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Childhood obesity and its prevention strategies

A significant increasing trend in the prevalence of overweight and obesity has been documented over the last few decades in the developed as well as in the developing countries. Several studies carried out globally also indicate a rise in overweight and obesity both in children and adolescents. Due to rapid transition in socioeconomic status, nutrition, lifestyles and urbanization & mechanization, leads to high energy intake and low energy expenditure. More than 500 million children were overweight and at least 150 million of them were clinically obese. In almost all the developing countries, the overweight/obesity are often coexists with undernutrition and the condition is also known as 'double burden of disease'. The prevalence of overweight/obesity in urban children in Delhi has shown an increase from 16% in 2002 to about 24% in 2006. The consequences of obesity are insulin resistance, type 2 diabetes mellitus (T2DM), dyslipidemia, hypertension, cardiovascular diseases, metabolic syndrome, gastro intestinal, breast, ovarian and endometrial cancers etc. The most significant long-term consequences of childhood and adolescent overweight and obesity are its persistence even in adulthood with all the attendant health risks.

Several studies also revealed that for any level of body mass index (BMI) in Asian Indians have a higher proportion of body fat percentage and lower muscle mass compared to their counter parts of Europeans and Caucasians, causing more insulin resistance, T2DM and metabolic syndrome even in individuals who have low BMI levels. About one-third of overweight or obese Asian Indian children have insulin resistance and at least one fourth of overweight and obesity individuals may suffer from at least two cardio-metabolic risk factors. High levels of C-reactive protein (CRP) levels predict future risk of T2DM and CHD. In Asian Indian adolescents, high CRP levels were seen in 13% subjects overall, in ~22% of overweight and in ~25% in those with excess body fat.

National Institute of Nutrition, Division of community studies have also carried out several studies to assess its magnitude, determinants and trends of overweight and obesity among children and the studies have shown that the prevalence of overweight among children was significantly increased from 6% in 2003, through 9% in 2007 and 12% in 2011. The studies have also shown that overweight and obese adolescents were less physically active than non-obese adolescents. The prevalence of overweight and obesity was significantly associated with socioeconomic status, occupation, literacy status of parents, physical activities and in-activities like TV watching, playing computer/video games, dietary behaviours of adolescents.

Biography

Avula Laxmaiah Currently, he is working as Deputy Director (Scientist E), Epidemiologist, Division of community studies, NIN, Hyderabad, India. He has done MBBS from Kakatiya Medical College, Warangal. He has also done his Masters degree in Public Health, from Sree Chitra Tirunal Institute of Medical Sciences and Technology, Kerala and also has Post Graduate Diploma in Public Health, from Osmania Medical College. He has completed more than 30 projects and Technical Reports during his 20 years of service at NIN, Hyderabad and he had attended and presented several papers in National and International Conferences/Seminars/workshops etc. He has published more than 60 papers in National & International peer reviewed journals. He the Expert committee member in several forums related to health and nutrition in India such as National Disaster Management of Authority (NDMA), Department of Science Technology (DST), GoI, Mid day Meal programme (MDM), Integrated Child Development Scheme (ICDS), Food and Nutrition Board (FNB), Min. of HRD, INCLIN India Trust (NGO), etc.

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