

PRIMARY LOW LACTASE ACTIVITY IN ABORIGINAL CHILDREN

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Although there are several studies of lactose malabsorption in Australian Aboriginal children, none have deliberately selected healthy subjects free from current gastrointestinal symptoms. The aim of the present study was to determine the age of onset of primary lactose malabsorption in full-blood Aboriginal children. Our previous investigation of healthy adults from the same area (near Derby, Western Australia) had shown an 84% prevalence of lactose malabsorption (Brand et al. 1981).

The subjects were 63 children (25 females, 38 males) with ages ranging from 6 to 14 years, attending the Looma school. Mean \pm SEM standard weight for age (SWFA) was $88.1 \pm 2.5\%$. 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 a minimum 4-hour 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 (Metz et al. 1976). A child's party whistle was attached to the end as a visual aid. Hydrogen concentration was determined by gas chromatography. Forty-six white Australian children (23 females, 23 males, aged 6 to 12 years, SWFA mean \pm SEM = $109 \pm 3.4\%$) were used as a control group.

Forty-four (70%) of the 63 Aboriginal subjects were found to be lactose malabsorbers and 37 (59%) were symptomatic, this generally being abdominal distension. In the control group only four (9%) were malabsorbers and only one complained of symptoms. No age trend was evident in the Aboriginal subjects.

These results confirm that the prevalence of primary lactose malabsorption is high in Australian Aboriginal children and similar to that of most other non-white children throughout the world. The lack of age trend indicates that the onset is prior to 6 years of age in most children.

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