THE THRESHOLD LEVELS OF MILK CONSUMPTION IN INDIVIDUALS WITH LACTASE DEFICIENCY

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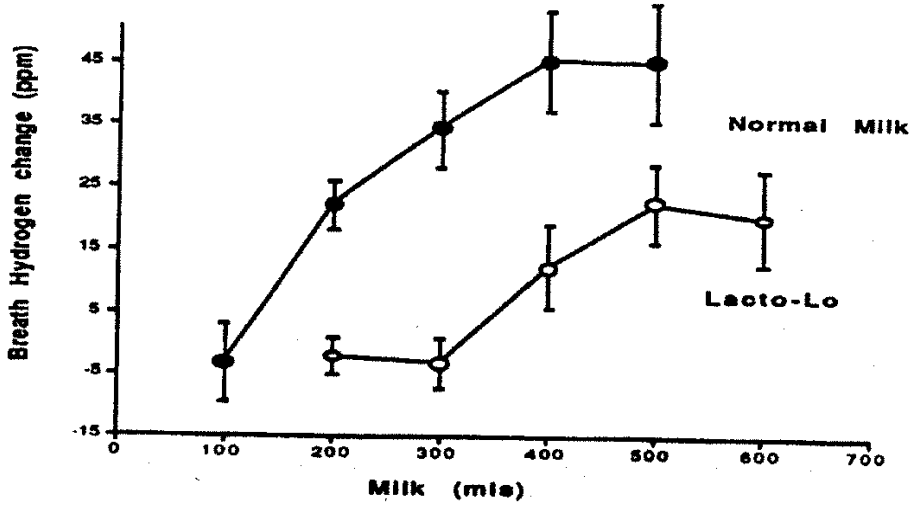
Milk and its products are a major source of calcium and people who avoid them may compromise their long term health. Various low lactose milk products, with lactose reduction >80%, have been developed to reduce the symptoms of lactose intolerance. However, the palatability and versatility of these products is less than ideal. A recent study by Brand and Holt (1991) suggested that a 50% reduction in lactose maybe as effective in alleviating the signs and symptoms of lactose intolerance as >80% lactose reduced milk. Furthermore, the 50% lactose reduced milk was almost indistinguishable in taste and texture from normal whole milk and the only one marketed as a fresh, pasteurised product.

Two different milks (normal whole milk and 50% lactose reduced whole milk) were given to seven healthy subjects with proven lactose maldigestion. The level of consumption of each milk before breath hydrogen rose $\geq$ 20 ppm was determined in each individual. Milk was consumed in increments of 100 mls from 100 mls to 600 mls on separate occasions one week apart. Breath hydrogen was measured at zero, two and three hours. The breath hydrogen threshold of 20 ppm was exceeded on average with approximately 200 mls of whole milk and 500 mls of 50% lactose reduced milk (Figure). Whole milk produced significantly more breath hydrogen ($P<0.05$) and maldigestion symptoms ($P<0.05$) at all levels than the 50% lactose reduced milk.

These results suggest that lactose maldigestors may consume twice as much of the 50% lactose reduced milk compared to normal milk before the signs and symptoms of lactose maldigestion become evident. Hence higher levels of lactose reduction in milk may not be necessary for the majority of lactose maldigestors. These findings may help dietitians and nutritionists encourage milk consumption in those people who avoid milk because of perceived milk intolerance.



BRAND, J.C. and HOLT, S. (1991). Am J. Clin. Nutr. 54: 148.

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