

Malnutrition & Frailty Management


Prof. Dr. med. Heike A. Bischoff-Ferrari, DrPH
 Klinikdirektorin, Klinik Geriatrie USZ
 Co-Leitung Alters-Traumatologie-Zentrum, USZ
 Lehrstuhl Geriatrie und Altersforschung, UZH
 Chefärztin, Universitärer Geriatrie-Verbund Zürich



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Überblick

- Was ist Malnutrition & Frailty?
- Relevanz?
- Wie behandeln?
- Kurzer Ausblick Forschung Zurich-POPS



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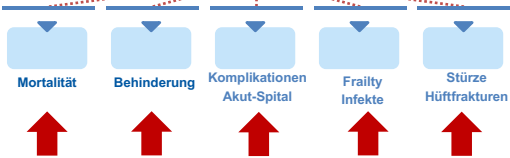
Was ist Malnutrition bei älteren Patienten?

- **Quantitative Mangelernährung**
 - Im Vordergrund steht zu wenig Energiezufuhr
- **Qualitative Mangelernährung**
 - Mangel an Vitaminen (B12, Vit D)
 - Mangel an gesunden Makronährstoffen wie Protein
 - Mangel an Mineralstoffen (Calcium)

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Klinische Relevanz Malnutrition

> 5% Gewichtsverlust in 6-12 Monaten bei älteren Menschen



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 Gaddey M, Am Fam Phys 2000

Instrumente

NRS – Kondrup – Malnutritiions-Screening

If "Yes" to any, proceed to Final Screening. If ALL 4 Initial Screening questions are "No", then the patient is low risk by NRS-2002.

BMI <20.5 kg/m ²	No	Yes
Weight loss within 3 months	No	Yes
Reduced dietary intake in the last week	No	Yes
ICU patient	No	Yes

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Wie fragt man nach Gewichtsverlust?

- **Was ist in Ihrem Kühlschrank?**
 In Frigo veritas – Boumedndjel N et al. The Lancet 2000
- **Gewichtsverlust**
 - Haben Sie in den letzten 6 Monaten unbeabsichtigt Gewicht verloren?
 - Was wiegen Sie jetzt? – Was haben Sie vor 6 Monaten gewogen?
 - Haben Sie in den letzten Monaten weniger gegessen, hatten Sie weniger Appetit?
 - Sind Ihre Kleider in den letzten 3 Monaten zu gross geworden – mussten Sie Ihren Gürtel enger machen?

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Ursachen: 9 D's of weight loss – in older adults

- Dementia
- Depression
- Disease (acute and chronic)
- Dysphagia
- Dysgeusia
- Diarrhea
- Drugs
- Dentition
- Dysfunction (functional disability)




Robbins, Kaplan 2000

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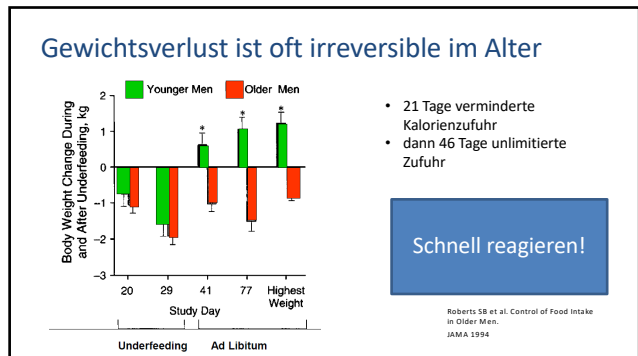
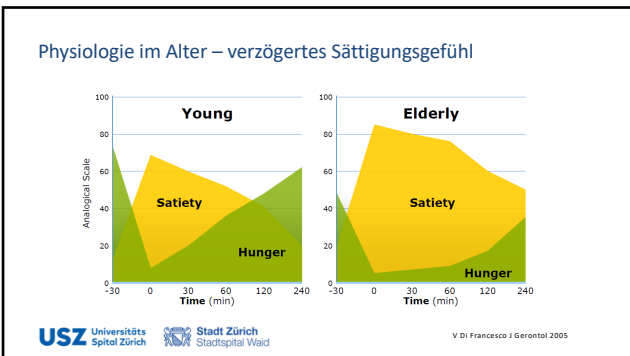
Treatable Causes of Weight loss in older adults: Meals on Wheels

- M Medication effects
- E Emotional problems, especially depression
- A Anorexia nervosa (nervosa), alcoholism
- L Late-life paranoia
- S Swallowing disorders
- O Oral factors (e.g., poorly fitting dentures, cavities)
- N No money
- W Wandering and other dementia-related behaviours
- H Hyperthyroidism, hypothyroidism, hyperparathyroidism, hypoadrenalism
- E Enteric problems (e.g., malabsorption)
- E Eating problems (e.g., inability to feed self)
- L Low-salt, low-cholesterol diets
- S Social problems (e.g., isolation, inability to obtain preferred foods), gallstones




Shabbir M. H. Alibhai, JAMC 2005

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Was tun um die Gewichtszunahme zu unterstützen – im Akutspital?

- Essen was schmeckt – möglichst ohne Limitierungen
- Energie-reiche Snacks – mehrfach am Tag (Ovo, Ei, Brot mit Olivenöl, Käse, Eiscreme)
- Supplemente (Eiweiss – z.B. Molke)
- Orale Gesundheit optimieren
- Schmerzen behandeln / Polypharmazie reduzieren
- Sinne optimieren
- Mobilität stimulieren – verbessert Verdauung und macht hungrig
- Gemeinsam essen
- würzen!
- Hilfsmittel anbieten – Ergotherapie
- Ziele setzen!!



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Ziele setzen!

Research question: We investigated whether care giver role prior to hip fracture influences functional recovery at 6 and 12 months after hip fracture.

Outcome: Functional recovery was measured as the timed up and go test.

Care giver other persons



Care giver pets



Care giver plants



Nardi M, Simmen HP, Page HC, Egli A, Willett WC, Theiler R, Bischoff-Ferrari HA. Association between Caregiver Role and Short- and Long-Term Functional Recovery after Hip Fracture: A Prospective Study. J Am Med Dir Assoc. 2018

Methods

Secondary Analysis: Zurich Hip Fracture Trial
Primary outcome: functional recovery by type of caregiver role

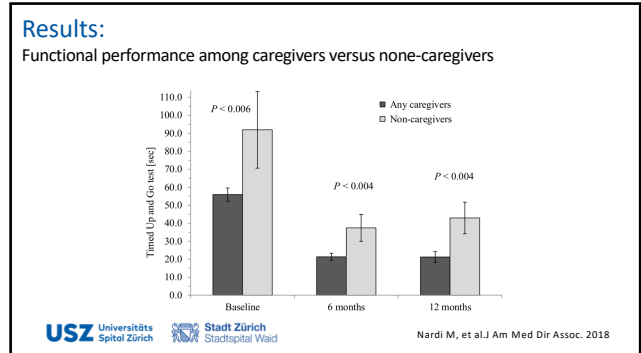
Population:

- All Participants had an acute hip fracture age 65+
- N = 107
- 84% women
- mean age 83.0 years – 44% > 85 years
- baseline Timed Up and Go (sec): 63.3 (SD 55.7)
- BMI 24.5 (SD 4.3)

Outcome: TUG at BL, 6, 12 months **Predictor:** Care giver role by questionnaire


Methods: Multivariate repeated measurement analysis, controlling age, gender, bmi, treatment, baseline TUG

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By type of Care Giver

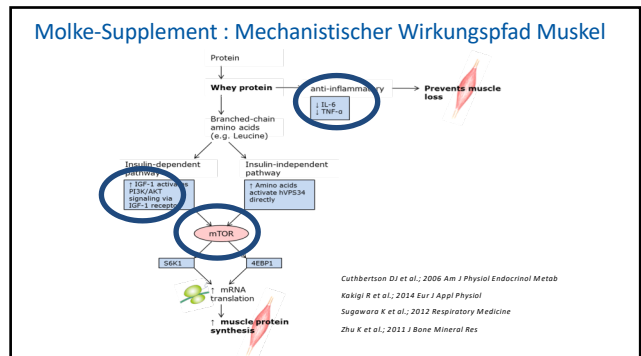
For short-term (6-month) functional recovery, hip fracture patients who have a caregiver role of any kind, and especially of plants, have a significant benefit.
 -- 6.6 seconds faster than non-caregivers (p-value = 0.003)!



For long-term (12 months) functional recovery, hip fracture patients who are caregivers for other persons have a significant benefit.
 -- 7.3 seconds faster than non-caregivers (p-value = 0.009)!



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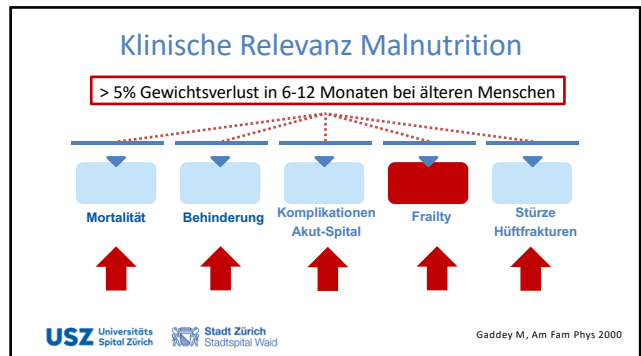


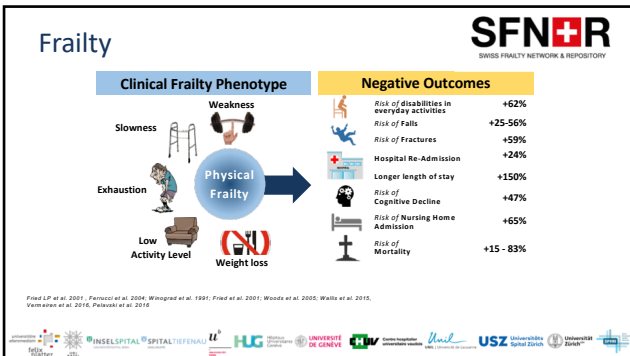
Meta-Analysis 2015: Effect of Leucine-rich protein supplements on muscle health

- 16 RCTs/crossover studies, N = 999 participants
- Protein Supplement versus control:
- ↑ body weight: 1.02kg (95% CI 0.19, 1.85) p=0.02
- ↑ lean body mass: 0.99kg (95% CI 0.43, 1.55) p=0.0005

Lean body mass benefits are most pronounced in sarcopenic individuals

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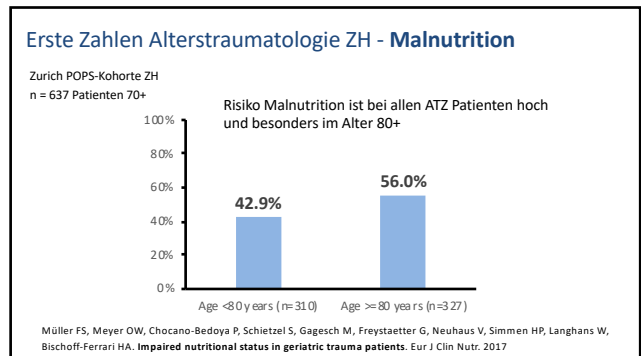
Geriatrische Akutrehabilitation parallel zur Akutbehandlung ATZ

Mobilität	
Kognition	
Mental Health	
Delirrisiko	
Quality of Life	
Medikation	
Ernährung	
Selbstständigkeit im Alltag (IADL)	
Alltagsaktivitäten (BADL)	
Frailty (Gebrechlichkeit)	
Sensorium	
Multimorbidität	

ZÜRICH-POPS

Forschungsschwerpunkt
Peri-Operativ Care Project in Seniors Patients

1. Erfassung Risiken
2. Neue Interventionen – RCTS
3. Implementation - Vernetzung



ZÜRICH-POPS Trials

Klinische Studien zur Prüfung in wieweit einfache Massnahmen Outcome bei älteren Patienten verbessern können
Leitung: Zentrum Alter und Mobilität, USZ – Klinik Geriatrie USZ

- STRONG trial (Molke + Training: Start 5-2018; n = 800) – Zusammenarbeit Basel
- Zurich hip fracture trial (Training + Vitamin D – 2010; n = 173)
- Testosteron & D – (SNF Start 2016; n = 168)
- Move for your Mind (Training – Start 1-2018; n = 160)
- DO-HEALTH – grösste Altersstudie Europas (2012 bis 6-2018; n = 2157)
- STARK – umfassende Reha zu Hause bei Hüftbruchpatienten

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Danke!

THREE STEPS TO UNBREAKABLE BONES
VITAMIN D, CALCIUM AND EXERCISE

1. Lanz P, Bischoff-Ferrari HA. The Influence of Protein on the Prevention of Fragility Fractures Among Senior Adults. Praxis 2018
2. Pape HC, Bischoff-Ferrari HA. How can we influence the incidence of secondary fragility fractures?
A review on current approaches. Injury. 2017

Unseren Patienten muss es schmecken und Essen ist ein wichtiger Pfeiler für den Erfolg Reha und Wundheilung

Medikamente & Malnutrition

Medication Adverse Effects That May Lead to Weight Loss

ADVERSE EFFECT	MEDICATIONS
Altered taste or smell	Allopurinol, angiotensin-converting enzyme inhibitors, antibiotics, anticholinergics, antihistamines, calcium channel blockers, levodopa, propranolol, selegiline (Eldypryl), spironolactone (Aldactone)
Anorexia	Amantadine, antibiotics, anticonvulsants, antipsychotics, benzodiazepines, digoxin, levodopa, metformin (Glucophage), neuroleptics, opiates, SSRIs, theophylline
Dry mouth	Anticholinergics, antihistamines, clonidine (Catapres), loop diuretics
Dysphagia	Bisphosphonates, doxycycline, gold, iron, nonsteroidal anti-inflammatory drugs, potassium
Nausea and vomiting	Amantadine, antibiotics, bisphosphonates, digoxin, dopamine agonists, metformin, SSRIs, statins, tricyclic antidepressants

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Gaddey M., Am Fam Phys 2000