

Total fat, trans fat linked to higher incidence of ischemic stroke

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Post-menopausal women who reported consuming the most daily dietary fat had a 40 percent higher incidence of clot-caused strokes compared to women who ate the least amount, according to research presented at the American Stroke Association's International Stroke Conference 2010.

The incidence of ischemic stroke also increased by 30 percent in the quartile of women consuming the highest daily amount of trans fat (average intake 7 grams per day) compared to those who consumed the least (average 1 gram/day). Two common sources of trans fat are processed foods and fried foods.

Ischemic strokes are caused by blockages in blood vessels in or leading to the brain.

"We found positive associations between total fat intake and ischemic stroke incidence and between trans fat intake and ischemic stroke incidence," said Sirin Yaemsiri, M.S.P.H., a doctoral student in the department of epidemiology in the Gillings School of Global Public Health at the University of North Carolina in Chapel Hill.

The study is the first to examine the associations of different fats and different subtypes of ischemic stroke in post-menopausal women, who face a higher stroke risk than men of a similar age.

Evidence from other studies shows that different types of fat have different effects on the incidence of [coronary heart disease](#) (CHD), with

trans fat implicated in the development of CHD. However, studies of ischemic stroke and fat have been inconclusive, possibly because earlier studies had small numbers of ischemic stroke cases.

Before menopause, women have a lower risk of stroke compared to men of similar age, a situation that reverses after menopause, Yaemsiri said.

The analysis included data on 87,230 post-menopausal women ages 50 to 79 who participated in the Women's Health Initiative (WHI) Observational Study, a project sponsored by the National Institutes of Health and the National Heart, Lung and Blood Institute. The women answered a food frequency questionnaire when they entered the study and were followed for an average of 7.6 years, the researchers said. During that time, 1,049 ischemic strokes occurred.

Researchers looked for links between dietary fat intake and four ischemic stroke subtypes, which were characterized by their size or point of origin. However, the data on [ischemic stroke](#) subtypes fell short of statistical significance, perhaps because strokes are difficult to characterize and 43 percent (445 cases) of the ischemic strokes in the study were of unknown type, Yaemsiri said.

Researchers divided the women into quartiles based on the amount of total dietary fat and types of fat (saturated fat, monounsaturated fat, polyunsaturated fat and [trans fat](#)) they reported consuming per day.

Variables included age, race, smoking status, physical activity, alcohol or aspirin use, body mass index, hormone therapy, heart disease history, diabetes, systolic blood pressure and whether the women took medication for high blood pressure or to reduce cholesterol, vitamin E supplementation, fruit/vegetable intake, total calories and dietary fiber.

Women in the top quartile for total fat intake had an average intake of

86 grams of total fat per day. Those in the lowest quartile consumed an average of 26 grams a day.

"I think our findings support the American Heart Association recommendations for keeping trans [fat](#) intake at less than 1 percent of energy," said Ka He, M.D., Sc.D., M.P.H., senior author of the study and associate professor of nutrition and epidemiology at the UNC Gillings School of Global Public Health.

Trans fats can be found in many foods - especially in fried foods like french fries and doughnuts, and baked goods including pastries, pie crusts, biscuits, pizza dough, cookies, crackers and stick margarine and shortenings.

Provided by American Heart Association

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