

**LACTOSE MALABSORPTION AND ITS TEMPORAL STABILITY
IN ABORIGINAL CHILDREN**

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Lactose malabsorption (LM) is common in Australian Aboriginal children, as it is in the children of other non-European groups. Malabsorption of lactose from milk may have some nutritional significance in the diet and in nutritional therapy of these children (Mitchell et al. 1977). The age at which LM appears in different populations varies and secondary LM may develop as a result of mucosal injury.

This study was a sequential examination of LM status in a group of Aboriginal children being given a dietary supplement of milk over a 3 year period. Seventy-three children between the ages of 2 and 9 had one or more breath hydrogen tests at six monthly intervals at Woorabinda, a genetically mixed community in central Queensland. The children all had a low fibre dinner of chicken and rice on the evening preceding the test. The following morning they were given 1g/kg of lactose in milk. The children were tested using the lactose breath hydrogen (H₂) test which is a simple noninvasive technique for diagnosing LM. Expired air was collected and samples analysed for H₂ by gas chromatography. These values were normalized to an oxygen (O₂) level of 13.6%. Oxygen was assayed with an O₂ sensitive electrode. A rise in breath H₂ of 20 parts per million or more within 2 hours was accepted as indicating lactose malabsorption.

The table presents the distribution of LM with age:

Age at test	Number Tested	%Malabsorbers
2	6	33
3	43	58
4	50	62
5	40	60
6	33	67
7	16	50
8	8	75

In addition, the data showed that 24 children were consistently lactose absorbers over time, and 33 children were consistently malabsorbers. Six children changed from being absorbers to malabsorbers and one child changed from being a malabsorber to an absorber. Nine children fluctuated between being absorbers and malabsorbers.

We conclude that in this group of children, LM is common and that it appears early in life, over 50% of children of age 3 already have the characteristic. Using these diagnostic criteria, absorption status can be readily determined and is generally stable.

MITCHELL, J.D., BRAND, J. and HALBISCH, J. (1977). Lancet. i.: 500.

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