4. Alterstraumatologie Kongress 2018

Zürich Regensdorf
22. – 23. März 2018

Ernährung bei Demenz

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Relationship between

Body Weight and Dementia

Weight loss precedes mild to moderate dementia

N = 299, community-dwelling
Follow-up: 20 years (1970 – 1990)

Result:
Significant weight decrease after baseline in participants with diagnosis of dementia in 1990 (n=50)

No significant weight loss in cognitively stable participants

Barrett-Connor E et al. Weight loss precedes dementia in community-dwelling older adults. J Am Geriatr Soc 1996;44:1147-52.

Accelerated weight loss preceding diagnosis of Alzheimer disease

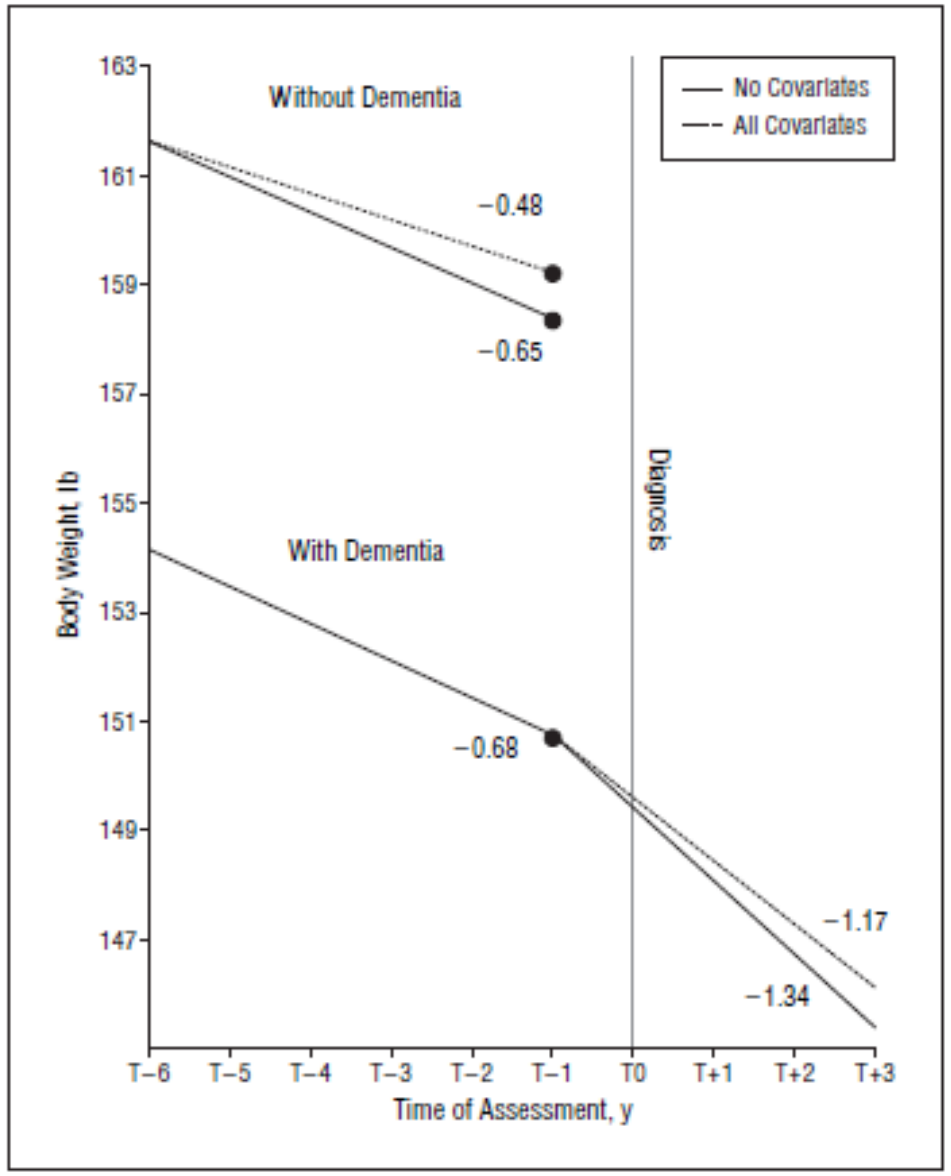


Figure. Average weight loss (men and women combined) over time by group. T0 indicates the time of dementia diagnosis; T−1 through T−6, times of assessment before diagnosis; and T+1 through T+3, times of assessment after diagnosis.

Johnson DK et al. Accelerated weight loss may precede diagnosis in Alzheimer disease. Arch Neurol 2006;63:1312-7.

Total lean mass reduced in early AD

Table 2. Body Composition in Participants With Early AD and Controls

Variable	Mean (SD)		
	Control	Early AD	*P* Value[a]
Body mass index[b]	25.7 (3.6)	25.0 (3.9)	.38
Weight, kg	73.2 (14.0)	69.1 (12.9)	.10
Height, cm	169.6 (11.2)	166.2 (9.1)	.14
Fat mass, kg	25.8 (8.3)	24.7 (8.7)	.41
Body fat, %	35.3 (8.7)	35.4 (9.7)	.93
Lean mass, kg	44.6 (10.4)	41.9 (9.3)	.02

Burns JM et al. Reduced lean mass in early Alzheimer Disease and its association with brain atrophy. Arch Neurol 2010;67:428-433.

Predictors of lean mass

Table 3. Standardized Coefficients (β) Predicting Lean Mass After Controlling for Age and Sex[a]

Variable	β	*P* Value
Whole-brain volume, normalized	.20	<.001
Gray matter volume, normalized	.06	.27
White matter volume, normalized	.19	<.001
Global cognitive performance	.12	.007
Mini-Mental State Examination	.11	.009
Insulin, AUC	.11	.02
Glucose, AUC	.09	.05
C-reactive protein	.003	.94
Physical activity (PASE)	.14	.001
Activities of daily living	.07	.09
Physical performance task	.07	.16
Depression	−.05	.21
Apolipoprotein E4 carrier	−.05	.24

Burns JM et al. Reduced lean mass in early Alzheimer Disease and its association with brain atrophy. Arch Neurol 2010;67:428-433.

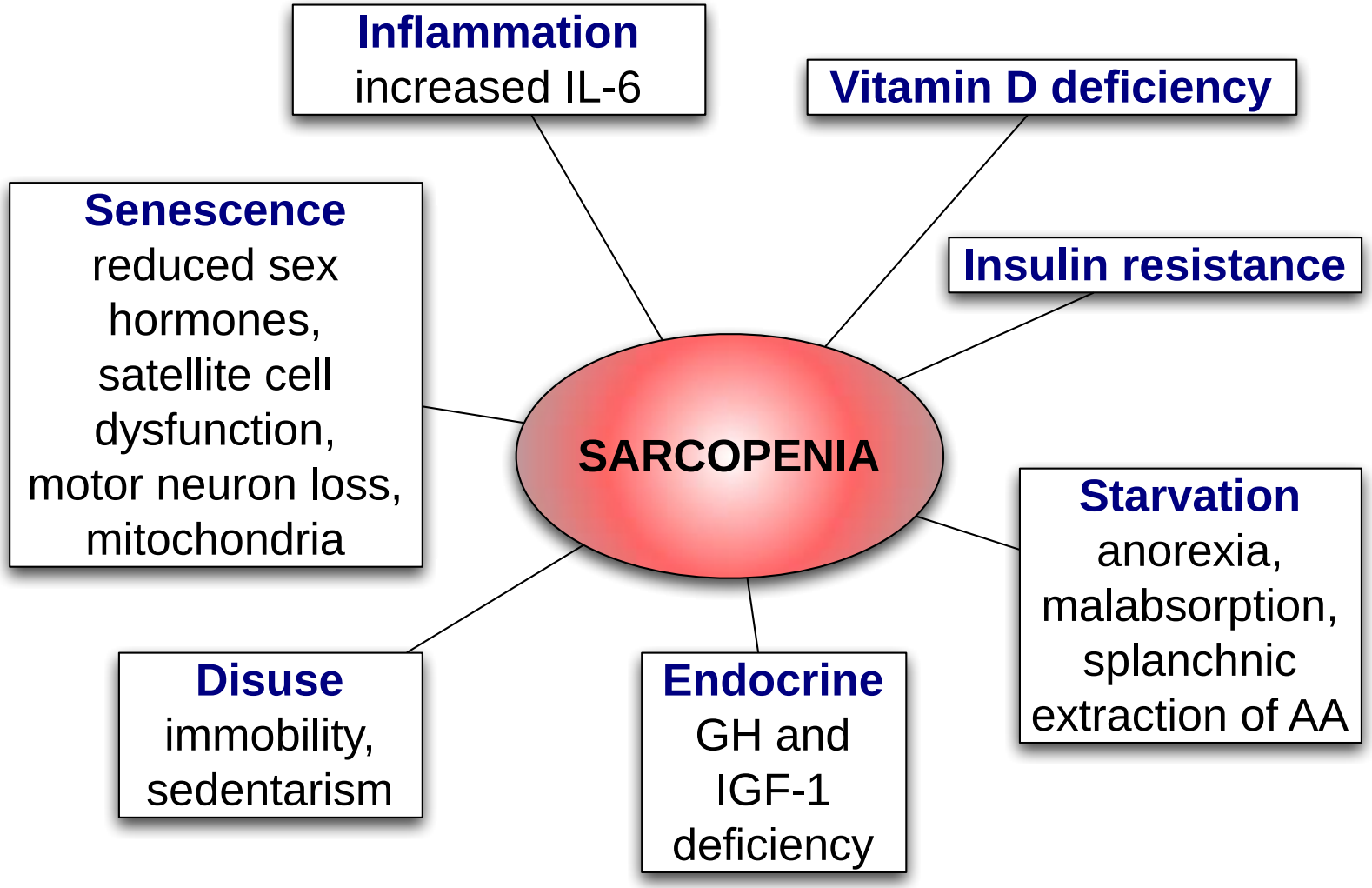
Weight loss in preclinical Alzheimer's Disease

Responsible mechanisms unknown.

Psychosocial (..”forget” to eat)?
Caregiver burden?
Depression?
Reduced appetite?
Changes in taste and smell?

Johnson DK et al. Accelerated weight loss may precede diagnosis in Alzheimer disease. Arch Neurol 2006;63:1312-7.

Sarcopenia Causes: Therapeutical Options?



Cederholm *et al.* Clin Geriatr Med 2011

Lower nutritional status by MNA: predictor of dementia progression in MCI

160 early AD patients (CDR 0.5), follow-up 1 year

52.5% stable
47.5% progressive

A baseline lower nutritional status (MNA) and a lower cognitive performance (AdasCog) : predictors of progression

Ousset PJ et al. Nutritional status is associated with disease progression in very Mild Alzheimer disease. Alzheimer Dis Assoc Diord 2008;22:66-71.

Erhalt der Muskel-Gesundheit

TAB. 1 **Empfohlene tägliche Proteinmengen ab Alter von 65 Jahren**

PROT-AGE (Bauer et al. 2013):

1.0 - 1.2 g/kg Körpergewicht bei gesunden Senioren
1.2 - 1.5 g/kg Körpergewicht bei chronisch kranken Senioren
> 2.0 g/kg Körpergewicht bei Malnutrition oder schweren Verletzungen/Erkrankungen

ESPEN Expert Group (Deutz et. al. 2013):

1.0 – 1.5 g/kg Körpergewicht pro Tag

Schweizerische Gesellschaft für Ernährung (SGE):
spezifische Empfehlungen für Senioren aktuell in Erarbeitung bei der Eigenössischen Ernährungskommission):

Allgemein: 0.8 g/kg Körpergewicht pro Tag für alle Erwachsenen

Kressig RW. Muskelgesundheit durch Muskeltraining und spezifische Ernährung im Alter: Update 2017. Der informierte Arzt 2017;07:32-34.

Biologische Wertigkeit – ausgedrückt als „Protein Digestibility-Corrected Amino Acid Score" (PDCAAS)

Proteinquelle	Biologische Wertigkeit (PDCAAS, in %)
Fleisch, Fisch	100
Milch, Käse	121
Eier	118
Soja	91
Kichererbse	91
Weizen, insgesamt	67
Weizen in Zerealien	42

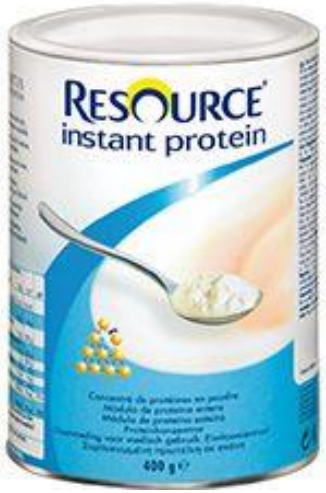
WHO technical report series ; no. 935, 2007
Schaafsma J. Journal of Nutrition. 2000;130:1865S-1867S (70)

Für erhöhten Protein-Intake:

Proteinverdichtung von kalten und warmen Speisen mittels Beimengung von Proteinpulver

Warm:

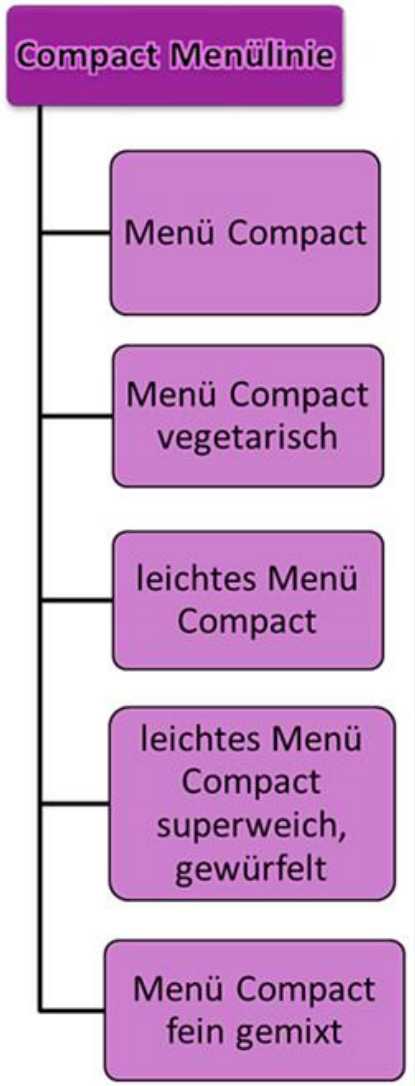
Casein



Kalt:

Molke

Seit 29. November 2016 neu:



Kleinere Portion
Proteinverdichtet (ca. 25g Protein pro Mahlzeit)
Optimale Proteinverteilung auf drei Hauptmahlzeiten

als Ersatz für Vollkost
Hauptkostform
Eintrittskostform

als Ersatz für Vegi / LOV
ohne Fleisch und Fisch und deren Erzeugnisse

als Ersatz für Leichte Vollkost
ohne Blähendes wie Zwiebeln, Kohl etc.

als Ersatz für LVK weich fein
weich gekocht und klein geschnitten

als Ersatz für Turmix
alles püriert

Increase of weight and lean body mass in AD patients

Setting: nursing home and day hospital

With oral supplements:	weight	+1,9 kg ± 2,33
(duration: 3 months)	**lean body mass**	**+0,78 kg** ± 1,4

No changes for cognition or physical function

Lauque S et al, Am J Geriatr Soc 2004;52:1 – 6.

Vergütung von Proteinsupplementen bei neurodegenerativen Erkrankungen

Kostengutsprachegesuch für die künstliche Ernährung zu Hause
Trinknahrung, Sondennahrung, Parenterale Ernährung

http://geskes.ch

Homecare

Original Study

Effects of a Vitamin D and Leucine-Enriched Whey Protein Nutritional Supplement on Measures of Sarcopenia in Older Adults, the PROVIDE Study: A Randomized, Double-Blind, Placebo-Controlled Trial

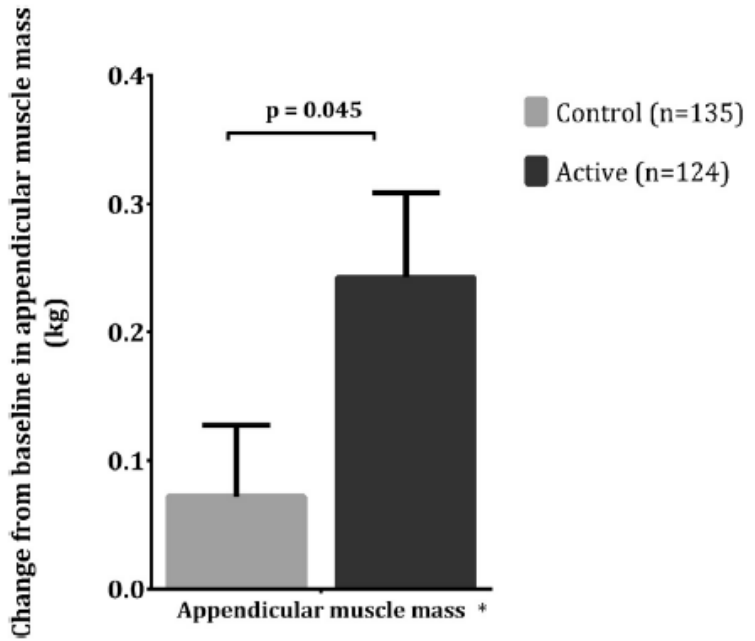


Fig. 2. Change (kg) in appendicular muscle mass from baseline to week 13 follow-up. *The raw mean change from baseline to week 13 and SE. The *P* value represents the time × treatment interaction derived from a mixed model (MMRM) adjusting for age, sex, and baseline protein intake.

Conclusion

This 13-week intervention of a vitamin D and Leucine-enriched whey protein oral nutritional supplement (alone, without exercise) resulted in improvements in muscle mass and lower extremity function.

Bauer J et al. JAMDA 2015;16:740-7.

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von Omanda und der Universitären
Altersmedizin Basel

http://omanda.ch/

VANILLE **VANILLE** **VANILLE**

Ergänzungsnahrung, aromatisiert.
Mit Süssungsmitteln.

Zutaten: **Molke**nproteinisolat (78%, enthält Emulgator **Soja**lecithin), L-Leucin (16%), Aroma, Guarkernmehl, Beta-Carotin, Vanillesamen, Süssungsmittel (Sucralose, Cyclamat, Saccharin, Acesulfame-K).

Nährwerte pro 200 ml trinkfertige Nahrung

	Wasser	Milch Drink (2.5%)
kcal	88	201
kJ	380	862
Fett	0.4 g	5.4 g
Kohlenhydrate	1.3 g	11.3 g
Eiweiss	19.4 g	25.4 g
- L-Leucin	5.4 g	5.8 g

Mindestens haltbar bis: siehe Aufdruck
Trocken, kühl und lichtgeschützt lagern.

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Verzehrempfehlung
Fügen Sie die Flüssigkeit Ihrer Wahl bis zum oberen Etikettenrand bei (200 ml) und schütteln Sie gut. Für eine cremige Konsistenz einige Minuten stehen lassen und nochmals schütteln. Mind. eine Portion täglich zur Deckung des erhöhten Proteinbedarfs.

Entwickelt in der Schweiz durch die Highperformance Scientific GmbH (Spin-off Unternehmen der ETH Zürich) in Zusammenarbeit mit der Universitären Altersmedizin am Felix Platter-Spital Basel, Schweiz. Hergestellt in der Schweiz.

Vertrieb: Omanda AG, Neuhofstrasse 5A, 6340 Baar

PET

7 640178 310070 >

5.8 g Leucin + 25.4 g Protein bei 200ml

Vitamin D…

etwas anders!

Pavé de soleil

Ein Stück Sonne zum Reinbeissen

http://www.bichsel.ch/diverse-produkte/product/pave-du-soleil-3069.html

Vitamin D (1000 IU) Pavé

Monatsschachtel à 24 Pavés

felixplatterspital
Universitäre Altersmedizin Basel

Exercise in patients with dementia

Effects of the Finnish Alzheimer Disease Exercise Trial (FINALEX)

A Randomized Controlled Trial

Kaisu H. Pitkälä, MD, PhD; Minna M. Pöysti, MD, PhD; Marja-Liisa Laakkonen, MD, PhD; Reijo S. Tilvis, MD, PhD; Niina Savikko, RN, PhD; Hannu Kautiainen, PhD; Timo E. Strandberg, MD, PhD

Importance: Few rigorous clinical trials have investigated the effectiveness of exercise on the physical functioning of patients with Alzheimer disease (AD).

Objectives: To investigate the effects of intense and long-term exercise on the physical functioning and mobility of home-dwelling patients with AD and to explore its effects on the use and costs of health and social services.

Design: A randomized controlled trial.

Setting and Participants: A total of 210 home-dwelling patients with AD living with their spousal caregiver.

Interventions: The 3 trial arms included (1) group-based exercise (GE; 4-hour sessions with approximately 1-hour training) and (2) tailored home-based exercise (HE; 1-hour training), both twice a week for 1 year, and (3) a control group (CG) receiving the usual community care.

Main Outcome Measures: The Functional Independence Measure (FIM), the Short Physical Performance Battery, and information on the use and costs of social and health care services.

Results: All groups deteriorated in functioning during the year after randomization, but deterioration was significantly faster in the CG than in the HE or GE group at 6 (P=.003) and 12 (P=.015) months. The FIM changes at 12 months were −7.1 (95% CI, −3.7 to −10.5), −10.3 (95% CI, −6.7 to −13.9), and −14.4 (95% CI, −10.9 to −18.0) in the HE group, GE group, and CG, respectively. The HE and GE groups had significantly fewer falls than the CG during the follow-up year. The total costs of health and social services for the HE patient-caregiver dyads (in US dollars per dyad per year) were $25 112 (95% CI, $17 642 to $32 581) ($P$=.13 for comparison with the CG), $22 066 in the GE group ($15 931 to $28 199; P=.03 vs CG), and $34 121 ($24 559 to $43 681) in the CG.

Conclusions and Relevance: An intensive and long-term exercise program had beneficial effects on the physical functioning of patients with AD without increasing the total costs of health and social services or causing any significant adverse effects.

Trial Registration: anzctr.org.au Identifier: ACTRN12608000037303

JAMA Intern Med. 2013;173(10):894-901.
Published online April 15, 2013.
doi:10.1001/jamainternmed.2013.359

Interventions to promote oral nutritional intake of older people with dementia

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67 papers identified within the topic
with 13 addressing interventions aimed at
helping demented patients to feed (all with positive outcomes!).

Only 1 randomized controlled trial

Change from preplated meal system to self-service (assistant)
Evaluation and food texture recommendation
Verbal prompts and positive reinforcement during meals
Soothing music during meals

Watson R, Green SM. Feeding and dementia: a systematic literature review. J Adv Nurs 2006; 54: 86-93.

Caregiver burden as a short-term predictor of weight loss in older Alzheimer Patients

N = 150, Age ≥ 70 y., mild to moderate AD, community-dwelling,
at least one informal care giver, follow-up of 3 months

Weight loss: ≥ 3% of baseline weight
Care giver burden inventory scale in the highest tertile (36+ out of 96)

Results:
23% of patients with weight loss
Care giver burden of 36+ predicted weight loss

OR 13.93 (CI 1.91-101.33, p=0.009)

Bilotta C et al. Caregiver burden as a short-term predictor of weight loss in older outpatients suffering from mild to moderate Alzheimer's disease: a three months follow-up study. Aging Ment Health 2010;14:481-8.

Effekt von Aquarien in den Speiseräumen auf Nahrungsaufnahme und Gewichtsentwicklung

62 Bewohner eines Seniorenheimes

Aquarien mit lebenden Fischen in den Speiseräumen

für die Interventionsgruppe

Fototapete mit Seeblick für die Kontrollgruppe

Beobachtungszeitraum 16 Wochen

Ergebnis

Signifikante Gewichtszunahme ($p \leq 0{,}005$) in der Interventionsgruppe

Abnahme der Supplementzufuhr um 25 %

Edwards NE et al. West J Nursing Res 2002; 24: 697 - 712

DANKE!

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