

Ernährung und Demenzrisiko – was ist gesichert?

Eine Übersicht epidemiologischer Studien

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Literatur:

1. *World Health Organisation*: World Health Day will focus on ageing. Bulletin of the World Health Organization 77: 293-294 (1999).
2. *Bickel, H.*: Demenzen im höheren Lebensalter: Schätzung des Vorkommens und der Versorgungskosten. Z. Gerontol. Geriatr. 34: 108-115 (2001).
3. *Möller, H. J.; Laux, G.; Kapfhammer, H. P.*: Psychiatrie und Psychotherapie. 2. Aufl., Springer Verlag, Berlin: 882 ff (2003).
4. *Kasper, S.; Volz, H. P.*: Psychiatrie compact. 1. Aufl., Georg Thieme Verlag, Stuttgart: 42 ff (2003).
5. *Sparks, D. L.; Martin, T. A.; Gross, D. R.; Hunsaker, J. C.*: Link between heart disease, cholesterol, and Alzheimer's disease: a review. Microsc. Res. Tech. 50: 287-290 (2000).
6. *Rutten, B. P. F.; Steinbusch, H. W. M.; Korr, H.; Schmitz, C.*: Antioxidants and Alzheimer's disease: from bench to bedside (and back again). Curr. Opin. Clin. Nutr. Metab. Care. 5: 645-651 (2002).
7. *Christen, Y.*: Oxidative Stress and Alzheimer disease. Am. J. Clin. Nutr. 71: 621S-629S (2000).
8. *Engelhart, M. J.; Geerlings, M. I.; Ruitenberg, A.; van Swieten, J. C.; Hofman, A.; Witteman, J. C. M.; Breteler, M. M. B.*: Dietary intake of antioxidants and risk of Alzheimer disease. J. Am. Med. Assoc. 287: 3223-3229 (2002).
9. *Morris, M. C.; Evans, D. A.; Bienias, J. L.; Tangney, C. C.; Bennett, D. A.; Aggarwal, N.; Wilson, R. S.; Scherr, P. A.*: Dietary intake of antioxidant nutrients and the risk of incident Alzheimer disease in a biracial community study. J. Am. Med. Assoc. 287: 3230-3237 (2002).
10. *Laurin, D.; Masaki, K. H.; Foley, D. J.; White, L. R.; Launer, L. J.*: Midlife dietary intake of antioxidants and risk of late-life incident dementia. Am. J. Epidemiol. 159: 959-967 (2004).
11. *Commenges, D.; Scotet, V.; Renaud, S.; Jacqmin-Gadda, H.; Barberger-Gateau, P.; Dartigues, J. F.*: Intake of flavonoids and risk of dementia. Eur. J. Epidemiol. 16: 357-363 (2000).
12. *Luchsinger, J. A.; Tang, M. X.; Shea, S.; Mayeux, R.*: Antioxidant vitamin intake and risk of Alzheimer disease. Arch. Neurol. 60: 203-208 (2003).
13. *Laurin, D.; Foley, D. J.; Masaki, K. H.; White, L. R.; Launer, L. J.*: Vitamin E and C supplements and risk of dementia. J. Am. Med. Assoc. 288: 2266-2268 (2002).
14. *Masaki, K. H.; Losonczy, K. G.; Izmirlian, G.; Foley, D. J.; Ross, G. W.; Petrovitch, H.; Havlik, R.; White, L. R.*: Association of vitamin E and C supplement use with cognitive function and dementia in elderly men. Neurology. 54: 1265-1272 (2000).
15. *Morris, M. C.; Beckett, L. A.; Scherr, P. A.; Herbert, L. E.; Bennett, D. A.; Field, T. S.; Evans, D. A.*: Vitamin E and Vitamin C supplement use and risk of incident Alzheimer disease. Alzheimer. Dis. Assoc. Disord. 12: 121-126 (1998).
16. *Zandi, P. P.; Anthony, J. C.; Khachaturian, A. S.; Stone, S. V.; Gustafson, D.; Tschanz, J. T.; Norton, M. C.; Welsh-Bohmer, K. A.; Breitner, J. C. S.*: Reduced risk of Alzheimer disease in users of antioxidant vitamin supplements. Arch. Neurol. 61: 82-88 (2004).
17. *McKhann, G.; Folstein, M.; Katzman, R.; Price, D.; Stadlan, E. M.*: Clinical diagnosis of Alzheimer's disease: report of the NINCDS-ADRDA Work Group under the auspices of Department of Health and Human Services Task Force on Alzheimer's Disease. Neurology 34: 939-944 (1984).
18. *Román, G. C.; Tatemichi, T. K.; Erkinjuntti, T.*: Vascular dementia: diagnostic criteria for research studies. Report of the NINDS-AIREN International Workshop. Neurology. 43: 250-260 (1993).
19. *Bourre, J. M.*: Roles of unsaturated fatty acids (especially omega-3 fatty acids) in the brain at various ages and during ageing. J. Nutr. Health. Aging. 8: 163-174 (2004).
20. *Engelhart, M. J.; Geerlings, M. I.; Ruitenberg, A.; van Swieten, J. C.; Hofman, A.; Witteman, J. C. M.; Breteler, M. M. B.*: Diet and risk of dementia: Does fat matter? Neurology. 59: 1915-1921 (2002).
21. *Kalmijn, S.; Launer, L. J.; Ott, A.; Witteman, J. C. M.; Hofman, A.; Breteler, M. M. B.*: Dietary fat intake and the risk of incident dementia in the Rotterdam Study. Ann. Neurol. 42: 776-782 (1997).
22. *Morris, M. C.; Evans, D. A.; Bienias, J. L.; Tangney, C. C.; Bennett, D. A.; Aggarwal, N.; Schneider, J.; Wilson, R. S.*: Dietary fats and the risk of incident Alzheimer disease. Arch. Neurol. 60: 194-200 (2003).
23. *Morris, M. C.; Evans, D. A.; Bienias, J. L.; Tangney, C. C.; Bennett, D. A.; Wilson, R. S.; Aggarwal, N.; Schneider, J.*: Consumption of fish and n-3 fatty acids and risk of incident Alzheimer disease. Arch. Neurol. 60: 940-946 (2003).
24. *Barberger-Gateau, P.; Letenneur, L.; Deschamps, V.; Pérès, K.; Dartigues, J. F.; Renaud, S.*: Fish, meat, and risk of dementia: cohort study. Br. Med. J. 325: 932-933 (2002).
25. *Fadda, F.; Rossetti, Z. L.*: Chronic ethanol consumption: from neuroadaptation to neurodegeneration. Prog. Neurobiol. 56: 385-431 (1998).
26. *Hofman, A.; Ott, A.; Breteler, M. M.; Bots, M. L.; Slooter, A. J.; van Harskamp, E.; van Duijn, C. N.; Van Broeckhoven, C.; Grobbee, D. E.*: Atherosclerosis, apolipoprotein E, and prevalence of dementia and Alzheimer's disease in the Rotterdam Study. Lancet 349: 151-154 (1997).
27. *Frankel, E. N.; Kanner, J.; German, J. B.; Parks, E.; Kinsella, J. E.*: Inhibition of oxidation of human low-density lipoprotein by phenolic substances in red wine. Lancet 341: 454-457 (1993).
28. *Ruitenberg, A.; van Swieten, J. C.; Witteman, J. C.; Mehta, K. M.; van Duijn, C. M.; Hofman, A.; Breteler, M. M.*: Alcohol consumption and risk of dementia: the Rotterdam Study. Lancet 359: 281-286 (2002).
29. *Orgogozo, J. M.; Dartigues, J. F.; Lafont, S.; Letenneur, L.; Commenges, D.; Salamon, R.; Renaud, S.; Breteler, M. B.*: Wine consumption and dementia in the elderly: a prospective community study in the Bordeaux area. Rev. Neurol. (Paris). 153: 185-192 (1997).
30. *Luchsinger, J. A.; Tang, M. X.; Siddiqui, M.; Shea, S.; Mayeux, R.*: Alcohol intake and risk of dementia. J. Am. Geriatr. Soc. 52: 540-6 (2004).
31. *Huang, W.; Qiu, C.; Winblad, B.; Fratiglioni, L.*: Alcohol consumption and incidence of dementia in a community sample aged 75 years and older. J. Clin. Epidemiol. 55: 959-964 (2002).
32. *Anttila, T.; Helkala, E. L.; Viitanen, M.; Kareholt, I.; Fratiglioni, L.; Winblad, B.; Soininen, H.; Tuomilehto, J.; Nissinen, A.; Kivipelto, M.*: Alcohol drinking in middle age and subsequent risk of mild cognitive impairment and dementia in old age: a prospective population based study. Br. Med. J. 329: 539-542 (2004).
33. *Truelsen, T.; Thudium, D.; Gronbaek, M.*: Amount and type of alcohol and risk of dementia: the Copenhagen City Heart Study. Neurol. 59: 1313-1319 (2002).
34. *Mukamal, K. J.; Kuller, L. H.; Fitzpatrick, A. L.; Longstreth, W. T., Jr.; Mittelman, M. A.; Siscovick, D. S.*: Prospective study of alcohol con-

- sumption and risk of dementia in older adults. *J. Am. Med. Assoc.* 289: 1405-1413 (2003).
35. *Lindsay, J.; Laurin, D.; Verreault, R.; Hebert, R.; Helliwell, B.; Hill, G. B.; McDowell, I.*: Risk factors for Alzheimer's disease: a prospective analysis from the Canadian Study of Health and Aging. *Am J Epidemiol.* 156: 445-453 (2002).
 36. *Mattson, M. P.*: Will caloric restriction and folate protect against AD and PD? *Neurology.* 60: 690-695 (2003).
 37. *Quadri, P.; Fragiaco, C.; Pezzati, R.; Zanda, E.; Forloni, G.; Tettamanti, M.; Lucca, U.*: Homocysteine, folate, and vitamin B-12 in mild cognitive impairment, Alzheimer's disease, and vascular dementia. *Am. J. Clin. Nutr.* 80: 114-122 (2004).
 38. *McCaddon, A.; Davies, G.; Hudson, P.; Tandy, S.; Cattell, H.*: Total serum homocysteine in senile dementia of Alzheimer type. *Int. J. Geriatr. Psychiatry.* 13: 235-239 (1998).
 39. *Gallucci, M.; Zanardo, A.; De Valentin, L.; Vianello, A.*: Homocysteine in Alzheimer disease and vascular dementia. *Arch. Gerontol. Geriatr. Suppl.* 9: 195-200 (2004).
 40. *Clarke, R.; Smith, A. D.; Jobst, K. A.; Refsum, H.; Sutton, L.; Ueland, P. M.*: Folate, vitamin B12, and serum total homocysteine levels in confirmed Alzheimer disease. *Arch. Neurol.* 55: 1449-1455 (1998).
 41. *Seshadri, S.; Beiser, A.; Selhub, J.; Jacques, P. F.; Rosenberg, I. H.; D'Agostino, R. B.; Wilson, P. W. F.; Wolf, P. A.*: Plasma homocysteine as a risk factor for dementia and Alzheimer's disease. *N. Engl. J. Med.* 346: 476-483 (2002).
 42. *Mizrahi, E. H.; Jacobsen, D. W.; Debanne, S. M.; Traore, F.; Lerner, A. J.; Friedland, R. P.; Petot, G. J.*: Plasma total homocysteine levels, dietary vitamin B₆ and folate intake in AD and healthy aging. *J. Nutr. Health. Aging.* 7: 160-165 (2003).
 43. *Morris, M. C.; Evans, D. A.; Bienias, J. L.; Scherr, P. A.; Tangney, C. C.; Hebert, L. E.; Bennett, D. A.; Wilson, R. S.; Aggarwal, N.*: Dietary niacin and the risk of incident Alzheimer's disease and of cognitive decline. *J. Neurol. Neurosurg. Psychiatry.* 75: 1093-1099 (2004).
 44. *Luchsinger, J. A.; Tang, M. X.; Shea, S.; Mayeux, R.*: Caloric intake and the risk of Alzheimer's disease. *Arch. Neurol.* 59: 1258-1263 (2002).
 45. *Sano, M.; Ernesto, C.; Thomas, R. G.; Klauber, M. R.; Schafer, K.; Grundman, M.; Woodbury, P.; Growdon, J.; Cotman, C. W.; Pfeiffer, E.; Schneider, L. S.; Thal, L. J.*: A controlled trial of selegiline, alpha-tocopherol, or both as treatment for Alzheimer's disease. *N. Engl. J. Med.* 336: 1216-1222 (1997).
 46. *Nilsson, K.; Gustafson, L.; Hultberg, B.*: Improvement of cognitive functions after cobalamin/folate supplementation in elderly patients with dementia and elevated plasma homocysteine. *Int. J. Geriatr. Psychiatry.* 16: 609-614 (2001).
 47. *Sommer, B. R.; Hoff, A. L.; Costa, M.*: Folic acid supplementation in dementia: a preliminary report. *J. Geriatr. Psychiatry. Neurol.* 16: 156-159 (2003).
 48. *Grodstein, E.; Chen, J.; Willett, W. C.*: High-dose antioxidant supplements and cognitive function in community-dwelling elderly women. *Am. J. Clin. Nutr.* 77: 975-984 (2003).
 49. *Paleologos, M.; Cumming, R. G.; Lazarus, R.*: Cohort study of vitamin C intake and cognitive impairment. *Am. J. Epidemiol.* 148: 45-50 (1998).
 50. *Kalmijn, S.*: Fatty acid intake and the risk of dementia and cognitive decline: a review of clinical and epidemiological studies. *J. Nutr. Health. Aging.* 4: 202-207 (2000).
 51. *Laurin, D.; Verreault, R.; Lindsay, J.; MacPherson, K.; Rockwood, K.*: Physical activity and risk of cognitive impairment and dementia in elderly persons. *Arch. Neurol.* 58: 498-504 (2001).
 52. *Abbott, R. D.; White, L. R.; Ross, G. W.; Masaki, K. H.; Curb, J. D.; Petrovitch, H.*: Walking and dementia in physically capable elderly men. *J. Am. Med. Assoc.* 292: 1447-1453 (2004).
 53. *Weuve, J.; Kang, J. H.; Manson, J. E.; Breteler, M. M.; Ware, J. H.; Grodstein, E.*: Physical activity, including walking, and cognitive function in older women. *J. Am. Med. Assoc.* 292: 1454-1461 (2004).

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