within populations as due to large intraindividual variation may be correct but his method of demonstrating it is entangled in an ecological fallacy. The failure to find substantial diet-cholesterol associations within populations has also been blamed on small sample size (8), lack of variation within populations (5, 9), and populations that are all exposed above a threshold value (9). Although the discordant correlations found between and within populations may be due to these factors, the Israeli data do not readily fall into the above categories and alternative interpretations (such as our hypothesis) may be more correct. Those who believe that reported low correlations between fat intake and serum cholesterol within populations are confusing and misleading might profitably shift from argument to demonstration. With an adequate sample from a population showing appreciable variation and by using all practical efforts to estimate individual data with minimal error, it should be possible to demonstrate that the underlying very high correlations postulated exist. To our knowledge this has not yet been accomplished.

Our hypothesis explains the existing data. If Keys, or anyone, can demonstrate that it is wrong we will be surprised not disappointed but pleased because the rejection of hypotheses is one of the paths to progress in science.

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Milk intolerance due to lactose and giardiasis

Dear Sir:

Professor Scrimshaw and Edwina Murray completed a monumental and hard task, compiling a comprehensive report on the acceptability of milk in populations with a high prevalence of lactose intolerance (1). In most countries of Sub-Saharan Africa, unfermented cow milk is not a part of the traditional diet. This too applies to Lesotho, a small (population 1.37 million in 1982) and landlocked kingdom situated at the eastern rim of the Southern African plateau. However, milk consumption has risen in the last two decades due to the following factors: overseas donated vitamin A–fortified milk has been dispensed in Lesotho’s school feeding program and South Africa–produced, sterilized full-cream milk has become commercially available, even in rural parts of the country. In 1981 ~ 288 000 primary-school pupils (60–70% of all children aged 5–16 y) benefitted from institutional feeding (J Anderson, unpublished observations, 1982). Recently we reported (2) the prevalence of primary, adult-type, lactose malabsorption (LM) in randomly selected Basotho school children aged 5–15 y from urban schools, ethnographically belonging to the Southern Sotho group. A breath hydrogen test (BHT) was performed with 360 mL full-cream milk after overnight fasting, sampling hourly over 4 h. H2 analysis was done by Lactoscreen (Hoek Loos, Schiedam, The Netherlands). Of 86 children without diarrhea in the last 7 d, 85% showed LM (H2 excretion > 20 ppm above fasting level) whereas 5% could not be classified because of undetectable H2 excretion. Milk intolerance due to lactose (3) was relatively rarely observed during the test and present in 10 (10%) of all 96 children tested, 6 who passed diarrheal stools and 4 who complained of abdominal discomfort; all 10 showed LM as well. Milk intolerance presenting as diarrhea was significantly (p < 0.01, chi-square test) more common in children who associated previous abdominal complaints with milk intake and/or did not like milk, as reported in pretest interviews. Stool samples of 93 children (147 samples) were examined for ova and cysts, af-
ter formol-ether concentration, and 18 children (19%) had cysts of Giardia intestinalis. The incidence of giardiasis did not correlate with the presence of LM. However, milk intolerance presenting as diarrhea was significantly ($p < 0.05$) more common in children with giardiasis (3/18) than in those without (3/75). These findings suggest that in healthy children with primary LM, giardiasis may aggravate LM and cause milk intolerance due to lactose by similar mechanisms that cause secondary LM in Caucasians that can absorb lactose. If this presumption is correct, milk-intolerant children from populations with a high prevalence of primary LM and with a high incidence of giardiasis may benefit from periodic anti-Giardia sp treatment when enrolled in an institutional feeding program that provides milk. The effect of such an approach also depends on the incidence of reinfection, which, under certain conditions, may be quite high (4).

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References