focused on food resource allocation within the family (8). Obesity and malnutrition have been shown to coexist, not only within the same strata of society but also within the same household. One important question is why limited household education and incomes have a disproportionate impact on women’s health. The strongest socioeconomic gradient for obesity is typically observed for women, not men. Indeed, the global obesity epidemic is, to some extent, a women’s health problem.

We agree that food-assistance programs such as WIC can serve to bring previously inaccessible foods within reach of lower-income mothers and their young children. The new WIC package, in particular, aims to promote the consumption of whole grains, vegetables, and fruit by lower-income households. Given that the WIC package is to remain cost-neutral, it will be interesting to screen the new food options with nutrient profiling techniques that are able to assess both nutrients per calorie and nutrients per dollar (9). Bonuses or vouchers enabling Food Stamp Program recipients to purchase more vegetables and fruit, farm to cafeteria programs, and the US Department of Agriculture’s Fruit and Vegetable Pilot Program for schools are all examples of how food interventions can be based on economic incentives.

Food-guidance systems, based on nutrient profiling models, can help consumers identify nutrient-rich foods at an affordable cost (10). The 2005 Dietary Guidelines for Americans stressed the need to select nutrient-rich foods in preference to discretionary calories. Efforts are being made to help identify such foods through front-of-pack labeling or the regulation of nutrition and health claims. Persons with limited food budgets will need additional assistance in selecting foods with a favorable nutrient content relative to price.

The dual burden of disease, undernutrition and overweight, now faced by developing nations is an economic issue that is directly linked to poverty and food costs. The relation between food, health, and income should again become a priority for global public health. The major policy and political challenge for global nutrition is to ensure a supply of affordable healthy foods to all.

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Mediterranean dietary patterns and chronic diseases

Dear Sir:

We read with interest the recent report of Brunner et al (1) in the Journal, which described the prospective relation between habitual diet and the incidence of diabetes or coronary heart disease in the 15-y follow-up of the Whitehall II study. The finding that healthy dietary patterns offer protection against the burden imposed by chronic diseases in the Western world is in line with current scientific information (2–4) and is reassuring. We would like to focus on the estimated macronutrient intake that Brunner et al described in Table 2, in which the value of carbohydrates/d across the dietary clusters is quite similar, ranging from a minimum mean value of 40.4% (Mediterranean-like dietary pattern) to a maximum mean value of 43.4% (Healthy dietary pattern); the other values (Unhealthy and Sweet dietary patterns) had intermediate positions. It seems quite strange that the Mediterranean-like pattern, which in theory would have had the maximal intake of estimated carbohydrates (higher than average consumption of whole-meal bread, fruit, vegetables, rice, and pasta and average consumption of white bread, as shown in Table 1), in practice had the lowest intake, whereas the Unhealthy dietary pattern had higher than average consumption of whole-meal bread, fruit, vegetables, rice, and pasta and average consumption of white bread, as shown in Table 1), in practice had the lowest intake, whereas the Unhealthy dietary pattern had higher than average consumption of bread and very low consumption of fruit and vegetables (as Brunner et al showed in Table 1). The mean intake of daily carbohydrates, <50% across the dietary clusters, may in fact reflect the country in which the study was conducted; however, the sum of energy distribution in each pattern (protein, carbohydrates, alcohol, and total fat) gave values consistently <100% (94.7–96.2%). Is there any particular reason for this?

Another aspect of the article that left us puzzled was the use of the term “Mediterranean-like” to describe a dietary pattern that, in theory, should conform to what a Mediterranean-style diet is thought to be; the calculated Mediterranean score is also unclear. The Mediterranean dietary pattern emphasizes a consumption of fat (30–40%
of daily energy intake), primarily from foods high in monounsaturated fatty acids, and encourages the consumption of fruit, vegetables, tree nuts, legumes, whole grains, and fish and a moderate consumption of alcohol (5). Thus, the main characteristics of the Mediterranean-style diet are an abundance of plant food, olive oil as the principal source of fat, consumption of fish and poultry in low-to-moderate amounts, relatively low consumption of red meat, and moderate consumption of wine, normally with meals. Quite paradoxically, in the description of dietary clusters (Table 1) and in the method given for calculating the Mediterranean diet score (Table 2, footnote), there is no mention of olive oil or other vegetable oils. Curiously, the reader is told that the Mediterranean-like dietary cluster is characterized by a high intake of butter (Table 1), which seems to be the negation of most scientific evidence about the health benefits of Mediterranean diets (6).

Thus, our concern relates to the improper use of the term Mediterranean-like as applied to a dietary cluster that was misconstrued by Brunner et al as having the full characteristic of a Mediterranean-style diet. For example, most of the attributes of the Mediterranean-style diet are split between the 2 healthy clusters (Mediterranean-like and Healthy; Table 1), which may account for the nonsignificant reduction found in the risk of diabetes and CHD (see Table 5). Unifying the 2 healthy clusters would, of course, have provided further support for the holistic concept of nutrition. Mediterranean diets, which are known to be safe and beneficial for a number of cardiovascular endpoints (7), are gaining popularity as individual persons and healthcare professionals seek diets that improve the quality of life and promote longevity (8).

Neither of the authors had a personal or financial conflict of interest.

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Reply to K Esposito and D Giugliano

Dear Sir:

We thank Esposito and Giugliano for their interest in our analysis of dietary patterns and the incidence of diabetes and coronary heart disease in British civil servants (1). They question the low estimates of daily carbohydrate intake as a proportion of total energy intake, and they note that the sum of mean energy intake from macronutrients and alcohol by dietary cluster is consistently <100%.

We have reviewed our computations, and we identified an error in the calculation of energy from carbohydrate. We wrongly used a conversion factor of 14 kJ/g, instead of 17 kJ/g. When the sum of estimated energy intakes derived from each macronutrient and alcohol for each participant is used as the estimate for total energy intake (Table 1), the corrected computation yields estimates of the proportion of energy from carbohydrate some 14% higher (≈6 percentage points) than those in our published article. Total energy intake in the published report was based on energy content data in McCance and Widdowson’s food tables. This estimate was used to compute the ratio of energy intake to energy expenditure and to correct for energy misreporting in the regression models. Thus, our error with respect to energy derived from carbohydrate has no effect on the diet-disease analysis.

We are also grateful to Esposito and Giugliano for the opportunity to clarify the method used to compute the Mediterranean diet score. We followed the approach of Trichopoulou et al (2) that uses a modified criterion for fat quality, grouping polyunsaturated and monounsaturated fatty acids together (on the basis that, over recent decades, one of the salutary changes in the Northern European food supply has been the greater availability of polyunsaturated seed oils). Values of 0 or 1 were assigned to each of 9 components. Participants reporting intakes of the 5 food groups vegetables, legumes, fruit and nuts, cereals, and fish above the sex-specific median intake per 10 MJ were assigned a value of 1 for each group. Participants with food group intakes of meat and dairy below the sex-specific median intake per 10 MJ were assigned values of 1. A score of 1 was given to moderate alcohol consumption (10 to <30 g/d in men and women, respectively). Participants with a ratio of unsaturated to saturated fat intake above the sex-specific median ratio were given a score of 1. The score based on crude food intake was positively correlated with total energy intake (r = 0.23, P < 0.001), and food intakes therefore were expressed as intakes per 10 MJ (3). The Mediterranean diet score (range: 0–9) was grouped (0–3, 4–5, and 6–9) for the analysis (4).

The “Mediterranean-like” diet was originally designated as “Continental” but was renamed in response to an American referee who suggested that non-European readers would not recognize that term. We have reservations about the term adopted, in parallel with those expressed by Esposito and Guigliano. However, because this cluster had the highest average Mediterranean diet score and a higher proportion of high scores (see Table 1), the change of designation seemed appropriate. With respect to the relation of the Mediterranean-like dietary pattern to health outcomes, it is interesting to compare our findings with those for the Healthy pattern. There is no significant difference in effects on coronary heart disease or...