

# Diet Recommendations for the IRON DEFICIENT Adult

**“... intakes of highly bioavailable forms of iron (supplemental iron and red meat) and of fruit, a dietary source of an enhancer of nonheme-iron absorption (vitamin C), promote high iron stores, whereas foods containing phytate (whole grains) decrease these stores. Individual dietary patterns may be important modulators of high iron stores.”**

Fleming, D. J., K. L. Tucker, P. F. Jacques, G. E. Dallal, P. W., Wilson, and R. J. Wood. "Dietary Factors Associated with the Risk of High Iron Stores in the Elderly Framingham Heart Study Cohort." American Journal of Clinical Nutrition 76 (2002): 1375-84.

Before recommending oral iron supplements to a patient whose hemoglobin is lower than normal, it is important to distinguish between iron deficiency anemia (IDA) and anemia of chronic disease (ACD). In ACD the lower than normal hemoglobin is in response to inflammation and the underlying cause should be identified and treated. If the patient is found to be iron deficient, often diet can improve hemoglobin values for patients, especially when the cause is due to inadequate dietary iron. The same diet can restore iron balance in the iron avid patient.

## Diet Recommendations for an Iron Deficient Patient

Consume at least three 4 oz.... portions of lean red meat per week. For vegetarians an increased consumption of foods with high non-heme iron content along with avoidance of substances that impair the absorption of iron. For a list of iron content in foods visit [www.irondisorders.org](http://www.irondisorders.org)

Substances that impair iron absorption include: coffee, tea, high fiber, calcium and eggs. Have these items at different times of the day or 2 hours prior to or after meat is consumed. Substances that improve the absorption of iron include naturally occurring beta carotene (not supplemental) and acidic foods such as tomatoes or oranges.

Once iron balance is achieved, continue on a balanced diet such as the following:

Get adequate daily protein from meat, soy or plant food combinations such as beans or lentils with rice. Reduce or eliminate refined sugar from the diet. Small amounts of honey, or molasses are okay. Limit the amount of sugar substitutes as well, especially aspartame. Stevia is a possible sweetener to consider. Do not cut complex carbs (whole grains) from the diet. Eat at least 3 portions of complex carbs per day. Eat at least 5 servings per day of fresh or fresh frozen fruits (berries are best choices especially for diabetics) and vegetables.

Though the iron in fruits and vegetables is not easily absorbed, these food items are essential for nutrients such as vitamin C, beta carotene and chlorophyll. Fruits and vegetables are a good source of antioxidants, which counter harmful free radical activity.

Consume at least two cups of dairy per day such as 8 oz.... glasses of skim-milk, yogurt (one with active cultures and no sugar). Sour cream and cheese are fine in moderation, just try to limit the fatty choices, but remember that fat is necessary for normal metabolism: olive oil, avocados, and most fish are good sources of fat.

## SUPPLEMENTS

**All patients should be evaluated before considering a diet additive or supplement. Otherwise, they can mask a potentially harmful, even fatal complication.**

Following evaluation, a one-dose-daily multiple vitamin with selenium is recommended for all groups with disorders of iron. Hemochromatosis patients should select a daily multi-vitamin without iron, even if they are trying to replenish iron stores caused by overbleeding. Consumption of a high iron diet should be sufficient for these patients because the tendency to load iron must be considered.

For the iron deficient patient, the daily multi-with iron might be beneficial until iron stores are replenished or improved. Taking supplemental iron without benefit of a physician's examination and tests could be harmful. Any use of supplemental iron should be determined appropriate and monitored by the physician. When hemoglobin has improved with diet and supplemental iron, but falls once the supplemental iron is discontinued, the patient should be examined for blood loss or other causes of anemia.

Iron balance can be confirmed by retesting serum ferritin, transferrin-iron saturation percentage (Tsat%) and hemoglobin. Iron Disorders Institute ranges for serum ferritin 25-75ng/mL; Tsat% 25-35%. A complete blood count also provides very helpful information as indicated below.

**“Anemia is not a complete diagnosis. If a patient is anemic, the underlying cause must be determined before supplemental iron is given. Iron is not just another vitamin, nor is it a cure for chronic fatigue.” James Cook, M.D.**

## Comparing blood tests for anemia of chronic disease (ACD) and iron deficiency anemia (IDA)

	ACD	IDA
Hemoglobin	Decreased*	Decreased
Serum ferritin	Increased	Decreased
TIBC	Decreased	Increased
Serum iron	Decreased	Decreased
Tsat% (transferrin/iron saturation percentage)	Decreased	Decreased
Erythropoietin	Inadequate	Adequate
MCV	Normal to slightly Decreased	Decreased
White blood cell	Variable	Normal
Red blood cell	Decreased	Normal to slightly Decreased
Serum transferrin receptor	Normal	Increased

\*Hemoglobin can go as low as 7.0g/dL in some ACD patients

## RESOURCES:

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