

## LACTASE DEFICIENCY IN AUSTRALIAN SCHOOL CHILDREN

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Previous studies of primary lactase deficiency in Australian children have been confined to those of either Northern European or Aboriginal descent (Brand et al. 1985). Since the prevalence of lactase deficiency is high in Mediterranean, Middle Eastern and Asian countries, it is likely that 'pockets' of lactase deficiency exist in the suburbs and communities in Australia where the overseas-born are concentrated. The aim of the present study was to determine the prevalence of lactose malabsorption in primary school age children in two of these communities in metropolitan Sydney.

The subjects were 109 healthy children aged 6 to 12 years drawn from Marrickville and Leichhardt primary schools. The highest proportion of subjects were of Northern European descent (n = 32) followed by Greek (25), mixed Mediterranean origin (11), Vietnamese (9), Italian (7), Spanish (7), Yugoslavian (5) plus small numbers from other countries in Asia and the Middle East. The breath hydrogen method was used to determine the malabsorption of lactose. Two grams of lactose/kg body weight, up to a maximum of 50 g, dissolved in 250 ml of water, was administered after an overnight fast. Breath samples were taken via 20 ml vacutainers (Terumo) at zero time and at 2 h by end expiratory sampling using a modified Haldane-Priestley tube. Hydrogen concentration was determined by gas chromatography and a rise of 20 ppm or more was considered as indicative of lactose malabsorption.

Forty percent of the children (44 of 109) were found to be malabsorbers. The percentage was similar in both sexes and in both schools. There was a significant age trend with more older children showing malabsorption. Of the 77 subjects available for follow-up, 57% reported symptoms, nearly two thirds of these being malabsorbers. The prevalence of malabsorption was highest in the subjects of Asian origin, all 14 children showing malabsorption. Fifty-six percent of the Greek subjects (14 of 25) were malabsorbers and 42% of the subjects from other Mediterranean countries (16 of 38).

The high prevalence of lactase deficient children in both schools underlines the necessity to consider the multicultural identity of Australians when planning health promotion programmes.

BRAND, J.C., DARNTON-HILL, I., GRACEY, M.S. and SPARGO, R.M. (1985).  
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