Letter to the Editor

Letter by Spence Regarding Article,
“Diet and Stroke: Recent Evidence Supporting a Mediterranean-Style Diet and Food in the Primary Prevention of Stroke”

To the Editor:

In their recent review of the Mediterranean diet and stroke prevention, Lakkur and Judd emphasize the kind of animal flesh that should be consumed (fish and poultry preferred to red meat), but do not address the quantity of animal flesh consumed. Furthermore, they mention components of red meat, which may contribute to stroke risk, include saturated fat and sodium in processed meat, but neglect to mention cholesterol and L-carnitine.

There is ample evidence that dietary cholesterol is harmful. Recent belief that saturated fat is harmless is based on failure to recognize that dietary cholesterol has a permissive effect on the harm from saturated fats—the “bacon and egg” effect.

Carnitine from animal flesh (4× as much in red meat as in chicken or fish) and phosphatidylcholine from egg yolk and other sources are converted by the intestinal bacteria to trimethylamine, which in turn is oxidized in the liver to trimethylamine n-oxide. In animal models, trimethylamine n-oxide is atherogenic, and in human subjects increases cardiovascular risk. Among patients referred for coronary angiography, after a test dose of 2 hard-boiled eggs, trimethylamine n-oxide levels in the top quartile nearly tripled the 3-year risk of stroke, death, or myocardial infarction.

In discussing the benefit of a daily serving of poultry substituted for a daily serving of red meat, Lakkur and Judd seem to assume that daily servings of animal flesh are the norm. For most North Americans, this is probably true, but given usual portion sizes in North America, it does not conform to the Mediterranean diet.

In a retrospective about the 7 Countries Study, Keys said “The heart of this diet is mainly vegetarian, and differs from American and northern European diets in that it is much lower in meat and dairy products and uses fruit for dessert.” Although poultry and fish have less saturated fat and l-carnitine than red meat, they have approximately the same cholesterol content.

In addition to choosing the right kind of animal flesh to consume, patients wanting to reduce their risk of stroke should limit their intake of animal flesh to much less than most North Americans consume. Instead of limiting intake of animal flesh to 2 oz per day, it is easier for most to have animal flesh every other day, in a portion about the size of the palm of the hand, and the thickness of a hamburger patty. They should also limit their intake of egg yolk. Learning to make vegetarian meals every other day is a tall order for most North Americans, but is feasible given tasty recipes and a positive attitude.

Disclosures

None.

J. David Spence, MD
Stroke Prevention and Atherosclerosis Research Centre
Robarts Research Institute
Western University
London, Ontario, Canada

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J. David Spence

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