

Effect of Age, Sex and Lifestyles on CHD Risk Factors: Influence of Obesity and Body Fat Distribution

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ABSTRACT South Asian Countries have high prevalence of coronary heart disease (CHD) in parallel with economic development. Thus India is facing the high burden of CHD. Hence, the present study is aimed to assess CHD risk factors like serum lipids and lipoproteins in relation to obesity and distribution of body fat with reference to age, sex and lifestyles in an Indian population (Tirupati, Chittoor District, Andhra Pradesh). Information was collected on physical exercise, habits of smoking and alcoholism, body mass index (BMI), waist hip ratio (WHR), percent fat besides estimation of serum cholesterol (SC), high density lipoprotein cholesterol (HDL) and triglycerides (TG) from a volunteers samples of 190 males and 140 females with an age range of 20-70 years. The age pattern show increased serum cholesterol, low density lipoprotein cholesterol (LDL), TG with age, and major increase occurs earlier in men than women. Differences in mean lipid levels in and body fat distribution are observed within groups of BMI and physical exercise in both sexes and, smoking and alcoholism in males. Obesity Grade I and II equally associated with low physical exercise exhibited rise in lipid pattern and higher exercise reduced the lipid levels even in the presence of smoking and alcoholism. Partial correlation coefficients between BMI and body fat distribution and within body fat distribution are distantly higher in females than males. In both sexes lipid pattern found food association with BMI. Multiple regression analysis reveals that variance in lipid levels is explained by age and obesity. The study concludes that most powerful correlates of CHD risk factors were age and body mass, with physical exercise and fat distribution in females serving as moderate predictors of CHD.