



ZINC

The mineral zinc is present in every part of the body and has a wide range of functions. It helps with the healing of wounds and is a vital component of many enzyme reactions. Zinc is vital for the healthy working of many of the body's systems. It is particularly important for healthy skin and is essential for a healthy immune system and resistance to infection.

Functions

Zinc has a range of functions. It plays a crucial role in growth and cell division where it is required for synthesis of genetic material, insulin activity, the metabolism of the ovaries and testes, and in liver function. As a component of many enzymes, zinc is involved in the creation and utilization of proteins, carbohydrates, fat-based substances and energy.

The first signs of zinc deficiency are impairment of taste. Other symptoms of zinc deficiency can include hair loss, diarrhea, fatigue, and delayed wound healing.

Factors Affecting Availability

More than half of the body's zinc supply is found in muscle tissue. This mineral is also found in other parts of the body, which include the bones, eyes, prostate gland, testes, skin and kidneys.

Since some minerals may compete for absorption in the small intestine, excess intakes of iron or copper can interfere with zinc absorption. Likewise, excess intake of zinc (from supplements or fortified foods) can impair iron and copper absorption.

Although phytates and fiber found in unprocessed grains inhibit the bioavailability of zinc, whole grains are still a better source of zinc than that found in refined grains (e.g. white bread). Whole grain yeast breads enhance the absorption of zinc by producing enzymes that destroy phytates. Zinc from meat products, on the other hand, is four times more bioavailable than that found in fibrous grain foods.

The body best absorbs smaller amounts of zinc at one time. Overall, the body absorbs 15-40% of dietary zinc, depending on the body's requirement for this mineral.

Dietary Sources

Zinc is present in a wide variety of foods, particularly in association with protein foods. A vegetarian diet often contains less zinc than a meat based diet and so it is important for vegetarians to eat plenty of foods that are rich in this vital mineral.

Good sources for vegetarians include dairy products, beans and lentils, yeast, nuts, seeds and wholegrain cereals. Pumpkin seeds provide one of the most concentrated vegetarian food sources of zinc.

Food Sources of ZINC

Food	Milligrams	%DV*
Oysters, battered and fried, 6 medium	16.0	100
Ready-to-Eat (RTE) Breakfast cereal, fortified with 100% of the DV for zinc per serving, 3/4 c serving	15.0	100
Beef shank, lean only, cooked 3 oz	8.9	60
Beef chuck, arm pot roast, lean only, cooked, 3 oz	7.4	50
Beef tenderloin, lean only, cooked, 3 oz	4.8	30
Pork shoulder, arm picnic, lean only, cooked, 3 oz	4.2	30
Beef, eye of round, lean only, cooked, 3 oz	4.0	25
RTE Breakfast cereal, fortified with 25% of the DV for zinc per serving, 3/4 c	3.8	25
RTE Breakfast cereal, complete wheat bran flakes, 3/4 c serving	3.7	25
Chicken leg, meat only, roasted, 1 leg	2.7	20
Pork tenderloin, lean only, cooked, 3 oz	2.5	15
Pork loin, sirloin roast, lean only, cooked, 3 oz	2.2	15

Yogurt, plain, low fat, 1 c	2.2	15
Baked beans, canned, with pork, 1/2 c	1.8	10
Baked beans, canned, plain or vegetarian, 1/2 c	1.7	10
Cashews, dry roasted w/out salt, 1 oz	1.6	10
Yogurt, fruit, low fat, 1 c	1.6	10
Pecans, dry roasted w/out salt, 1 oz	1.4	10
Raisin bran, 3/4 c	1.3	8
Chickpeas, mature seeds, canned, 1/2 c	1.3	8
Mixed nuts, dry roasted w/peanuts, w/out salt, 1 oz	1.1	8
Cheese, Swiss, 1 oz	1.1	8
Almonds, dry roasted, w/out salt, 1 oz	1.0	6
Walnuts, black, dried, 1 oz	1.0	6
Milk, fluid, any kind, 1 c	.9	6
Chicken breast, meat only, roasted, 1/2 breast with bone and skin removed	0.9	6
Cheese, cheddar, 1 oz	0.9	6
Cheese, mozzarella, part skim, low moisture, 1 oz	0.9	6
Beans, kidney, California red, cooked, 1/2 c	0.8	6
Peas, green, frozen, boiled, 1/2 c	0.8	6
Oatmeal, instant, low sodium, 1 packet	0.8	6
Flounder/sole, cooked, 3 oz	0.5	4

* DV = Daily Value. DVs are reference numbers based on the Recommended Dietary Allowance (RDA). They were developed to help consumers determine if a food contains very much of a specific nutrient. The DV for zinc is 15 milligrams (mg). The percent DV (%DV) listed on the nutrition facts panel of food labels tells adults what percentage of the DV is provided in one serving. Percent DVs are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs. Foods that provide lower percentages of the DV also contribute to a healthful diet.