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# NUTRIENT INTAKES AND ANTHROPOMETRIC MEASUREMENTS IN RURAL WEST AUSTRALIAN CHILDREN

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There is little published data available on the dietary intakes of Australian children. Children in year 8 attending six rural high schools in the South-West of Western Australia, were selected for study. Of the sample selected, 80% of children, 343 Caucasian and 20 Aboriginals, agreed to participate. The children each completed 24-hour dietary records, which were supplemented by interviews with dietitians using food models for quantification of consumption. The children were measured using standard anthropometric methods.

When compared to the Dietary Allowances for Use in Australia (NHMRC, 1979) mean intakes of energy were low in all groups; iron levels were low in both female groups. Aboriginal girls were also low in thiamin while Aboriginal boys were low in ascorbic acid and calcium. The nutrient density of the Aboriginal diets were lower than for Caucasians, although the percent contribution of energy from fat, carbohydrate and protein were very similar. Caucasian and Aboriginal females recorded significantly higher triceps skinfold thicknesses than their male counterparts. Females also tended to be slightly heavier and taller and have higher blood pressures.

| | Caucasians | | Aboriginals | |
|---|---|---|---|---|
| | Males(173)+ ++ | Females(170) | Males(8) | Females(12) |
| Energy (Kcal) | 2188 | 2012 | 1910 | 1899 |
| Protein (gm) | 87.7 | 67.0 | 64.4 | 65.1 |
| Iron (mg) | 13.8 | 10.9 | 11.8 | 8.7 |
| Calcium (mg) | 944 | 689 | 525 | 662 |
| Thiamin (mg) | 1.5 | 1.2 | 1.2 | 0.9 |
| Ascorbic Acid (mg) | 61.8 | 55.0 | 23.8 | 46.2 |
| Triceps Skinfold(mm) | 9.1 | 11.2 | 5.8 | 10.3 |

\+ Numbers of respondents in parentheses.
++ Mean values

The distribution of triceps skinfold measurements were divided into deciles and the mean energy intake for each computed. No significant relationship was found between energy intakes, general food variables and anthropometric indices.

Despite the small number of Aboriginal males studied, this group appears the most at risk in terms of their low nutrient density diet and their lack of fat reserves.

NH and MRC, Dietary Allowances for Use in Australia (1979). (Australian Government Publishing Service, Canberra).

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