

## Zinc status in adolescent girls of low income groups

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Zinc deficiency occurred in humans in early sixties, it is now clear that the zinc deficiency is very wide spread throughout the world. According to WHO (2003) report, zinc was identified as the main nutritional problem affecting adolescent population's worldwide and it was also recognized as one of the leading global risk factor and contribution to global burden of disease. Unfortunately WHO, FAO, UNICEF, UNESCO, USAID and countries where this deficiency is prevalent have taken no steps thus far to correct this deficiency. Zinc deficiency remains a serious health problem worldwide affecting developed as well as developing countries. Despite the evidence proving that zinc deprivation during the periods of rapid growth negatively affects the normal physiology, growth and development, there are few complete studies carried out in adolescents. The present study was planned to assess the zinc status of adolescents. India is a diversified country with different castes and religions in which the Scheduled Castes comprise 15-16 percent of national population. The study was conducted in Social Welfare hostels in Tirupathi, Andhra Pradesh. Adolescent girls residing in Social Welfare hostels belong to very low income group since it is the major criteria for getting admission into these hostels. The girls of these hostels were taken as subjects for the current study. A total number of 479 students were there in 10-16 years age group. A sub-sample of 263 was randomly selected to perform bio-chemical analysis. Serum zinc concentration was analyzed which is the most widely used biochemical indicator of the zinc status. The mean zinc values recorded at 10 years was 72.43 µg/dl and at 16 years was 66.40 µg/dl. As the age increased, there is a decrease in mean zinc levels of the girls. The mean serum zinc status shows that 62.35 % of girls were at marginally deficient levels and 37.64 % of girls at normals irrespective of age. The Biochemical parameters when segregated according to the menarcheal (AM) status, the mean zinc levels were high in the girls who attained menarche than the girls not attained menarche (NAM). There was a significant difference in zinc levels between the AM and NAM. In sexually mature and immature zinc-deficient rats, serum concentrations of GH were significantly more depressed than in ad libitum-fed control rats. Zinc deficiency plays an important role in sexual maturation and intrauterine growth.

### Biography

Sucharitha K.V., is a assistant professor, of the Department of Home Science in specialization of Food science and Nutrition and Food Technology, Sri Venkateswara University, Tirupati, India. She pursued Ph.D. in 2005 on "Nutritional Status of Adolescent girls and Effect of Zinc supplementation on Growth, Zinc and Iron status" from Sri Padmavathi Womens University. She published 10 papers in reputed journals. She participated and presented papers in more than 60 national and international seminars. She presented a paper on "A Study on Zinc Nutrition on Growth of Adolescents" in the XI Asian congress of Nutrition 2011 held in Singapore. She is the member of Board of studies in three different Universities in India. Currently she is the Principal Investigator of one major research project funded by University grants commission, India. She is executive member of Indian dietetic association, and Life member in Nutrition society of India and Association Food scientists and Technologists India.