

compared with targets in the Health of the Nation³ a smaller proportion of the fifth of the population in the study that had the highest saturated fat intake smoked cigarettes (14.4% v 20%, the British target for 2000) and this fifth of the population was the only one to derive more than 35% of total food energy from fat (the British target for 2005). Mean alcohol consumption was low in all the groups, at below 14 units a week, whereas the Health of the Nation's target for 2005 is to reduce the proportion of adult men drinking 21 units a week to 18% (taking 1 unit as 8.5 g alcohol⁴). Furthermore, only one group failed to achieve the British target of eating five servings of vegetables and fruit a day.

Regardless of the representativeness of the American health professionals, the reported mean serum cholesterol concentration of the groups was remarkably consistent at 5.2-5.3 mmol/l.

J MUNBY
Senior lecturer
D F WEETMAN
Professor

School of Health Sciences,
University of Sunderland,
Sunderland SR2 7EE

- 1 Ascherio A, Rimm EB, Giovannucci EL, Spiegelman D, Stampfer M, Willett WC. Dietary fat and risk of coronary heart disease in men: cohort follow up study in the United States. *BMJ* 1996;313:84-90. (13 July.)
- 2 Wynder EL, Field F, Haley NJ. Population screening for cholesterol determination: a pilot study. *JAMA* 1986;256:2839-42.
- 3 Department of Health. *The health of the nation: a strategy for health in England*. London: HMSO, 1992.
- 4 Doll R, Peto R, Hail E, Wheatley K, Gray R. Mortality in relation to consumption of alcohol: 13 years' observations on male British doctors. *BMJ* 1994;309:911-8.

Relative risks should not have been adjusted for body mass index

EDITOR,—In their prospective study of 43 757 health professionals in the United States, Alberto Ascherio and colleagues found that the multivariate relative risk of myocardial infarction was increased to 1.22 (95% confidence interval 0.96 to 1.56) and that of fatal coronary heart disease was increased to 2.21 (1.38 to 3.54) for men in the top versus the lowest fifth of saturated fat intake.¹ They conclude that these data do not support the strong association between intake of saturated fat and risk of coronary heart disease suggested by international comparisons.

The authors' conclusion is questionable because the relative risks were also adjusted for differences in body fatness (body mass index), which is generally believed to be promoted by a high fat diet and is a strong risk factor for coronary heart disease. By adjusting the relative risks for body fatness the authors eliminated the effect of a high fat diet on coronary heart disease exerted through increased body fatness. From the figures in table 1 of the authors' paper the correlation between saturated fat as a percentage of energy and body mass index is 0.97 ($P < 0.002$) and that between total fat as a percentage of energy and body mass index is 0.99 ($P < 0.001$). This strongly suggests that obesity was associated with a high dietary fat and saturated fat intake in this cohort. As some of the detrimental effect of a high fat diet is mediated through increased body fatness it seems more appropriate to present multivariate relative risks for coronary heart disease unadjusted for body mass index.

ARNE ASTRUP
Director

Research Department of Human Nutrition,
Royal Veterinary and Agricultural University,
1958 Frederiksberg,
Denmark

- 1 Ascherio A, Rimm EB, Giovannucci EL, Spiegelman D, Stampfer M, Willett WC. Dietary fat and risk of coronary heart disease in men: cohort follow up study in the United States. *BMJ* 1996;313:84-90. (13 July.)

Authors' reply

EDITOR,—Nicolai Worm notes that our data imply an inverse association between intake of saturated fat and risk of non-fatal myocardial infarction. Any factor that increases the case fatality rate of a disease without affecting its incidence, however, will be inversely associated with non-fatal occurrences of the disease. Such associations are of dubious interpretation. Also, we did not report results on intake of oleic acid because this is mainly derived from red meat and dairy fat (rather than olive oil, as in the Mediterranean diet) and is highly correlated with intake of total fat ($r = 0.96$) and saturated fat ($r = 0.73$). Attempts to adjust for these correlated nutrients cause wide confidence intervals, and results are not very informative. For example, the relative risk for men in the top fifth compared with those in the bottom fifth of oleic acid intake was 0.85 (95% confidence interval 0.53 to 1.44) after adjustment for total fat and polyunsaturated fat intakes.

J Munby and D F Weetman have calculated correlations between mean saturated fat intake and the means of other variables for the fifths of the population shown in our table 1. These calculations, however, greatly overestimate the correlations between these variables within the cohort. Also, the authors seem to suggest that saturated fat intake may be more strongly associated with risk of myocardial infarction in populations with a higher prevalence of smoking, a higher alcohol intake, and lower consumption of fruits and vegetables. Statistical power to detect these interactions was limited even in our large study, and therefore we cannot exclude this possibility. Although our population was decidedly more health conscious than the average British or American population, this provided the opportunity to evaluate the potential effects of diets with reduced levels of saturated fat.

Finally, Arne Astrup has also incorrectly calculated correlations between mean values; the actual correlation between saturated fat intake and body mass index was 0.09, and thus confounding by body mass index was slight. We certainly agree that maintaining a lean body contributes considerably to the prevention of coronary heart disease, but the role of dietary fat in causing obesity is minor.^{1,2}

ALBERTO ASCHERIO
Assistant professor of epidemiology and nutrition
ERIC B RIMM
Assistant professor of epidemiology and nutrition
WALTER C WILLETT
Professor of epidemiology and nutrition

Department of Nutrition,
Harvard School of Public Health,
665 Huntington Avenue,
Boston, MA 02115,
USA

- 1 Jeffery RW, Hellerstedt WL, French SA, Baxter JA. A randomized trial of counseling for fat restriction versus calorie restriction in the treatment of obesity. *Int J Obesity* 1995;19:132-7.
- 2 Kushi LH, Lenart EB, Willett WC. Health implications of Mediterranean diets in light of contemporary knowledge. 2. Meat, wine, fats, and oils. *Am J Clin Nutr* 1995;61 (suppl):1416-27S.

Healthy sexual lifestyle should be emphasised when negative results of HIV tests are given

EDITOR,—Riva Miller and Marc Lipman welcome the Department of Health's recent guidelines for pre-test discussion on HIV antibody testing.¹ I am concerned, however, that there are two serious omissions from these guidelines, which may have an effect on the public health.

Firstly, no reference is made to offering testing for other sexually transmitted diseases. People who request testing for HIV antibody have a high

incidence of sexually transmitted diseases, many of which are symptomless and are detected only by routine screening.

Secondly, the guidelines give no advice about counselling after the test for those in whom the result is negative. Most people who have an HIV test are given a negative result. This is an ideal opportunity to reinforce issues of general health promotion and of sexual health promotion in particular. Such an opportunity to emphasise the importance of a healthy sexual lifestyle should not be minimised when a negative result is given. Experience in genitourinary medicine clinics (where most HIV tests have been carried out) suggests that patients are particularly receptive to this advice at this time, when the anxieties about the HIV test have diminished.

Skill is readily available in genitourinary medicine clinics for both counselling before and after HIV tests and screening for sexually transmitted diseases.

ERIC CURLESS
Honorary secretary, Association for Genitourinary Medicine
Bolton Centre for Sexual Health,
Bolton General Hospital,
Bolton BL4 0JR

- 1 Miller R, Lipman M. HIV pre-test discussion. *BMJ* 1996;313:130. (20 July.)

Evidence for the risk of calcium channel blockers in hypertension was selective

EDITOR,—We have five comments on the Fortnightly review by D G Beevers and P Sleight.¹

Firstly, Beevers and Sleight say that results from a Chinese study may not be readily applicable to a Western population and that a longer acting formulation of nifedipine was used.² It could be argued that if a beneficial effect was demonstrable in a population with low incidence of an event then it would be similar, if not more beneficial, in a population with a higher incidence of that event. Beevers and Sleight also did not attribute the better outcome in the nifedipine group to the use of a longer acting preparation, despite acknowledging the lack of information on these formulations. Thus, two potentially positive features of the study were presented as negative attributes.

Secondly, the authors cite highly selected reports to suggest an increase in mortality from events related to ischaemic heart disease in patients treated with nifedipine.^{3,4} These studies have been criticised^{5,6} for the small number of patients studied with limited statistical power of the data and for the confounding effects of the increased prevalence of pre-existing ischaemic heart disease (between 46% and 78% v 32% in the β blocker group) and diabetes in the group treated with nifedipine.³ Moreover, 515 patients were treated with β blockers, 74 with nifedipine, and 77 with verapamil. Thus, the case mix compared in each treatment arm was not sufficiently matched, introducing the likelihood of confounding errors.

Thirdly, their statement "short acting calcium channel blockers like nifedipine" ignores the widely available longer acting formulations.

Fourthly, the reflex catecholamine surge is a physiological response to hypotension including that induced by all vasodilators without a negative chronotropic effect. Not only is this effect not group related it would be expected to be less obvious in the longer acting formulations.

Finally, two possibly advantageous properties of calcium channels—antiplatelet and antispasm effects—were judged as side effects whereas in some clinical situations they may be considered beneficial.