

ZINC

Facts on zinc from your water to your body.



Zinc (Zn)

Zinc is a very common substance that occurs naturally in the environment. Many foodstuffs contain certain concentrations of zinc. Drinking water also contains certain amount of zinc, which may be higher if stored in metal tanks. The most readily available form of zinc occurs in animal flesh, particularly red meats and poultry. Meat intake is frequently low among pre-schoolers, perhaps because of personal preferences, possibly because of socio-economic reasons, but usually because meats are displaced by cereal foods, milk and milk products that children tend to prefer.

Zinc is abundantly distributed throughout the human body and is second only to iron among trace elements in the body. Zinc occurs in the human body in amounts of about 2 to 3 g, the high concentrations occurring in the liver, pancreas, kidney, bone and muscles. Other tissues with highest concentrations include various parts of the eye, prostate gland, skin, hair, fingernails and toe-nails.

Food Sources and intake

Zinc can enter the body if you eat foods or drink water or other beverages containing zinc. Very small amounts of zinc enter the body through skin contact. Meat, fish, poultry, milk and milk products provide 80% of the total dietary zinc. Oysters, other shellfish, meat, liver, cheese, whole grain cereals, dry beans, and nuts are also fairly good sources of zinc. Soy products are also fairly good sources of zinc. In general, zinc intake correlates well with protein intake.

Recommended Dietary allowance (RDA)

A RDA of 15 mg/day has been determined as the appropriate zinc intake for male adolescents and adults. Because of lower body weight of female adolescents and adult women, their RDA is 12 mg/day. The requirement for preadolescents is estimated at 6 mg/day, but because of greater dermal losses and more variation, the RDA has been set at 10mg. The RDA for infants is 5mg/day during the first year of life.

Health effects of Zinc

Although humans can handle proportionally large concentrations of zinc, too much zinc can still cause eminent health problems. The levels of zinc that produce adverse health effects are much higher than the Recommended Daily Allowances, for zinc of 15mg/day for men and 12 mg/day for woman. If large doses of zinc (10-15 times higher than the RDA) are taken by mouth even for a short time, stomach cramps, skin irritations, vomiting, nausea and anaemia may occur. Taking too much zinc into the body through food, water, or dietary supplements can also affect health. Consuming too little zinc is at least as important a health problem as consuming too much zinc. Without enough zinc in the diet, people may experience loss of appetite, decreased sense of taste and smell, decreased immune function, slow wound healing and skin sores. Too little zinc in the diet may cause poorly developed sex organs and retarded growth in young men. If a pregnant woman does not take in enough zinc, her babies may have growth retardation.

Why depend on zinc in water instead of zinc in food or tablets?

It is highly recommended that you consume at least eight glasses of water a day. The body absorbs very small amounts of the zinc in food and zinc is more readily available in water. Rand Water purifies the water through a conventional purification process, resulting in adequate zinc levels in your tap water (enough for your daily requirement), which is within SABS 0241 water specifications (5mg/l).

Visit www.reservoir.co.za for further information on water quality in your area.

