

DIET AND SERUM LIPID LEVELS IN AUSTRALIAN ADOLESCENTS

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The purpose of this study was to correlate the dietary habits of Australian adolescent children with serum lipid levels. 370 randomly selected school children aged 14 years from 13 High Schools in the Sydney metropolitan area have been studied. A retrospective 24 hour food analysis and a retrospective one week general food programme has been completed.

There were 195 boys and 175 girls. The mean serum cholesterol level for all children was 4.87mmol/l (190mg%); boys 4.7mmol/l (180mg% \pm 0.76), girls 5.05mmol/l (195mg% \pm 0.67). 26% exceeded 5.2mmol/l (200mg%) and 4% exceeded 6.2mmol/l (240mg%). The mean level in boys was significantly lower than in girls. The serum triglyceride level for all children was 0.85mmol/l (76mg%); boys 0.8mmol/l (72mg%), girls 0.91mmol/l (82mg%).

The girls had a greater body mass, 38% exceeding the 75th percantile than the boys in whom 21% exceeded the 75th percantile (NHMRC 1975). The mean serum cholesterol in these girls was 5.0mmol/l as compared with 4.6mmol/l in the boys. The girls, despite a greater body mass and higher serum cholesterol, had a lower caloric (2248 calories versus 3264), saturated fat (47gm versus 72gm), lipid(105gm versus 153gm) and cholesterol (367gm versus 517gm) intake as compared with the boys. There was no individual correlation between the caloric, cholesterol, fat content and polyunsaturated fat intake and individual serum cholesterol and triglyceride levels.

The relationship of caloric intake, serum cholesterol levels and indices of physical fitness will be discussed. 85% of meals were brought from home and school canteens and tuck shops were of less influence than expected. The confidence limit of the study was 11%.

NHMRC, Australian Department of Health, 1975.

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