

bronchodilators are not sufficient and oral or inhaled corticosteroids are needed, theophylline still is an important adjunctive measure.⁵

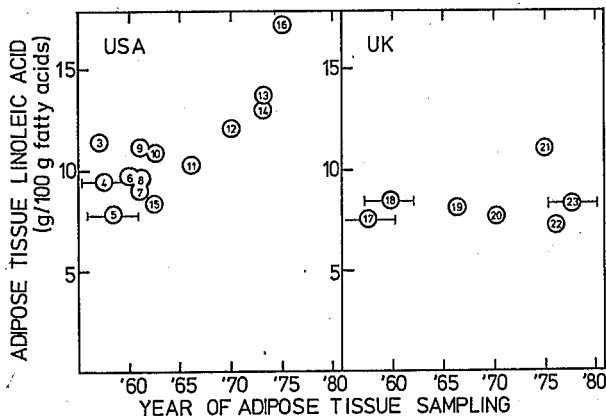
If there is an increased fatality rate among young patients with asthma in New Zealand, it does not appear necessarily to be recent, and the New Zealand physicians need to look beyond recent changes in practice for the explanation.

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LINOLEIC ACID CONSUMPTION AND CORONARY HEART-DISEASE IN U.S.A. AND U.K.

SIR,—The death rate from coronary heart-disease (CHD) in the U.S.A. fell by 21% between 1968 and 1976 while in the U.K. mortality rates for heart-disease have remained constant.¹ Professor Hetzel and Dr Dwyer (May 16, p. 1104) suggest that one of the causes for the decline in CHD in the U.S.A. is an increased consumption of polyunsaturated fatty acids. However, true dietary fat intakes are difficult to determine. Figures from food balance sheets



Mean linoleic acid levels of subcutaneous adipose tissue of American and British subjects as reported by various investigations, plotted against the year of sampling.

Numbers correspond to references: a list of the twenty-two studies cited may be obtained from the authors. Where the year of sampling could not be verified it was estimated using the mean of the delays between year of sampling and publication of the other studies (3.4 years). Such estimates are indicated by a horizontal bar, which corresponds to ± 1 SD of the delay (± 2.5 years; $n = 16$).

do not accurately estimate the amount of fat consumed—for example, an increased “consumption” of vegetable fats and oils may be due to an increased use of frying oil, much of which is not eaten. The balance sheets also do not take into account the actual composition of fats and oils, either as such or after industrial processing.

The major proportion of dietary polyunsaturated fatty acids is linoleic acid. We have shown that the percentage linoleic acid in human subcutaneous fat is a valid index of the proportion of linoleic acid in the dietary fat over the preceding two to three years.² Such a direct analysis of the adipose tissue composition avoids many of the uncertainties inherent in the usual food consumption methods.

To see if the intake of polyunsaturated fatty acids has increased in the U.S.A. over the past 20 years we looked at published data on the composition of the adipose tissue of healthy Americans on their habitual diets. The difference in trends in CHD mortality between the U.K. and the U.S.A. prompted us to collect data on the linoleic acid content of the subcutaneous fat stores of residents of the U.K. also.

1. Editorial. Why the American decline in coronary heart-disease? *Lancet* 1980; i: 183-84.
2. Beynen AC, Hermus RJJ, Hautvast JGAJ. A mathematical relationship between the fatty acid composition of the diet and that of the adipose tissue in man. *Am J Clin Nutr* 1980; 33: 81-85.

The figure shows that during the past 15 years there has been a steady increase in the percentage of linoleic acid in the adipose tissue of Americans. In contrast, the linoleic acid content of the adipose tissue of the British population does not seem to have changed during the past two decades. Thus published data suggest that the decline in ischaemic heart-disease mortality in the U.S.A. was preceded by an increase in the consumption of polyunsaturated fat. Although these data do not prove a causal relation between dietary fat type and CHD, they do fit the different mortality trends in the U.S.A. and the U.K. remarkably well.

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INFECTION BY FASTIDIOUS ENTERIC ADENOVIRUSES IN CHILDHOOD

SIR,—Adenoviruses have been detected by electron microscopy (EM) in the stools of some 3-15% of children with acute diarrhoea.¹⁻⁴ However, many of these strains have proved difficult to culture by conventional techniques.¹⁻⁴ A comparison of adenovirus shedding by children with diarrhoea and by control patients led Brandt and his colleagues to suggest that these fastidious adenoviruses detected by EM are the “prime candidate enteric pathogens among the adenoviruses”.³ Fastidious adenoviruses from children in Glasgow have been passaged in cultures of

PROPORTION OF CHILDREN SEROPOSITIVE FOR THE COMMON SEROTYPE OF FASTIDIOUS ADENOVIRUS, BY AGE

Age (mo)	Proportion (and %) seropositive*
0-12	3/13 (23%)
13-24	5/18 (28%)
25-36	6/13 (47%)
37-48	5/9 (55%)
49-60	5/10 (50%)
61-72	4/4 (100%)
Total	28/67 (42%)

*Titre ≥ 20 .

Chang conjunctival cells and have been found to be related antigenically but distinct from other serotypes by neutralisation tests⁵ (and R. Wigand, J. C. de Jong, and A. H. Kidd, unpublished) and by enzyme linked immunosorbent assay.⁶ Thus, most fastidious adenoviruses appear to constitute a newly discovered serotype whose enteropathogenicity requires further investigation.

Culture of the virus has allowed us to compare the levels of neutralising antibody to this serotype in sera from 67 children attending the Hospital for Sick Children, London. The sera were collected over several months from children up to 6 years of age. Conventional neutralisation tests were performed using Chang cells and the cultures were fixed after 7 days and stained for immunofluorescence as previously described.⁵ The neutralising titre was taken as the highest serum dilution to cause at least 75% reduction

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