

Boost Energy with Iron Rich Foods

Your energy level depends on it! Iron is a mineral that carries oxygen to working muscles and brain. It is crucial for health and both mental and physical performance.

When iron levels are low...

- You feel tired and irritable
- Focus and concentration suffers
- Your immune system weakens
- Recovery from exercise slows

Identify how much iron you need in your diet.

	Males	Female	If Deficient*	Pregnancy	Athletes
Recommended Daily Intake	8 mg	18 mg	30 mg	27 mg	Slightly increased needs, see RD
Maximum Daily Intake	45 mg	45 mg	45 mg	45 mg	45 mg

* Deficiency is diagnosed by your doctor with lab tests such as ferritin, red blood cell count and hemoglobin concentration.

Maximize the absorption of the iron.

Heme iron, found in animal-based foods, such as fish, chicken, meat, dairy and eggs, is easily absorbed. The absorption of *Non-Heme* iron found in plant-based foods, such as beans, vegetables and soy, will be enhanced and limited by many factors presented in the tables below.

Factors that Enhance *Non-Heme* Iron Absorption

Factor	Source
Vitamin C	Bell peppers, all colors Berries Broccoli
	Oranges, grapefruits Orange and grapefruit juices Melon Papaya
	Pineapple Potatoes Tomatoes
Citric, malic, and tartaric acids (organic acids)	Fruits Vegetables
	Vinegar Citrus zest
Lactic acid	Sauerkraut
Retinol and carotenoids	Dark-green, red and orange fruits and vegetables
Specific food processing methods	Leavening and baking bread Soaking and sprouting beans, grains and seeds
	Processing of soy foods (miso, tempeh, natto, silken tofu)
Tissue protein factor	Eating animal protein with non-heme iron from plant foods promotes absorption of non-heme iron.

Factors that Decrease *Non-Heme* Iron Absorption

Factor	Source
Polyphenols, tannins	Tea, coffee
Calcium, dairy protein	Milk, yogurt and cheese
Egg protein	Whole eggs, egg whites
Phytates	Legumes, whole grains

Practical tips to maximize iron absorption:

- ✓ Include a source of vitamin C or other organic acid with most meals. For example:
 - Add a small glass of orange, grapefruit, or tomato juice to breakfast.
 - Top salads, wraps and sandwiches with tomatoes.
 - Use salsa and tomato sauce as a favorite condiment.
 - Add a splash of vinegar to salads or cooked greens.
- ✓ Avoid consuming tea, coffee or milk with meals.
- ✓ See the next page for a listing of the iron contents of common foods, so that you can estimate your personal iron intake.

Personal Iron Intake

Identify sources of iron and estimate your daily iron intake.

The type of iron in animal foods is "Heme" iron; Heme iron is more absorbable than the non-heme iron found in plant foods.

Animal Foods (Heme)	Iron (mg)	X	# daily servings	=	Total Iron	
Red Meat, 3 oz						
Beef, chuck or sirloin	~ 3.0	X		=		
Beef, round	2.2	X		=		
Beef, tenderloin	3.0	X		=		
Ham	1.2	X		=		
Lamb, loin	2.1	X		=		
Pork tenderloin	1.2	X		=		
Dairy						
Cheese, 1 oz	0.2	X		=		
Milk, 1 cup	0.1	X		=		
Yogurt, 1 cup	0.2	X		=		
Poultry, 3 oz						
Chicken, white meat	1.1	X		=		
Egg, whole	0.7	X		=		
Egg white	0.0	X		=		
Turkey, dark meat	2.3	X		=		
Turkey, light meat	1.6	X		=		
Fish & Shellfish, 3 oz						
Crab	0.8	X		=		
Flounder or sole	0.2	X		=		
Halibut	0.9	X		=		
Oysters, 6	4.8	X		=		
Salmon	0.5	X		=		
Sardines	2.5	X		=		
Shrimp, 4 large	0.7	X		=		
Tuna, Bluefin	1.1	X		=		
Tuna, canned in water	0.8	X		=		
TOTAL HEME IRON CONSUMED					=	

Plant Foods (Non-Heme)	Iron (mg)	X	# daily servings	=	Total Iron	
Fruit						
Apple	0.3	X		=		
Apricots, 5 halves, dried	0.9	X		=		
Banana	0.4	X		=		
Berries, 1 cup	~1.0*	X		=		
Prune, 1	0.9	X		=		
Raisins, ¼ cup	0.7	X		=		
Beans and Lentils, ½						
Beans, ½ cup	~2.0	X		=		
Lentils, ½ cup cooked	3.3	X		=		
Condiments						
Blackstrap molasses, 1 molasses, 1 T	3.6	X		=		
Ketchup, 1 T	.08	X		=		
Grains						
Bread, 1 slice	0.8	X		=		
Brown rice, ½ cup	1.1	X		=		
Cream of wheat, 1 cup	9.4	X		=		
Fortified cereal, 1 cup (Frosted Mini Wheat, Total or Raisin Bran)	18.0*	X		=		
Oatmeal, ½ cup	0.8	X		=		
Vegetables, 1 cup cooked						
Broccoli	1.1	X		=		
Collard greens	2.2	X		=		
Green peas	2.4	X		=		
Sweet potato	1.1*	X		=		
Winter squash	1.0*	X		=		
Nuts and Seeds, 1 oz						
Nuts and seeds, all	~1.0	X		=		
Peanut butter, 2 T	0.6	X		=		
Pumpkin seeds	4.2	X		=		
Trail mix, 1 cup	3.7*	X		=		
Soy Foods						
Soy milk, 1 cup	6.6	X		=		
Edamame, ½ cup	4.4	X		=		
Tofu, firm ½ cup	3.4	X		=		
Tofu, regular, ½ cup	6.7	X		=		
TOTAL NON-HEME IRON CONSUMED					=	

*also high in vitamin C

Total Heme Iron Consumed _____
+ Total Non-Heme Iron Consumed _____
= Total Iron Intake _____
- Goal Iron Intake _____
=Iron needed to meet goal _____

If needed, plan to add these iron containing foods:

Nutrient data from, <http://www.nal.usda.gov/fnic/foodcomp/search/>

NUTRITION COUNSELING - CAMPUS HEALTH SERVICE - HEALTH PROMOTION

Gale Welter, MS, RD, CSSD, CSCS 520-621-4550 welter@email.arizona.edu

Sarah Rokuski, RD 520-626-6265 srokuski@email.arizona.edu

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