Dietary Fats and the Risk of Incident Alzheimer Disease

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Background Few studies have investigated the effects of dietary fats on the development of Alzheimer disease. We examined the associations between intake of specific types of fat and incident Alzheimer disease in a biracial community study.
Methods We performed clinical evaluations on a stratified random sample of 815 community residents aged 65 years and older who were unaffected by Alzheimer disease at baseline and who completed a food-frequency questionnaire a mean of 2.3 years before clinical evaluation.
Results After a mean follow-up of 3.9 years, 131 persons developed Alzheimer disease. Intakes of saturated fat and *trans*-unsaturated fat were positively associated with risk of Alzheimer disease, whereas intakes of -6 polyunsaturated fat and monounsaturated fat were inversely associated. Persons in the upper fifth of saturated-fat intake had 2.2 times the risk of incident Alzheimer disease compared with persons in the lowest fifth in a multivariable model adjusted for age, sex, race, education, and apolipoprotein E 4 allele status (95% confidence interval, 1.1-4.7). Risk also increased with consumption of *trans*-unsaturated fats, beginning with the second fifth of intake (relative risk, 2.4 compared with the lowest fifth; 95% confidence interval, 1.1-5.3). We observed linear inverse associations between Alzheimer disease and vegetable fat (P = .002), and, after further adjustment for other types of fat, marginally significant associations with intake of -6 polyunsaturated fat (P = .10 for trend) and monounsaturated fat (P = .10 for trend). Intakes of total fat, animal fat, and dietary cholesterol were not associated with Alzheimer disease.
Conclusion High intake of unsaturated, unhydrogenated fats may be protective against Alzheimer disease, whereas intake of saturated or *trans*-unsaturated (hydrogenated) fats may increase risk.