



Iron: Helping Your Child Get Enough

Iron in red blood cells carries oxygen to all parts of the body. When children don't get enough iron, they may look pale, act cranky, and not have much energy. Iron-deficiency anemia is the most common nutritional problem children have.

You can, however, prevent anemia without much trouble by following these guidelines:

1. Breast-feed your baby or give iron-fortified formula.
2. Start giving your baby iron-fortified infant cereal by the age of 6 months.
3. Teach your child to eat solid foods so he doesn't just drink milk.
4. Take some moderate care in planning your child's menu.
5. Serve nutritious food at snack time. Snacks shouldn't be just treats that provide calories with few other nutrients.

Iron Content of Foods

Children need 6 to 10 milligrams (mg) of iron per day. Except for milk, the foods listed in this chart offer significant amounts of iron.

Foods to Increase Iron and Iron Absorption

| | Elemental Iron, mg |
|--|--------------------|
| Commercial baby food, ^a heme iron | |
| Meat | |
| Baby food, lamb, junior, 1 jar (2.5 oz) | 1.2 |
| Baby food, chicken, strained, 1 jar (2.5 oz) | 1.0 |
| Baby food, lamb, strained, 1 jar (2.5 oz) | 0.8 |
| Baby food, beef, junior, 1 jar (2.5 oz) | 0.7 |
| Baby food, beef, strained, 1 jar (2.5 oz) | 0.7 |
| Baby food, chicken, junior, 1 jar (2.5 oz) | 0.7 |
| Baby food, pork, strained, 1 jar (2.5 oz) | 0.7 |
| Baby food, ham, strained, 1 jar (2.5 oz) | 0.7 |
| Baby food, ham, junior, 1 jar (2.5 oz) | 0.7 |
| Baby food, turkey, strained 1 jar (2.5 oz) | 0.5 |
| Baby food, veal, strained, 1 jar (2.5 oz) | 0.5 |
| Commercial baby food, ^a nonheme iron | |
| Vegetables | |
| Baby food, green beans, junior, 1 jar (6 oz) | 1.8 |
| Baby food, peas, strained, 1 jar (3.4 oz) | 0.9 |
| Baby food, green beans, strained, 1 jar (4 oz) | 0.8 |
| Baby food, spinach, creamed, strained, 1 jar (4 oz) | 0.7 |
| Baby food, sweet potatoes, junior (6 oz) | 0.7 |
| Cereals | |
| Baby food, brown rice cereal, dry, instant, (1 tbsp) | 1.8 |
| Baby food, oatmeal cereal, dry, (1 tbsp) | 1.6 |

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| Baby food, rice cereal, dry, (1 tbsp) | 1.2 |
| Baby food, barley, cereal, dry, (1 tbsp) | 1.1 |
| Table food, heme iron | |
| Clams, canned, drained solids, (3 oz) | 23.8 |
| Chicken liver, cooked, simmered, (3 oz) | 9.9 |
| Oysters, Eastern canned, (3 oz) | 5.7 |
| Beef liver, cooked, braised, (3 oz) | 5.6 |
| Shrimp, cooked moist heat, (3 oz) | 2.6 |
| Beef, composite of trimmed cuts, lean only, all grades, cooked, (3 oz) | 2.5 |
| Sardines, Atlantic, canned in oil, drained solids with bone, (3 oz) | 2.5 |
| Turkey, all classes, dark meat, roasted, (3 oz) | 2.0 |
| Lamb, domestic, composite of trimmed retail, cuts, separable lean only, choice cooked, (3 oz) | 1.7 |
| Fish, tuna, light, canned in water, drained solids, (3 oz) | 1.3 |
| Chicken, broiler or fryer, dark meat, roasted, 3 oz | 1.1 |
| Turkey, all classed, light meat, roasted, (3 oz) | 1.1 |
| Veal, composite of trimmed cuts, lean only, cooked, (3 oz) | 1.0 |
| Chicken, broiler or fryer, breast, roasted, (3 oz) | 0.9 |
| Pork, composite of trimmed cuts (leg, loin, shoulder), lean only, cooked, (3 oz) | 0.9 |
| Fish, salmon, pink, cooked, (3 oz) | 0.8 |
| Table food, nonheme iron | |
| Oatmeal, instant, fortified, cooked, (1 cup) | 14.0 |
| Blackstrap molasses, ^b (2 tbsp) | 7.4 |
| Tofu, raw, regular, (½ cup) | 6.7 |
| Wheat germ, toasted, (½ cup) | 5.1 |
| Ready-to-eat cereal, fortified at different levels, (1 cup) | ~4.5 to 18 |
| Soybeans, mature seeds, cooked, (½ cup) | 4.4 |
| Apricots, dehydrated (low-moisture), uncooked, (½ cup) | 3.8 |
| Sunflower seeds, dried, (½ cup) | 3.7 |
| Lentils, mature seeds, cooked, (½ cup) | 3.3 |
| Spinach, cooked, boiled, drained, (½ cup) | 3.2 |
| Chickpeas, mature seeds, cooked, (½ cup) | 2.4 |
| Prunes, dehydrated (low-moisture), uncooked, (½ cup) | 2.3 |
| Lima beans, large, mature seeds, cooked, (½ cup) | 2.2 |
| Navy beans, mature seeds, cooked (½ cup) | 2.2 |
| Kidney beans, all types, mature seeds, cooked, (½ cup) | 2.0 |
| Molasses, (2 tbsp) | 1.9 |
| Pinto beans, mature seeds, cooked, (½ cup) | 1.8 |
| Raisins, seedless, packed, (½ cup) | 1.6 |
| Prunes, dehydrated (low-moisture), stewed, (½ cup) | 1.6 |
| Prune juice, canned, (4 fl oz) | 1.5 |
| Green peas, cooked, boiled, drain, (½ cup) | 1.2 |
| Enriched white rice, long-grain, regular, cooked, (½ cup) | 1.0 |
| Whole egg, cooked (fried or poached), (1 large egg) | 0.9 |
| Enriched spaghetti, cooked, (½ cup) | 0.9 |
| White bread, commercially prepared, (1 slice) | 0.9 |
| Whole-wheat bread, commercially prepared (1 slice) | 0.7 |
| Spaghetti or macaroni, whole wheat, cooked, (½ cup) | 0.7 |
| Peanut butter, smooth style, (2 tbsp) | 0.6 |
| Brown rice, medium-grain, cooked, (½ cup) | 0.5 |

Note that all figures are rounded.

^aBaby food values are generally based on generic jar, not branded jar; 3 oz of table-food meat = 85 g; a 2.5 oz jar of baby food = 71 g (an infant would not be expected to eat 3 oz [approximately the size of a deck of cards] of pureed table meat at a meal).

^b Source of iron value was obtained from a manufacturer of this type of molasses.

Source of iron values in foods: US Department of Agriculture, Agricultural Research Service. USDA National Nutrient Database for Standard Reference, Release 20. Nutrient Data Laboratory home page available at: www.ars.usda.gov/va/bhnrc/ndl.

Selected Good Vitamin C Sources to Increase Iron Absorption

Fruits

Citrus fruits (e.g. orange, tangerine, grapefruit)

Pineapples

Fruit juices enriched with vitamin C

Strawberries

Cantaloupe

Kiwifruit

Raspberries

Vegetables

Green, red, and yellow peppers

Broccoli

Tomatoes

Cabbages

Potatoes

Leafy green vegetables

Cauliflower

Other Strategies for Adding Iron to the Diet

The problem with iron is that it is difficult for the body to absorb. Iron in meat, poultry, and fish is absorbed several times better than iron from vegetable sources. Animal protein contains something called meat factor, which improves absorption of vegetable iron eaten at the same time as meat. Vitamin C helps iron absorption, too. If your child eats foods rich in vitamin C at the same time as foods rich in iron, the iron will be absorbed better. Examples of meals that have both meat and vitamin C include hamburgers and coleslaw, spaghetti with meat and tomato sauce, hot dogs and orange wedges, and chicken with broccoli.

Eggs, Milk, and Liver

Iron in egg yolk is poorly absorbed. In fact, unless you have some vitamin C at the same time you eat an egg, egg yolk will keep iron from being absorbed from other foods. Milk is low in iron (anemic children used to be called milk babies). Milk neither enhances nor blocks iron absorption from other foods.

Liver is an excellent source of iron. However, if your child eats too much liver, she will get too much vitamin A. If you serve liver, serve it only twice a month.

Getting Children to Eat Foods Rich in Iron

Have regular meals and snacks, keep control of the menu, and offer children a variety of foods. Then wait. If you try to force children to eat nutritious food, they won't like it and most won't eat it. All you can do is offer good food, have regular meals and snacks, and make eating pleasant.

Typically, iron-rich foods are challenging for children. For example, green leafy vegetables have a strong flavor. Eat and enjoy them yourself, and after a while your child will try them and maybe even learn to like them. Meat can be hard to chew and swallow. Make meat moist and tender.

Call Your Child's Physician During Office Hours If:

- Your child consistently appears pale, listless, and cranky.
- Your child consistently eats a diet low in iron.

Excerpts from AAP Publications and Ellyn Satter, R.D., M.S.S.W., author of "Child of Mine: Feeding with Love and Good Sense,"

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