron. Bran, zinc, antacids and vitamin E may interfere with the absorption of iron.

Recently the Ironplus topical patch has been made available and can be purchased at <https://www.patchmd.com/Iron-Plus-Topical-Patch.html> or at Dr. Friedman's clinic on Tuesday nights. One patch a day is reasonable for those with a ferritin above 30 ng/mL and two patches a day or one patch plus Ironsorb is recommended for a ferritin level less than 30 ng/mL. There are no reports of constipation or gastrointestinal irritation with this patch.

Patients not responding to iron pills or patches may be prescribed IV iron treatment (requiring a hospital visit). All oral iron products should be taken at least an hour after thyroid medication. After taking iron for 3 months, a ferritin level should be rechecked and the dosage adjusted accordingly.

Common side effects of iron treatment include constipation and black stools. Patients should increase the fiber and fluids in their diets to avoid constipation. Patients may need a stool softener such as colace, also available over the counter. For more information about Dr. Friedman's Endocrinology clinic, please visit his website at [www.goodhormonehealth.com](http://www.goodhormonehealth.com). To schedule an appointment, please email us at [mail@goodhormonehealth.com](mailto:mail@goodhormonehealth.com)