

Breakthrough common nutrition myths, see what's trending, catch up on latest research, and get great tips from our team of Registered Dietitians.

MYTH

All iron in food is absorbed the same way.

FACT

Not true. There are two types of iron: heme and non-heme. Non-heme iron comes primarily from plants and heme iron comes primarily from meat. Heme iron is easily absorbed by the body whereas non-heme iron must be changed before it can be absorbed.



ANEMIA – Did you know?

Iron Deficiency vs. Iron Deficiency Anemia:

Iron deficiency refers to when iron stores have dropped below a normal range (ferritin <14-22 in kids, <20 in adults) but Hgb remains within a normal range. In iron deficiency anemia, Hgb has dropped <110, ferritin stores are low, and drops in Hct and MCV are expected - everything is low!

33% of healthy Canadian children between 8-15 months of age have low iron:

Iron deficiency, not just anemia, can result in impaired child growth and development. Therefore, the key is to treat iron deficiency before it transitions to iron deficiency anemia.

Lower doses of iron are more effective in the elderly:

A RCT study examining the treatment of iron deficiency anemia in individuals over the age of 80 found similar rises in Hgb regardless of the amount of iron supplement used (15mg, 50mg, and 150mg/d). They concluded that low-dose iron supplementation is as effective as high dose iron supplementation in older adults, with less adverse symptoms reported in the low-dose iron group.

There are many drug/nutrient interactions with iron supplements:

Iron absorption can be reduced by medications and vitamin/mineral supplements containing aluminum, zinc, calcium, magnesium, PPI's, antibiotics and many more. Talk to your pharmacist for more information.

Serum B12 levels do not reliably reflect tissue B12 deficiency:

B12 deficiency is usually defined by serum B12 levels of <148 pmol/L and subnormal levels are considered 148-221 pmol/L. However, serum B12 levels do not reliably reflect tissue B12 deficiency. Up to 30% of patients with low-normal serum B12, levels have anemia and neurologic disease.

Oral B12 supplementation is just as effective as injection:

Higher doses of oral vitamin B12 (1000 ug/day) are as effective for normalizing markers of vitamin B12 status as intramuscular vitamin B12. However, intramuscular administration is recommended for individuals with significant neurological symptoms and when compliance is a problem. Lifetime treatment is required for pernicious anemia, while shorter treatment is effective if the underlying cause is resolved.

Serum potassium should be monitored when treating a B12 deficiency in patients with heart failure:

Patients with CHF and/or on diuretics, can have a rapid production of RBCs which may increase potassium demand. As a result, serum potassium should be monitored and managed appropriately if hypokalemia develops.

High levels of folic acid can mask a B12 deficiency, as a result, serum B12 should be checked concurrently with RBC folate.

Serum folate vs. RBC folate:

Serum folate measures the amount of folic acid in the blood; it is affected by dietary intakes of folic acid from the last 1-2 weeks. Red blood cell (RBC) folate levels measure the amount of folic acid stored in the body; as it is less influenced by recent intakes of folic acid, it is a more sensitive test for assessing folate deficiency.

Iron supplementation will not correct anemia associated with thalassemia.

Thalassemia is an inherited condition, which results in less hemoglobin and less red blood cells in the body than normal. Good nutrition and a balanced diet are important. Depending on the type of thalassemia and an individual's treatment plan, dietary iron may need to be restricted and supplements of folate, calcium, and vitamin D may be needed.

Dietary changes are not needed for hemochromatosis.

Primary hemochromatosis is a genetic condition which causes the body to absorb too much iron. As phlebotomy is the most important treatment, extreme dietary changes are not needed. Except for organ meats, limiting iron-rich foods is not recommended as this may lead to deficiencies in other nutrients (such as zinc and vitamin B12). Dietary changes which may be helpful in reducing the risk of complications from hemochromatosis include avoiding excessive iron from supplements and fortified foods, avoiding vitamin C supplements, limiting or avoiding alcohol, and avoiding raw fish and shellfish.

Anemia of chronic disease vs. iron deficiency anemia.

Anemia of inflammation and chronic disease (AI/ACD) is seen with the abnormal activation of the immune system (such as with cancer and inflammatory disorders), and with long-term illness and infection. This type of anemia is often confused with iron deficiency anemia (IDA) as both conditions present with low circulating iron levels in the blood; with AI/ACD stored ferritin levels are normal or high, while with IDA stored ferritin levels are depleted. Unless AI/ACD is accompanied by IDA, iron supplementation will not resolve the anemia; in cases of infection and malignancy, iron supplementation may prove harmful, as the extra iron is free to nourish pathogens and cancer cells. The focus for treatment of AI/ACD is to address the underlying issue.

References:

<https://www.ncbi.nlm.nih.gov>

<https://www.healthlinkbc.ca>

<http://www.thalassemia.org/learn-about-thalassemia/about-thalassemia/#thalassemiabrochures>

<http://www.toomuchiron.ca/hemochromatosis/dietary-precautions/>

<http://www.irondisorders.org/>

<https://www.albertahealthservices.ca/assets/info/nutrition/if-nfs-ng-healthy-infants-key-nutrients-iron.pdf>

Zlotkin SH, Ste-Marie M, Kopelman H, Jones A, Adam J. The prevalence of iron depletion and iron-deficiency anaemia in a randomly selected group of infants from four Canadian cities. *Nutr Res.* 1996;16(5):729-33.

Anemia Review Panel. *Anemia Guidelines for Family Medicine.* 3rd ed. Toronto: MUMS Guideline Clearinghouse; 2014
Are we giving too much iron? Low-dose iron therapy is effective in octogenarians.

<https://www.ncbi.nlm.nih.gov/pubmed/16194646>

Talk to your Registered Dietitian for more information.

Recipe of the Month

Beef and Vegetable Stir Fry Makes 4 servings

Ingredients

450g beef flank or pork tenderloin, ¼ inch slices
3 tbsp soy sauce, low-sodium
1 tbsp rice vinegar
1 tbsp hoisin sauce
1 tsp granulated sugar
½ tbsp cornstarch
3 tsp vegetable oil
1 tbsp fresh ginger, minced
450g green beans, trimmed, cut crosswise into 2” pieces
1 medium red/orange sweet bell pepper, cut into thin strips



Instructions

- 1) To make it easier to slice, freeze the beef, wrapped in plastic, for 20 minutes. Prepare the rest of the ingredients while the beef is in the freezer.
- 2) In a small bowl, mix soy sauce, hoisin sauce, vinegar, sugar, and cornstarch. Set sauce aside.
- 3) Heat 2 tsp oil in large skillet over medium heat. Add ginger and beef. Cook until beef is no longer pink, about 3 minutes. Transfer to plate.
- 4) Heat 1 tsp oil in large skillet over medium heat. Add green beans and beef. Cook until beef is no longer pink, about 3 minutes. Transfer to plate.
- 5) Heat 1 tsp oil in large skillet over medium heat. Add green beans and 2 tbsp water and cook for 4 minutes. Add bell peppers and 1 tbsp water. Cook over high heat, stirring until peppers are tender, about 2 minutes.
- 6) Add beef and sauce. Stir until beef is coated, about 1 minute.
- 7) Serve immediately.

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