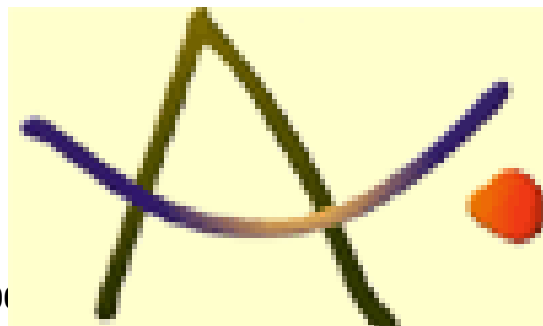
Update Demenz 2007

Alzheimergesellschaft Niedersachsen
Hannover 20.06.2007

Dr. Manfred Gogol
Klinik für Geriatrie



Lebenssituation

1.042 Männer, 70-89 Jahre, ab 1990 nachverfolgt für 5 Jahre

2fach erhöhtes Risiko für Demenz wenn

- Verwitwet
- Unverheiratet
- Alleinlebend

im Vgl. zu Verheirateten und solchen, die mit anderen Personen zusammenlebten

Van Gelder BM et al. – Marital status and living situation during a 5-year period are associated with a subsequent 10-year cognitive decline in older men: The FINE study. J Gerontol B 2006;61:P213-9

Loneliness and Risk of Alzheimer Disease

Robert S. Wilson, PhD; Kristin R. Krueger, PhD; Steven E. Arnold, MD; Julie A. Schneider, MD; Jeremiah F. Kelly, MD; Lisa L. Barnes, PhD; Yuxiao Tang, PhD; David A. Bennett, MD

Arch Gen Psychiatry. 2007;64:234-240

N = 791
5 Jahre Beobachtungszeit, jährliche Untersuchung
→ Im Mittel über 3,3 Jahre nach beobachtet

Alter bei Einschluß 80,7 ± 7,1 Jahre
Ausbildungszeit 14,5 ± 3,0 Jahre
Frauen 75,7 %
Weisse / Nicht-spanisch 91,0 %

<u>Lebenssituation</u>
4 % Pflegeheim / assist. Living
30 % allein lebend
66 % “retirements homes”

Table 1. Characteristics of Participants Who Did Not Develop AD and Those Who Did*

Characteristic	Participants Without AD (n = 716)	Participants With AD (n = 76)	*P* Value
Age at baseline, y	80.3 (7.1)	85.1 (5.9)	<.01
Educational achievement, y	14.5 (2.9)	14.8 (3.4)	.35
Female sex, %	77.2	61.8	<.01
African American race, %	6.0	4.0	.47
Income score	5.7	4.7	.03
MMSE score	28.2 (1.8)	25.8 (3.0)	<.01
Nine-item CES-D score	1.1 (1.5)	1.1 (1.7)	.97
Loneliness score	2.2 (0.6)	2.5 (0.6)	<.01
Social network size	7.0 (6.0)	6.4 (5.1)	.41
Social activity score	2.6 (0.6)	2.3 (0.5)	<.01
Cognitive activity score	3.2 (0.7)	2.8 (0.8)	<.01
Physical activity score	2.9 (3.4)	3.3 (4.2)	.42
Disability, %†	10.5	24.0	<.01
Vascular risk factors, %‡	79.5	85.5	.21
Vascular conditions, %‡	29.1	34.2	.35

Personality traits distinguishing dementia with Lewy bodies from Alzheimer disease

James E. Galvin, MD, MPH, Heather Malcom, David Johnson, PhD and John C. Morris, MD

NEUROLOGY 2007;68:1895-1901

Longitudinalstudie
n = 290
Alter 77,6 ± 9,9 Jahre
Im Mittel 4,8 Untersuchungen (1 – 14) bis zum Tod
Diagnosesicherung durch Autopsie

Keine Demenz	=	34
AD	=	128
LBD	=	128

Unterschiede LBD zu AD

- Emotionale Stumpfheit *(p = 0,004)*
- Interesseverlust (Hobbies) *(p = 0,01)*
- Apathie *(p = 0,03)*
- Grundlose Überaktivität *(p = 0,003)*

Σ : im Vergleich zur AD *(p = 0,001)*

Ernährung und Demenz I

Mediterrane Diät

(Olivenöl, wenig Fleisch, viel Gemüse + Früchte)

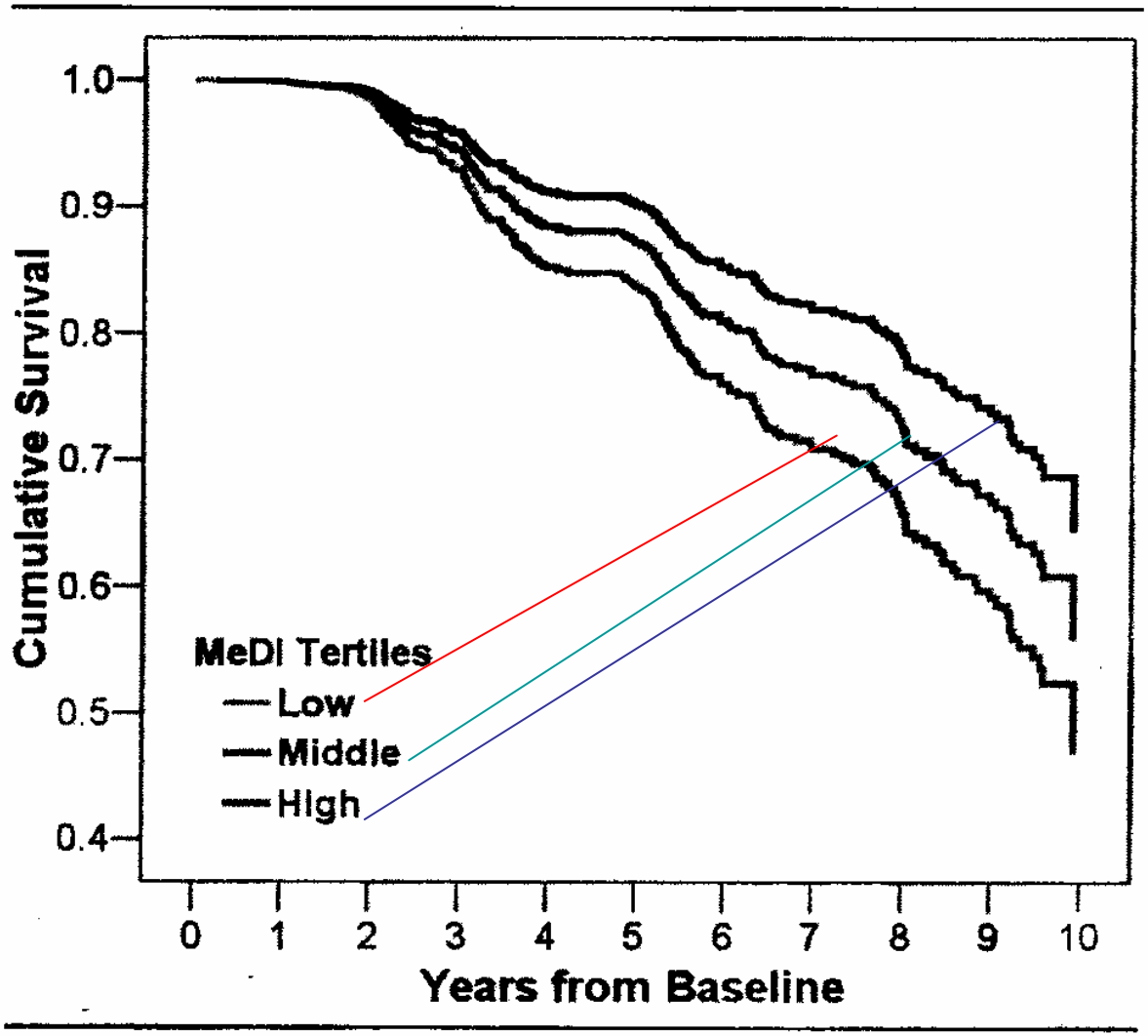
2.258 Personen, mittl. Alter 77 Jahre, 68 Jahre
untersucht alle 1,5 Jahre, Follow-up 4 Jahre

Die höchste Tertil* hatte i.Vgl. zur niedrigsten ein deutlich geringeres Risiko eine Alzheimer-Demenz zu entwickeln.

* *Ernährung i.S. einer mediterrane Diät*

Scarmes N et al. – Mediterranean diet and risk for Alzheimer´s Disease. Ann Neurol 2006;59:912-21

Ernährung und Demenz II



Ernährung und Demenz III

Meta-Analysis: High-Dosage Vitamin E Supplementation May Increase All-Cause Mortality

Edgar R. Miller III, MD, PhD; Roberto Pastor-Barriuso, PhD; Darshan Dalal, MD, MPH; Rudolph A. Riemersma, PhD, FRCPE; Lawrence J. Appel, MD, MPH; and Eliseo Guallar, MD, DrPH

Background: Experimental models and observational studies suggest that vitamin E supplementation may prevent cardiovascular disease and cancer. However, several trials of high-dosage vitamin E supplementation showed non–statistically significant increases in total mortality.

Purpose: To perform a meta-analysis of the dose–response relationship between vitamin E supplementation and total mortality by using data from randomized, controlled trials.

Patients: 135 967 participants in 19 clinical trials. Of these trials, 9 tested vitamin E alone and 10 tested vitamin E combined with other vitamins or minerals. The dosages of vitamin E ranged from 16.5 to 2000 IU/d (median, 400 IU/d).

Data Sources: PubMed search from 1966 through August 2004, complemented by a search of the Cochrane Clinical Trials Database and review of citations of published reviews and meta-analyses. No language restrictions were applied.

Data Extraction: 3 investigators independently abstracted study reports. The investigators of the original publications were contacted if required information was not available.

Data Synthesis: 9 of 11 trials testing high-dosage vitamin E (≥400 IU/d) showed increased risk (risk difference > 0) for all-cause mortality in comparisons of vitamin E versus control. The pooled all-cause mortality risk difference in high-dosage vitamin E trials was 39 per 10 000 persons (95% CI, 3 to 74 per 10 000 persons; $P = 0.035$). For low-dosage vitamin E trials, the risk difference was −16 per 10 000 persons (CI, −41 to 10 per 10 000 persons; $P > 0.2$). A dose–response analysis showed a statistically significant relationship between vitamin E dosage and all-cause mortality, with increased risk of dosages greater than 150 IU/d.

Limitations: High-dosage (≥400 IU/d) trials were often small and were performed in patients with chronic diseases. The generalizability of the findings to healthy adults is uncertain. Precise estimation of the threshold at which risk increases is difficult.

Conclusion: High-dosage (≥400 IU/d) vitamin E supplements may increase all-cause mortality and should be avoided.

Ann Intern Med. 2004;142:●●●-●●●. www.annals.org

For author affiliations, see end of text.

See editorial comment on pp ●●●-●●●.

Effect of multivitamin and multimineral supplementation on cognitive function in men and women aged 65 years and over: a randomised controlled trial

Geraldine McNeill*[1], Alison Avenell[2], Marion K Campbell[2], Jonathan A Cook[2], Philip C Hannaford[3], Mary M Kilonzo[4], Anne C Milne[2], Craig R Ramsay[2], D Gwyn Seymour[5], Audrey I Stephen[2] and Luke D Vale[2,4]

Nutrition Journal 2007, **6**:10 doi:10.1186/1475-2891-6-10

MAVIS trial
Randomisiert, verblindet, placebo-kontrolliert
Substitution von 11 Vitaminen + 5 Spurenelementen
(in einer Tablette)

n = 910
≥ 65 Jahre (n = 290 ≥ 75 a)
At risk n = 260
97 % community living

Characteristics	Supplemented group (n 456)	Placebo group (n 454)
Age in years: median (interquartile range)	72 (68.0 – 76.0)	71 (68.0 – 76.0)
Body mass index in kg/m^2: mean (SD)	28.2 (4.2)	27.9 (4.1)
Women: n (%)	217 (48)	214 (47)
Current smoker: n (%)	57 (13)	63 (14)
Past or present hypertension: n (%)	188 (41)	172 (38)
Past or present heart disorders: n (%)	137 (30)	130 (29)
Past or present chest disorders: n (%)	86 (19)	87 (19)
Past or present diabetes: n (%)	37 (8)	42 (9)
Past or present cancer: n (%)	46 (10)	46 (10)
Past or present cerebrovascular disease: n (%)	31 (7)	22 (5)
At risk of iron, folate, vitamin C or vitamin D deficiency: n (%)	145 (32)	117 (26)

→ **Nach einem Jahr Beobachtungszeit keine Unterschiede**

GLYCEMIC LOAD AND RISK OF ALZHEIMER'S DISEASE

J.A. LUCHSINGER, M.-X. TANG, R. MAYEUX

J Nutr Health Aging 2007;11:238-41

Table 3

Hazard ratios (HR) and 95% confidence intervals (CI) relating glycemic load quartiles to incident Alzheimer's disease using the second quartile as the reference. Model 1 is adjusted for age and gender. Model 2 is also adjusted for years of education, ethnic group, diabetes and APOE-e4. Rates are per 100 person years.

Glycemic load Quartile (mean)	At risk	Cases (rate)	Model 1 HR (95% CI)	Model 2 HR (95% CI)
1 (7596.8)	235	44 (3.1)	1.0	1.0
2 (9714.6)	234	46 (3.1)	0.9 (0.6,1.4)	1.0 (0.7,1.6)
3 (10574.5)	234	41 (2.9)	0.9 (0.6, 1.4)	0.9 (0.6,1.5)
4 (12095.9)	236	53 (3.4)	1.1 (0.7,1.6)	1.1 (0.7,1.7)
p for trend			0.75	0.72

Adipositas und Demenz

10.276 Personen, 55 % Frauen, zwischen 1964-73 im Alter von 40-45 Jahren

Nachuntersucht 1994, mittl. Follow up 27 Jahre

Adipositas (BMI > 30)	1,74 faches Risiko
Übergewicht (BMI 25-30)	1,35 faches Risiko

Ausprägung bei Frauen ausgeprägter als bei Männern

Whitmer RA et al. – Obesity in middle age and future risk of dementia: a 27 year longitudinal population based Study. BMJ 2005;330:1360-4

Körperliches Training und Demenz I

BMJ 2004;329:761

Körperliches Training und Demenz II

Exercise Is Associated with Reduced Risk for Incident Dementia among Persons 65 Years of Age and Older

Eric B. Larson, MD, MPH; Li Wang, MS; James D. Bowen, MD; Wayne C. McCormick, MD, MPH; Linda Teri, PhD; Paul Crane, MD, MPH; and Walter Kukull, PhD

Ann Intern Med. 2006;144:73-81

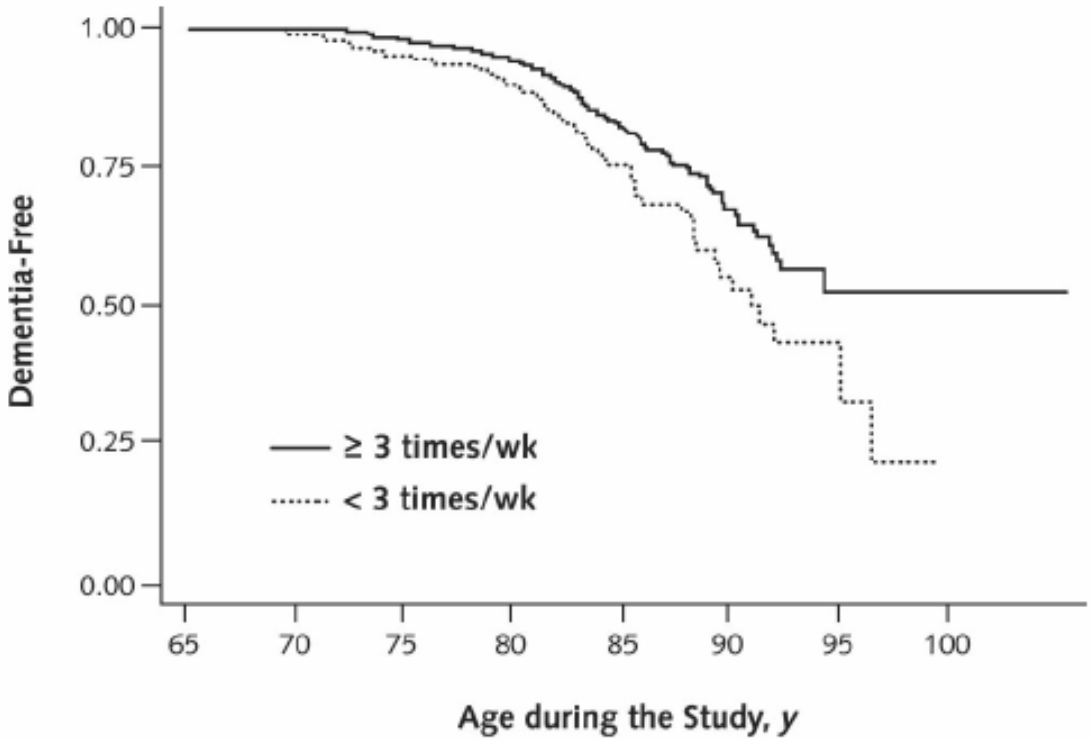
1.740 Studienteilnehmer, mittl. Alter 74 Jahre, 60 % Frauen, Follow up 6,2 Jahre

Exercise: ≥ 15 min an körperlicher (sportlicher) Aktivität

Test: PPF (Performance-based Physical Function), 4 Domänen Mit 0 bis 4 Punkte bewertet (Range 0-16)

Körperliches Training und Demenz III

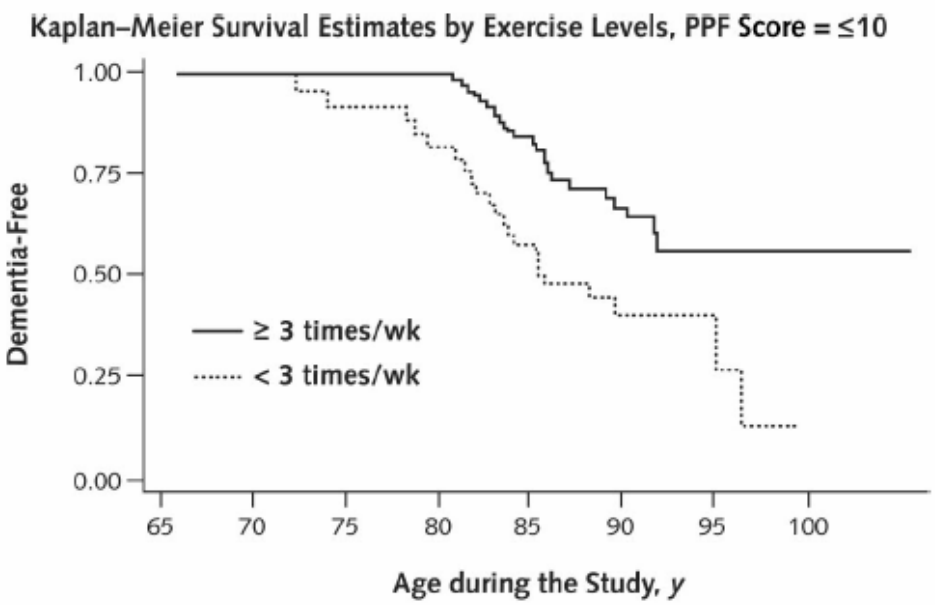
Figure 1. Kaplan–Meier survival estimates for the probabilities of being dementia-free.

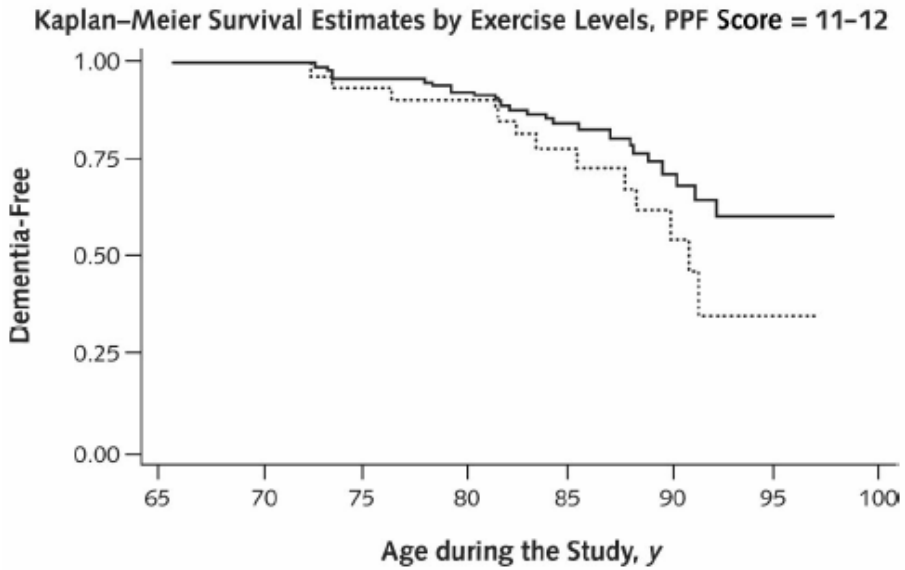


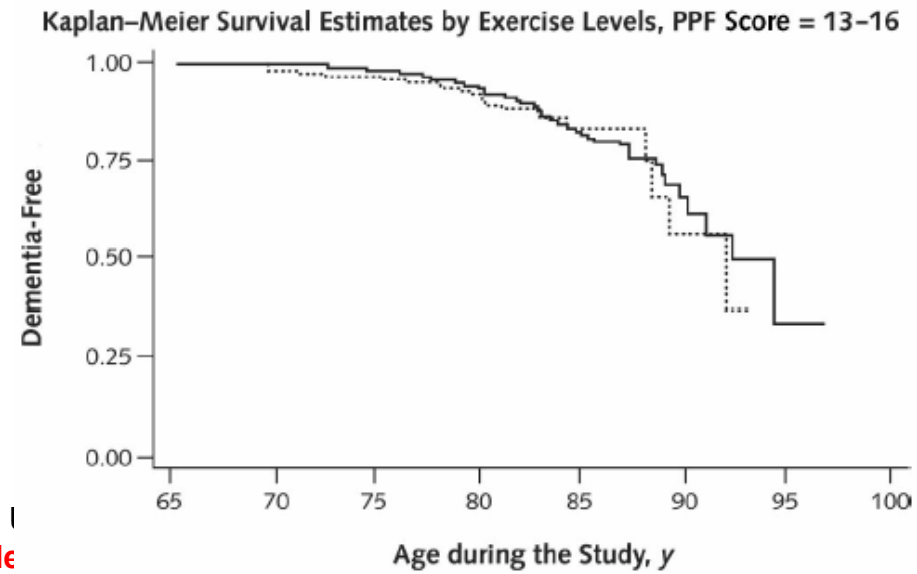
Persons who exercised 3 or more times per week were more likely to be dementia-free than those who exercised fewer than 3 times per week.

Körperliches Training und Demenz IV

Figure 2. Kaplan–Meier survival estimates by exercise and performance-based physical function (*PPF*) levels.







KRANKENHAUS LINDENBRUNN

Dr. M. Gogol

Alzheimergesellschaft Niede

Körperliches Training und Demenz VI

2.288 Personen, 60 % Frauen, 90 % Weisse, mittl. Alter 76 Jahre, Follow-up 5,9 Jahre

Je höher der PPF-Score, desto geringer die Häufigkeit eine Demenz zu entwickeln

Wang L et al. – Performance-based physical function and future dementia in older people. Arch Intern Med 2006; 166:1115-20

Physical activity and health

Even low intensity exercise such as walking is associated with better health

BMJ 2007;334:1173
doi: 10.1136/bmj.39225.414537.80

Interventions to promote walking: systematic review

David Ogilvie, MRC fellow,[1] Charles E Foster, senior researcher,[2] Helen Rothnie, research associate,[3] Nick Cavill, research associate,[2] Val Hamilton, research assistant,[4] Claire F Fitzsimons, SPARColl project coordinator,[3] Nanette Mutrie, professor of exercise and sport psychology,[3] on behalf of the Scottish Physical Activity Research Collaboration (SPARColl)

BMJ 2007;334;1204

WHAT IS ALREADY KNOWN ON THIS TOPIC

Accumulating 30 minutes of moderate intensity physical activity on most days of the week substantially reduces the risk of many chronic diseases

Walking is a popular, familiar, convenient, and free form of exercise by which many sedentary people could gain the health benefits of moderate intensity physical activity

Walking may be influenced by environmental and societal conditions as well as by interventions targeted at individuals

WHAT THIS STUDY ADDS

Interventions tailored to people's needs, targeted at the most sedentary or at those most motivated to change, and delivered either at the level of the individual or household or through groups can increase walking by up to 30-60 minutes a week on average, at least in the short term

Homocystein und Demenz I

These: Homocystein sei ein unabhängiger vaskulärer Risikofaktor und seine Beeinflussung sei sinnvoll

276 Patienten, mittl. Alter 73 Jahre, 65 % Frauen
Follow up 2 Jahre

Kognitive Teste zeigten nach 1 und 2 Jahren
keinen Unterschied

McMahon JA et al. – A controlld trial of homocysteine lowering and cognitive performance. N Engl J Med 2006;354,2764-72
Clarke C – Vitamin B12, folic acid, and the prevnetion of dementia. N Engl J Med 2006;354:2817-9
Garcia A et al. – Homocysteine and cognitive function in elderly people. CMAJ 2004;171:897-904
Bonaa KH et al. – Homocysteine lowering and cardiovascular events after acute myocardial infarction. N Engl J Med 2006; 354:1578-88
The Heart Outcomes Prevention Evaluation (HOPE) 2 investigators – Homocystein lowering with folic acid and B vitamins in vascular disease. N Engl J Med 2006;354:1567-77
Loscalzo J – Homocysteine trials – clear outcomes for complex reasons. N Engl J Med 2006;354:1629-32

Homocystein und Demenz II

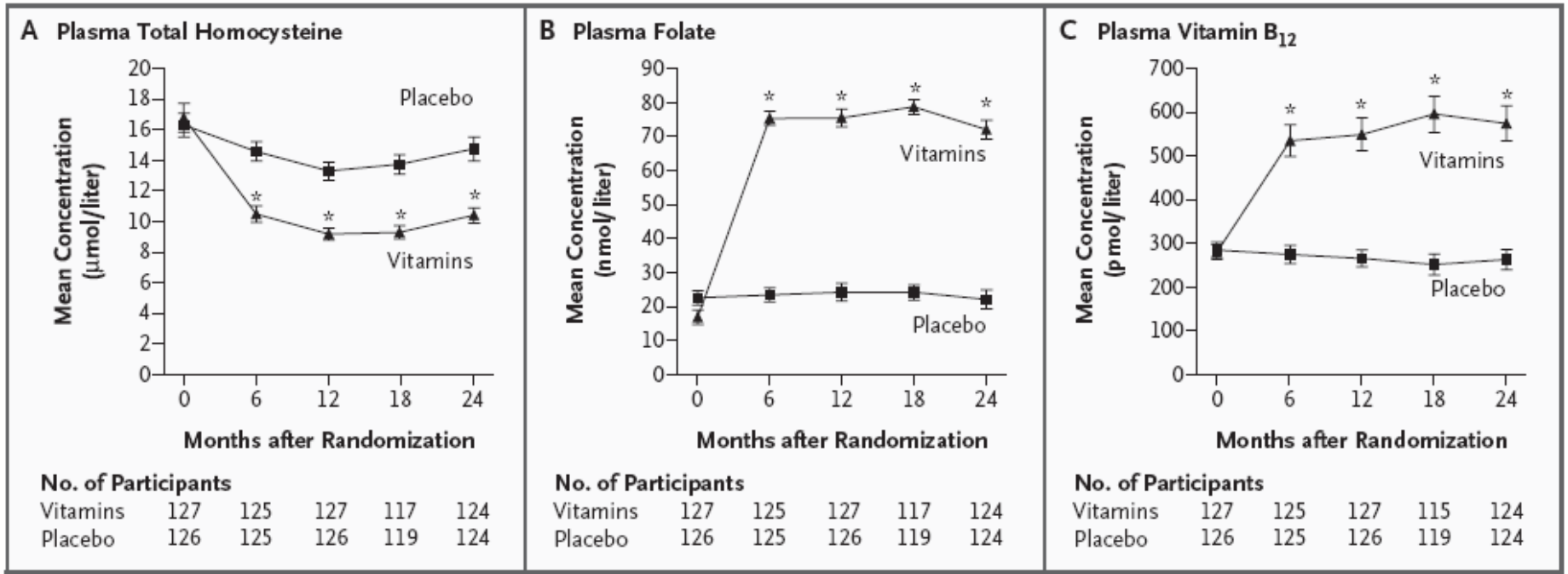


Figure 2. Effect of Vitamins on Biochemical Measurements.

I bars represent 95 percent confidence intervals. Asterisks indicate a significant difference from the placebo group (P<0.001). To convert the values for folate to nanograms per milliliter, divide by 2.266. To convert the values for vitamin B_{12} to picograms per milliliter, divide by 0.738.

N Engl J Med 2006;354:2764-72

Homocystein und Demenz III

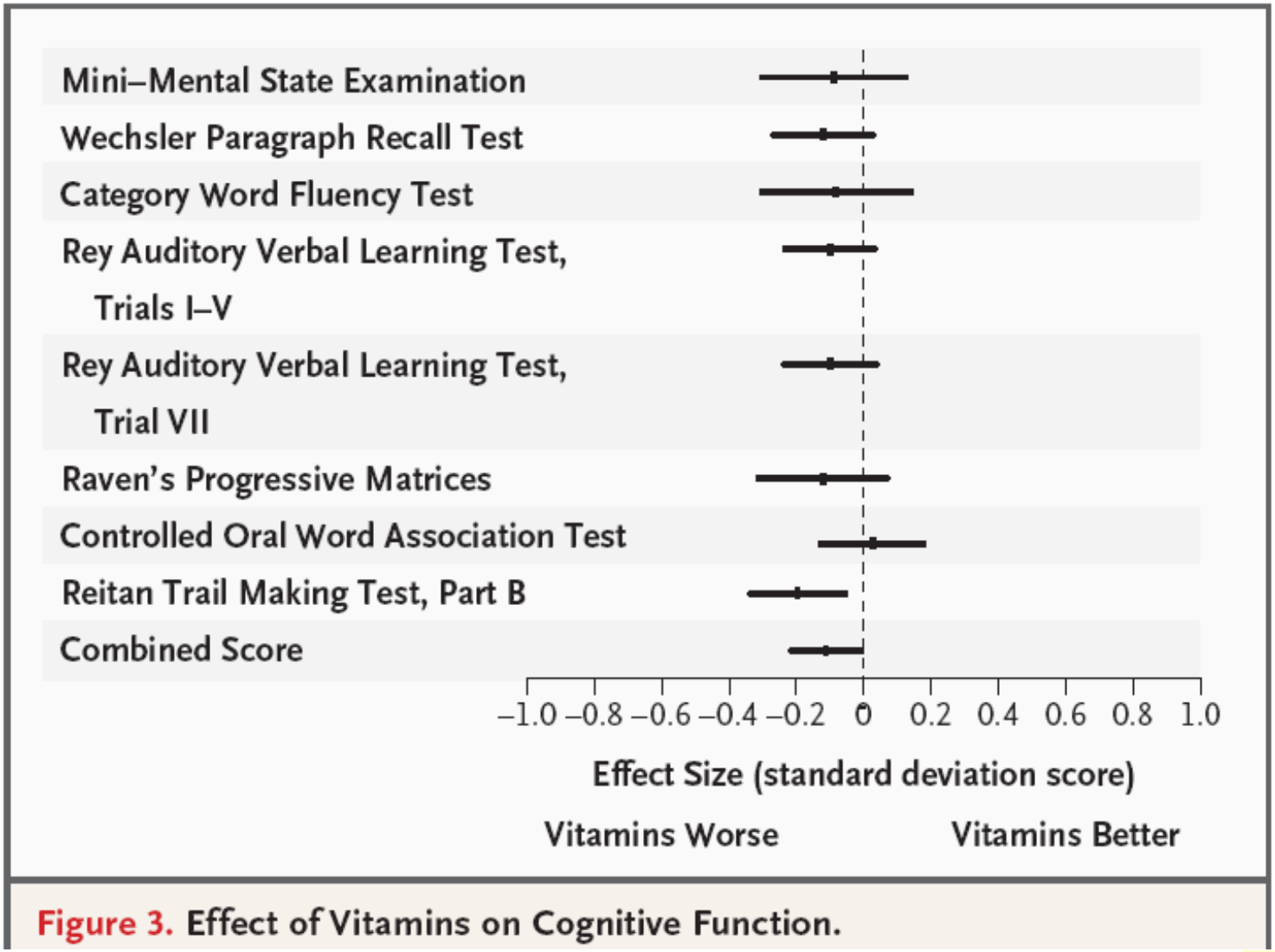


Figure 3. Effect of Vitamins on Cognitive Function.

N Engl J Med 2006;354:2764-72

Homocystein und Demenz IV

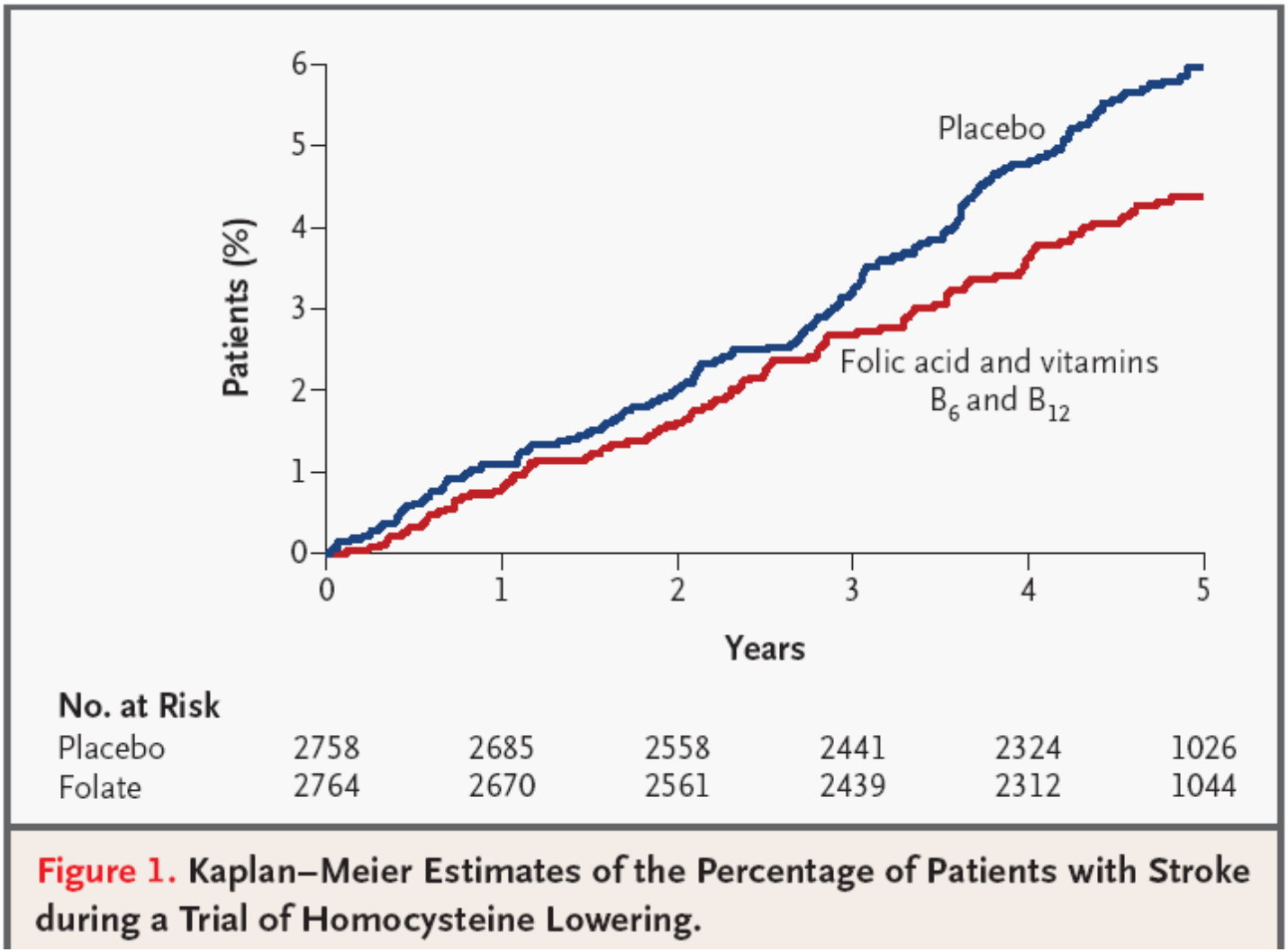


Figure 1. Kaplan–Meier Estimates of the Percentage of Patients with Stroke during a Trial of Homocysteine Lowering.

N Engl J Med 2006;355:205-11

Zusammenfassung

- Einsamkeit
- Vitaminarme (Obst, Gemüse) Ernährung
- Übergewicht
- Mangelnde körperliche Aktivität

Sind RF bzw. Ihre aktive Vorbeugung bedeutet einen gewissen Schutz / Verlangsamung oder Verspätung für eine AD

- Homocystein bleibt fraglich
- Vitamin-/Spurenelemente-Substitution bleibt fraglich

- **Email:** gogol@krankenhaus-lindenbrunn.de

- **Internet:** www.krankenhaus-lindenbrunn.de
  → Geriatrie → Fachbeiträge