



**For the week of
May 11, 2003**

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Editor:

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Vitamin C and iron are great partners

**When I gave blood,
they told me citrus fruits
were good sources of
iron. Is that true?**

Citrus fruit doesn't have much iron itself — a medium orange has only 0.1 milligrams of iron, for example. But, vitamin C does help the body absorb iron, especially one form of iron called "non-heme" iron.

Heme iron is the type found in meat that originally comes from hemoglobin (the iron-containing part of the red blood cell) and myoglobin (a compound in muscle tissue). Close to half of the iron in red meat is heme iron. Usually, about 20 percent to 25 percent of heme iron in food is absorbed by the body.

Non-heme iron is much more common in the diet, making up nearly 90 percent of the iron we consume. It's found in egg yolks and all sorts of plant-based foods, including fortified breakfast cereals, bran, prune juice, spinach, kidney and lima beans, whole wheat bread and soybean nuts. Unfortunately, only 2 percent to 20 percent of non-heme iron is usually absorbed — with most people absorbing closer to 2 percent.

Citrus fruits can help the body absorb non-heme iron through a chemical reaction that actually adds an electron to the ferric form of iron. That allows a series of changes to take place, making the iron more absorbable by the body.

Non-heme iron also is more absorbable when it is consumed together with heme iron. Also, a protein factor in meat, fish and poultry help the body absorb non-heme iron. Higher amounts of acid in your stomach can increase the amount of iron the body absorbs.

On the other hand, some foods decrease iron absorption. Tannins in tea, phytic acid in fiber, oxalic acid in spinach and some other vegetables, and high doses of calcium — especially the kind found in calcium supplements — all reduce the amount of iron your body absorbs. So, if you drink calcium-fortified orange juice, don't take your iron supplement at the same time.

Vitamin C-rich foods include sweet red and green peppers, peaches, papayas, broccoli, tomato products, strawberries, potatoes, cantaloupes, and, of course, citrus fruits and juices.

Low iron is one of the most common nutrient deficiencies. Adult men and women over 50 need about 8 milligrams a day, while women of childbearing age need 18 milligrams daily. Pregnant women should get 27 milligrams a day.

Chow Line is a service of Ohio State University Extension and the Ohio Agricultural Research and Development Center. Send questions to Chow Line, c/o Martha Filipic, 2021 Coffey Road, Columbus, OH 43210-1044, or filipic.3@osu.edu.