



### Think zinc if 20-year-old looks like 10

What nutrient deficiency can impair hundreds of cellular functions, stunt growth, prevent sexual maturity and decrease immune system function? If you made it from A to Z and picked "zinc," you are right.

**Question:** What does zinc do in the body?

**Answer:** Zinc affects hundreds of essential chemical reactions in the body. Zinc is even necessary for genes to function normally.

**Q:** What happens if a person doesn't consume enough zinc?

**A:** A diet low in zinc slows growth, decreases the ability to learn and prevents sexual maturation. Low zinc also depresses immune function, making a person more vulnerable to infectious diseases.

Studies conducted in the Middle East during the 1960s identified men in their early 20s who looked like 10-year-old boys. Dr. Ananda S. Prasad, an astute physician, determined that the condition was caused by serious zinc deficiency. When he treated these "zinc dwarfs" with

zinc supplements or a high zinc diet, there was a rapid growth spurt of about 5 inches and normal sexual maturation.

**Q:** What caused the zinc deficiency in the Middle East?

**A:** Prasad found that the diets of the zinc dwarfs were primarily whole grains and beans. These foods contain a zinc-binding compound called phytate that prevents normal zinc absorption in the intestine. Most of their calories were provided by whole-wheat bread made without yeast. Yeast in whole-grain bread is known to improve the absorption of zinc.

**Q:** What else contributes to zinc deficiency?

**A:** Generally, zinc is absorbed and retained in the body better from animal foods than from plant foods. Diets devoid of animal foods tend to increase the risk of zinc deficiency. Also, consuming foods or supplements very high in calcium or iron might reduce zinc absorption when eaten at the same time. Consequently, it is probably best to not consume high-

calcium foods like milk at the same time as high-zinc foods or zinc supplements. In a similar fashion, calcium inhibits iron absorption. Interestingly, this provides a nutritional reason for the Jewish teaching to not consume meat and milk at the same time.

**Q:** What are the key sources of zinc?

**A:** A 3-ounce portion of lean beef provides about half of the recommended daily zinc intake for an adult. Lamb and pork also are good zinc sources, just slightly less than beef. Beans and breakfast cereals fortified with zinc provide significant amounts of zinc, but the zinc is not well absorbed from these plant foods.

Some cold and flu lozenges contain very high levels of zinc that should not be consumed for an extended period of time.

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