

LETTER

The Mediterranean vs the Japanese diet

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Both the Mediterranean and Japanese diets are known to be healthy (Tokudome *et al*, 2000; Trichopoulou & Vasilopoulou, 2000; Ferro-Luzzi *et al*, 2002; Serra-Majem *et al*, 2003). People of the Mediterranean countries enjoy a low risk of cardiovascular disease, while Japanese are famous for their longevity/healthy life expectancy (UN, 1998). However, there are both similarities and discrepancies in intake of foods and beverages between the two cases. The Mediterranean diet is characterized by high consumption of cereals (wheat), vegetables and fruit, fish and olive oil (Trichopoulou & Vasilopoulou, 2000; Ferro-Luzzi *et al*, 2002; Serra-Majem *et al*, 2003). Japanese also consume large amounts of cereals (rice), vegetables and fruit, and fish, but there is much lower intake of energy and oils/fats (Tokudome *et al*, 2000; Health Promotion and Nutrition Division, 2003).

In a recent issue of *EJCN*, Dr Serra-Majem *et al* (2003) reported an interesting ecological finding that typical Mediterranean individuals consume high amounts of total lipids (approximately 100 g/day in males and 80 g in females) and also polyunsaturated fatty acids (PUFAs) in males, and lipids (more than 40% energy) and PUFAs in both genders along with high concentrations and proportions of mono-unsaturated fatty acids (MUFAs), largely from olive oil.

In contrast, the traditional Japanese diet has been characterized by low intake of total lipids, including saturated fatty acids, MUFAs and PUFAs, particularly of n-6 PUFAs, not only absolute concentrations as well as proportions (Okuyama *et al*, 1997; Tokudome *et al*, 2000). However, the recent past has seen a change from 20% energy from lipids to 30%, whereas the ratio of n-6 PUFAs/n-3 PUFAs has shifted from 2–3 to 4–5. We assume that these changes will enhance the risk of fat-related cancers, cardiovascular disease and cerebrovascular embolisms.

Therefore, we wonder if Dr Serra-Majem *et al* could provide information that the risk of cardiovascular disease is explained with reference to concentrations and/or percentage energy from total lipids, n-6 PUFAs and n-3 PUFAs together with its ratio. Furthermore, comments on whether the risk is modulated when the intake of vegetables and fruit is adjusted would be welcomed because they contain antioxidant nutrients, including α -tocopherol, carotenoids, vitamin C and folic acid.

There is evidence that not only absolute concentrations of total lipids but also the balance of fatty acids of n-6 PUFAs/n-

3 PUFAs, in particular, are crucial to our health (Lands, 1995; Okuyama *et al*, 1997; Rose & Connolly, 1999). We propose that, even if olive oil comprises antioxidant nutrients, intake at high levels may be unhealthy. According to values for macronutrients set for the Japanese diet (Health Promotion and Nutrition Division, 2003), intake of 20–25% energy from lipids on average, with more than 50% from carbohydrates and 15–20% from proteins may be recommended for adults.

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