

ZINC, SERUM / PLASMA
(ICPMS)

ug/dL

Interpretation

REFERENCE GROUP	REFERENCE RANGE IN ug/dL
Males	75-291
Females	65-256

Note:

1. Inductively Coupled Plasma Mass Spectrometry (ICPMS) is used to determine the level of heavy / trace metals in biological tissues
2. There is a circadian variation with levels peaking around 9 am and 6 pm
3. Zinc levels decrease post prandially

Comments

Zinc is second to iron as the most abundant trace element in the body. Most zinc is in the skeletal muscle (60%) and bone (30%). It is involved in almost all aspects of metabolism. Dietary sources of zinc are oysters, shell fish & meat. Zinc is required for wound healing, immune function and fetal development. Human zinc deficiency is often associated with diets low in animal derived protein but high in cereals that bind zinc. Nutritional zinc deficiency is fairly prevalent despite wide availability of zinc in foods. Long term zinc supplementation may induce copper deficiency. Zinc toxicity is rare in humans. Inhalation of zinc oxide fumes is the most common cause of metal fume fever.

Decreased Levels

Treatment with anabolic steroids & metal chelating drugs, synthetic diet therapies, Acrodermatitis enteropathica, Alopecia, Typhoid, Pulmonary tuberculosis, liver metastasis, Celiac sprue, Thalassemia major, Pernicious anemia, Acute Myocardial infarction, Renal disease, pregnancy, lactation & old age

Increased levels

Hemodialysis with zinc containing dialysate, Primary osteosarcoma of bone, Coronary heart disease, Arteriosclerosis, Familial hyperzincemia & Anemia