

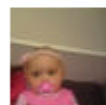
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A blog that collects hospital food from around the world !

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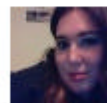
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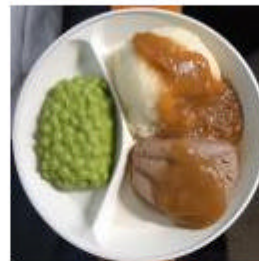
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Hospital Food

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Hospital Food in BoingBoing:



Hospital Food Photo Blog - Boing Boing

boingboing.net

Here's a link to a new tumblog that collects photos of delicious, healing hospital meals from around the world. (Thanks, Reno!).

July 23, 2009 at 9:01am · [Share](#)



Hospital Food in the Washington Post:



All We Can Eat - How Healthful Is Your Hospital Food?

voices.washingtonpost.com

A new Web site collects photos of hospital meals -- the good, the bad and the ugly -- from around the world.

July 23, 2009 at 9:00am · [Share](#)



Hospital Food in the Guardian



Internet review: Hospital Food | Technology | The Guardian

www.guardian.co.uk

The food that patients are expected to consume appears to be on a level just one rung above what you'd give to a cat

July 23, 2009 at 8:53am · [Share](#)

Michael Wythe likes this.

RECENT ACTIVITY



Hospital Food changed their [Website](#).

[Create an Ad](#)

Skal du h terrasse?



Få prisen på
vores online

Like

Hvad nu her



Dit barn kor
institutioner
dækket? - K
testen. - De
konkurrence
forsikringer

Like

Nej til nedskæri



Børnefamilie

Dansk Selskab for Klinisk Ernæring

19. årsmøde 28.05.2010

Proteinanbefalinger hos raske og syge –
hvad gør protein godt for?



Synopsis:

- 2007 WHO/FAO/UNU anbefalinger:
Nitrogen balance eller funktionelle kriterier?
- 3 ugers studie hos raske
- Patienter
- Rotter

Protein and amino acid requirements in human nutrition

Report of a Joint WHO/FAO/UNU Expert Consultation - 2007

- Protein requirements were based on studies of nitrogen balance
- Amino acids requirements were (mainly) based on indicator amino acid balance (isotope labeled leucine).

Protein and amino acid requirements in human nutrition

Report of a Joint WHO/FAO/UNU Expert Consultation - 2007

	2007	1985
Total protein, g/kg per day	0.83	0.75
Histidine, mg/kg per day	10	10
Isoleucine, mg/kg per day	20	10
Leucine, mg/kg per day	39	14
Lysine, mg/kg per day	30	12
Methionine & Cysteine, mg/kg per day	15	13
Methionine, mg/kg per day	10	-
Cysteine, mg/kg per day	4	-
Phenylalanine & Tyrosine, mg/kg per day	25	14
Threonine, mg/kg per day	15	7
Tryptophan, mg/kg per day	4	4
Valine, mg/kg per day	26	10
Total essential amino acids, mg/kg per day	184	94
% of total protein	22	13

Protein and amino acid requirements in human nutrition

Report of a Joint WHO/FAO/UNU Expert Consultation - 2007

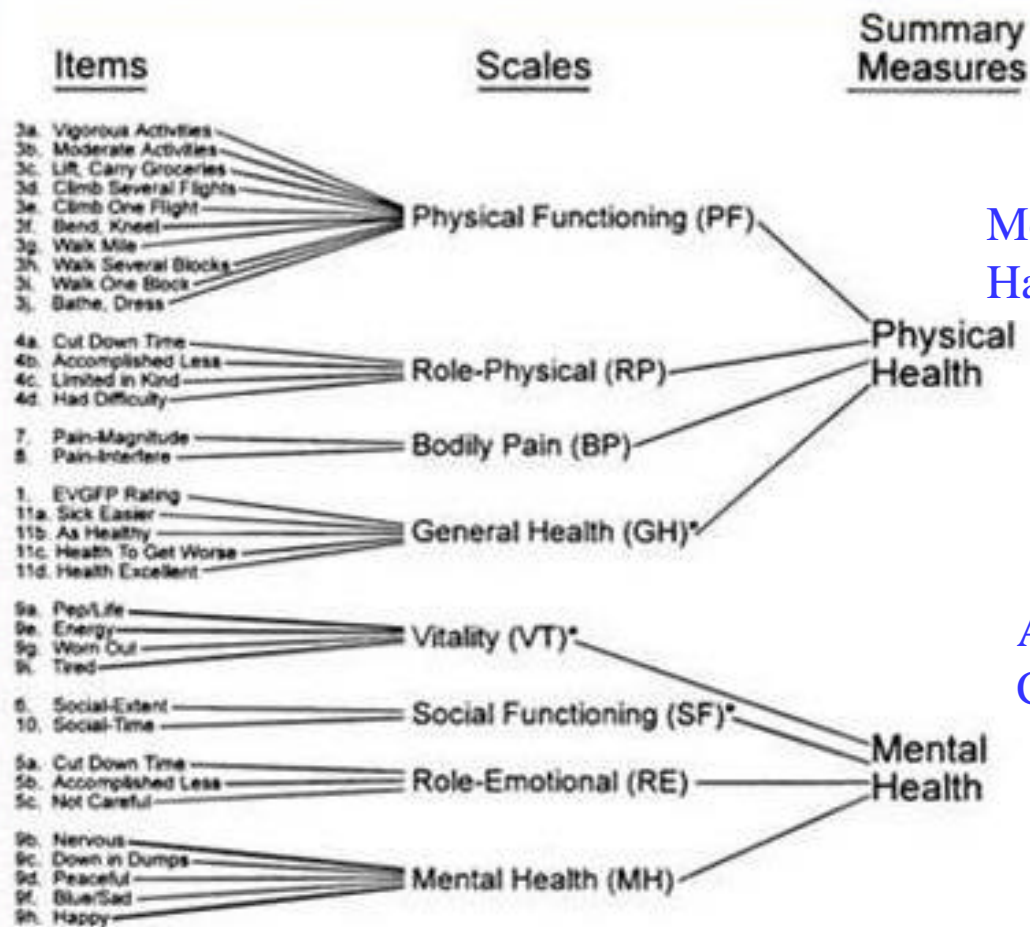
- ...requirement is the lowest level of dietary protein intake that will balance the losses of nitrogen from the body, and thus maintain the body protein mass...
- ...nitrogen balance does not necessarily identify the optimal intake for health, which is less quantifiable.
- There is emerging information on the apparently beneficial effect of protein intakes in excess of the safe level for lowering blood pressure, reducing risk of ischaemic heart disease and improving bone health. Causal relationships?
- The task is to identify protein intakes that enable long-term health and well-being

What should we measure for "long-term health and well-being"?

Recording ? Subjective

Measuring ? Objective

SF-36[®] Measurement Model



* Significant correlation with other summary measure.

Mobility (timed-up-and go), TUG

Hand grip strength & endurance, HGS & HGE

Addenbrooke's Cognitive examination, ACE

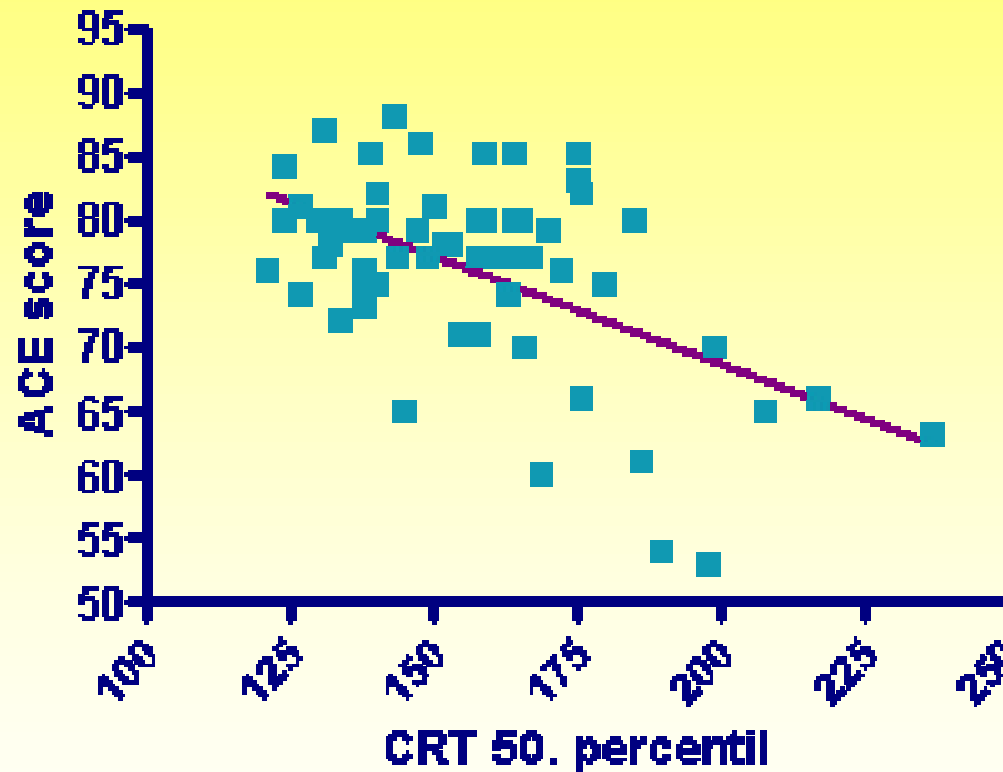
Continuous Reaction Time, CRT

- requires a lot of validation

Lene Holm Jakobsen

Validation of continuous reaction time (CRT) as a measure of cognitive function (part of mental function)

CRT versus ACE score



Lene Holm Jakobsen

ACE =

Orientation + Attention + Memory +

Verbal Fluency + Language + Visiospatial Ability

High protein intake: study design

Twenty-four healthy, non-athletic men, aged 19-31 years, were investigated.

They consumed a diet similar to their usual diet with a protein content = 1.5 g/kg per d for a one-week run-in period.

They were then randomly assigned to continue on this usual protein diet (UP) (n = 12) or to switch to a High Protein (HP) 3.0 g/kg per d (n = 12) for 3 weeks.

The subjects received all their food and drink from the metabolic kitchen and were allowed only to consume water and salt in addition.

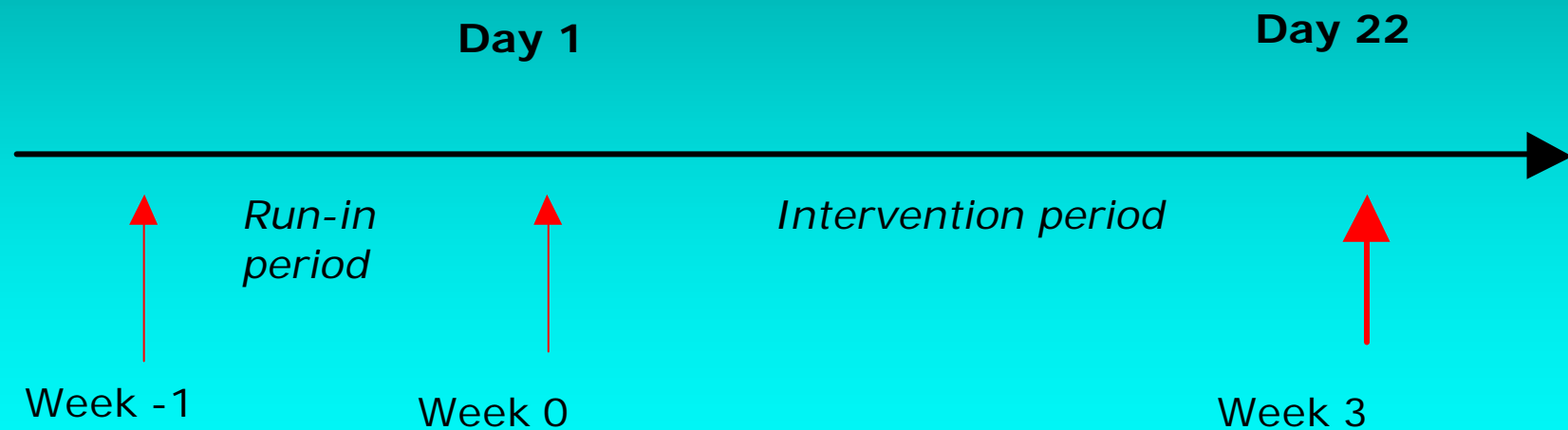
One subject (HP) dropped out because of a flu.

Composition of protein foods, % of total protein intake

	UP%	UP g	HP%	NP g
Fish	4	0.06	5	0.16
Dairy products	16	0.24	25	0.78
Meat	35	0.53	55	1.71
Egg	7	0.11	3	0.09
Vegetable	40	0.60	13	0.40
Total	100	1.50	100	3.10

Lene Holm Jakobsen

Reaction time and muscle function were measured, and blood samples were drawn, on the first day and on the day after the 3 weeks' control/intervention diet



Lene Holm Jakobsen

Results

Mean \pm SD of differences from first to final measurement: ? .

Student's unpaired t-test comparison between groups

* $p < 0.05$, ** $p = 0.015$, *** $p < 0.001$.

	1.5 g/kg per day	3.0 g/kg per day
? Go/No-Go (ms)?	5.7 ± 27.4	$-21.9 \pm 22.1^{**}$
? Go/No-Go Number of errors	0.3 ± 0.9	$-0.5 \pm 0.5^{*}$
? P-valine, mmol/l	0.4 ± 39.3	$78.1 \pm 37.2^{***}$
? P-phenylalanine, mmol/l	2.6 ± 5.3	$8.5 \pm 9.3^{*}$

Results: No significant difference

- ✍ Hand Grip Strength
- ✍ Hand Grip Endurance
- ✍ Timed Up-and-Go
- ✍ Addenbrooke's Cognitive Examination
- ✍ Quality of Life (SF-36)
- ✍ Serum IGF-I
- ✍ Serum GH
- ✍ Serum insulin
- ✍ Plasma glucose

Conclusions

- ✍ A high protein intake improves reaction time
- ✍ This may be due to an increased cerebral concentration of dopamine
 - ✍ due to an increase in plasma-phenylalanine and a decrease in monoamine oxidase B
- ✍ Further research is needed to investigate
 - ✍ other possible effects of a high protein intake.
 - ✍ other age groups, and women – and patients

Protein and amino acid requirements in human nutrition

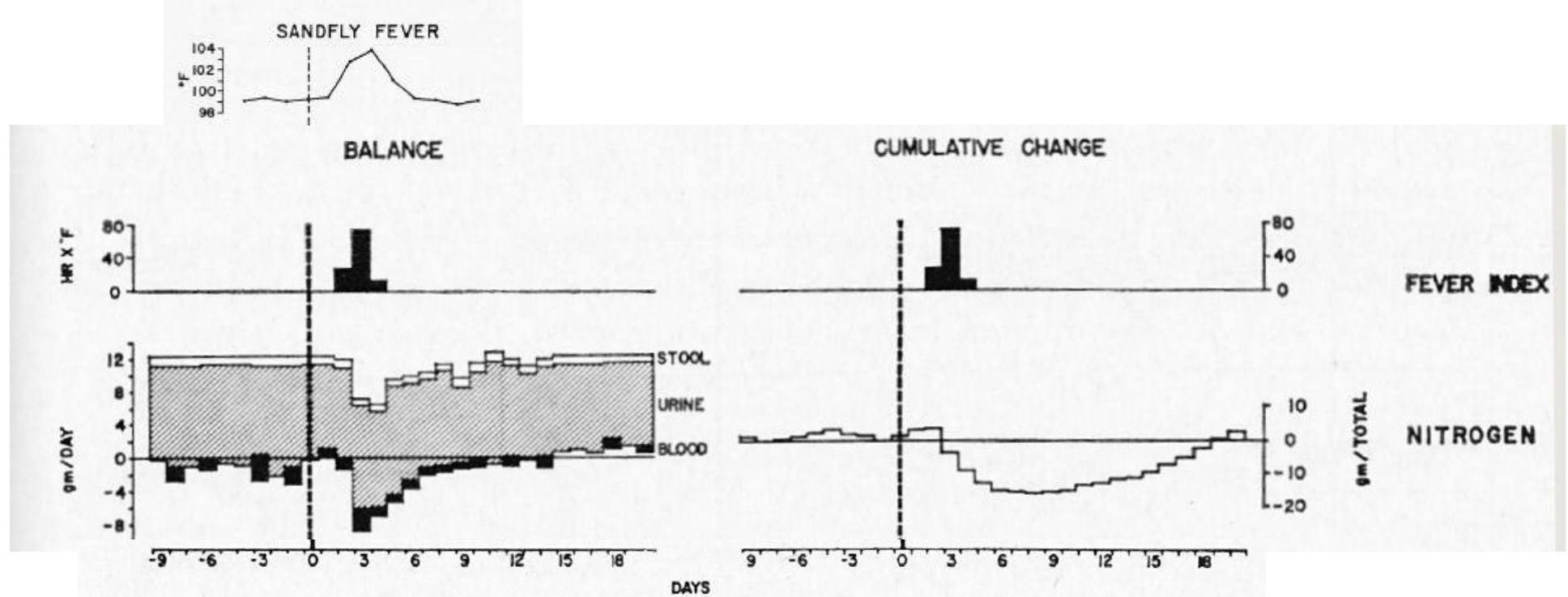
Report of a Joint WHO/FAO/UNU Expert Consultation - 2007

Patients...

Protein and amino acid requirements in human nutrition

Report of a Joint WHO/FAO/UNU Expert Consultation - 2007

Chapter 11: Influence of infection on protein and amino acid requirements



Effect of 3 days' sandfly fever in healthy volunteers.

35% of cumulative nitrogen loss due to decreased intake

Beisel et al. Ann Intern Med 1967; 67:744-779; Powanda & Beisel. Review. J Nutr 2003;133:322S-327S.

Intake in at-risk patients

2 N = 212 patients at risk (NRS-2002) in 3 hospitals from multiple specialities were randomized to standard treatment or a daily follow-up care by a team of nurse and dietitian. Mean \pm SD

Intake (mean ? SEM)	Control N=99	Team N=103
Energy intake, kJ/kg per d	106 ? 5	126 ? 5 ¹⁾
Protein intake, g/kg per d	0.9 ? 0.04	1.1 ? 0.04 ¹⁾
Energy, % of requirement	84 ? 3	99 ? 3 ¹⁾
Protein, % of requirement	66 ? 3	83 ? 3 ¹⁾
Protein, % ptt ? 75% of req.	36	62 ²⁾

¹⁾ P < 0.005 ²⁾ P = 0.0004

Accommodation to 8 weeks' inadequate protein intake.

2N=12. Castaneda et al. Am J Clin Nutr 1995; 62: 30-39

	Low Prot	Control
Intake, g/kg per d	0.47	0.91
Balance, g/kg per d	-0.03	0.01
LBM-DEXA, kg	41 ? 39 ¹⁾	38 ? 40
Skin test, n antigens	3.0 ? 1.5 ¹⁾	1.7 ? 2.5
Muscle relaxation rate	12 ? 9 ¹⁾	12 ? 10
F ₁₀ /F ₅₀	29 ? 48 ¹⁾	35 ? 30

¹⁾ Sign ? base-line ²⁾ Sign ? ctr ³⁾ Sign ? ctr and 3 weeks

3 months' AA supplementation in healthy elderly (12 g: leu, ileu, val, lys, cys, his, thr, met, phe, tyr, try)

Scognamiglio et al. Gerontology 2005; 51:302-308

(2N = 95. Age: 75 yrs. BMI: 27. Usual intake: 1700 Kcal, 62 g protein.

	Control		AA	
Max handgrip, kg	14 ?	14	15 ?	20 ¹⁾
LV ejection fraction, exercise ^{*)}	56 ?	56	55 ?	67 ²⁾
6 min walking, m	212 ?	212	215 ?	269 ¹⁾
Questionnaire, walking stairs, score	73 ?	72	72 ?	98 ¹⁾

^{*)} 3 min at 40% of Max handgrip

¹⁾ P<0.001 ²⁾ P<0.01

5 weeks' supplementation with milk protein daily in elderly with hip fracture.

(2N = 62. Age: 82 yrs. BMI: 24. Usual intake: 48 g protein.

Tkatch et al. J Am Col Nutr 1992;11:519-25

	Control Iso E CH	Protein 20 g
Reduced femoral BMD in 7 mths, N	12	6 ¹⁾
Favorable clinical course, % of N	36	79 ²⁾
Complications incl. death, % of N	80	52 ¹⁾
Length of stay incl. rehab, d	102	69 ¹⁾

¹⁾ P<0.05 ²⁾ P=0.02

6 months' supplementation with milk protein daily in elderly with hip fracture.

(2N = 82. Age: 81 yrs. BMI: 24. Usual intake: 48 g protein.
Schurch et al. Ann Intern Med 1998;128:801-9.

	Control Iso E CH	Protein 20 g
Change in IGF-I, ? g/l	24.5	45.1 ¹⁾
Change in femoral BMD, %	-4.7	-2.3 ²⁾
Length of stay, d	54	33 ¹⁾

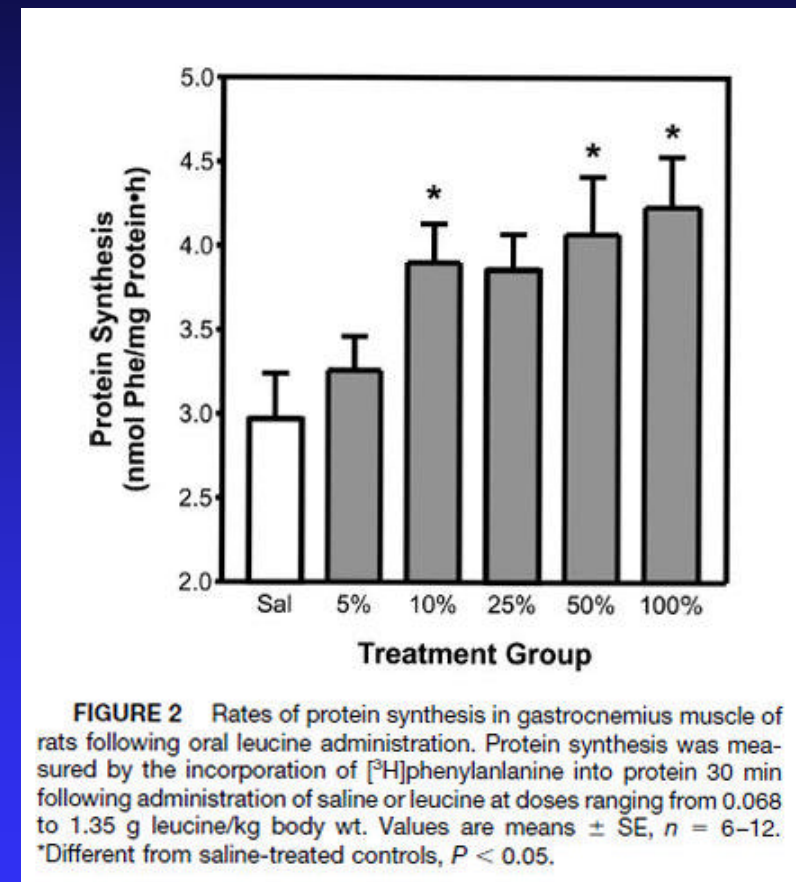
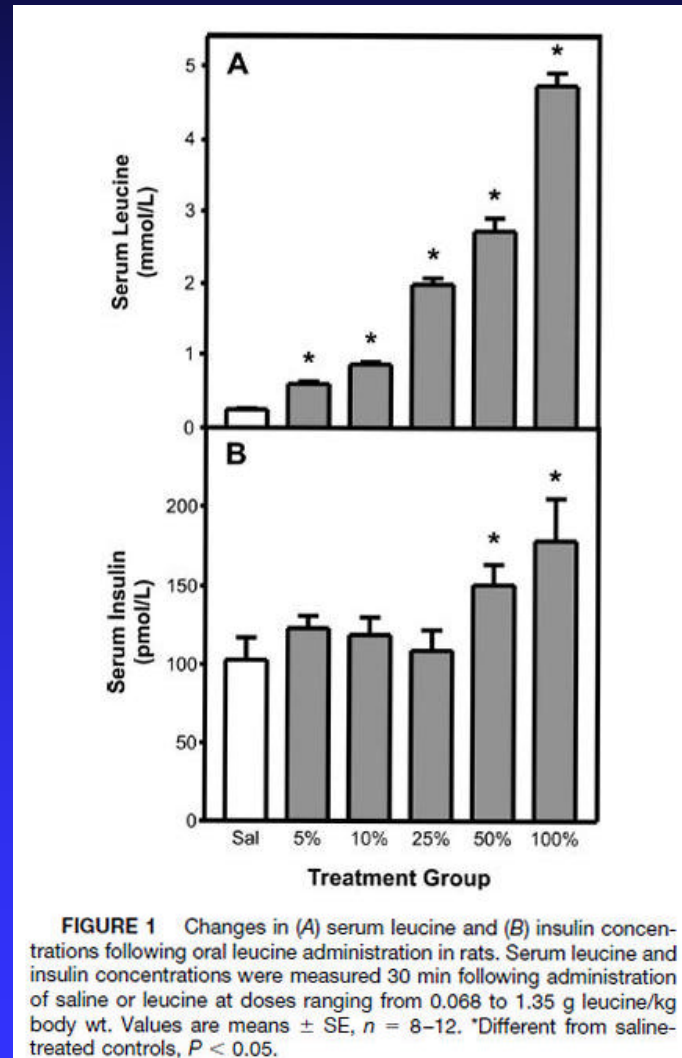
¹⁾ P=0.02 ²⁾ P=0.03

Rats...

Effect of oral leucine on protein synthesis in rats

Crozier et al. J Nutr 2005;135:376-82.

100% = the daily intake (1.35 g leucine/kg body wt)



Effect of dietary protein on protein synthesis in rats.

Whey: 11% leucine; wheat: 7% leucine;

30 E % whey = 0.6 g leucine/kg body weight

Norton et al. J Nutr 2009;139:1103-9

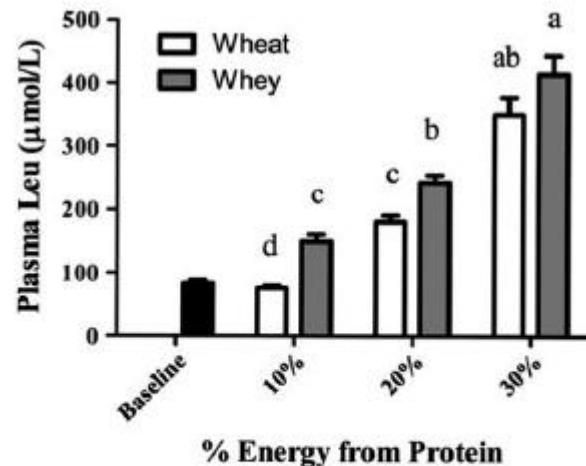


FIGURE 4 Plasma Leu concentrations of rats fed complete meals containing either wheat or whey at 3 different total protein contents (10, 20, or 30% of energy). Data are means \pm SEM; $n = 7-8$. Labeled means without a common letter differ, $P < 0.05$. All fed groups except 10% wheat differed from baseline, $P < 0.05$.

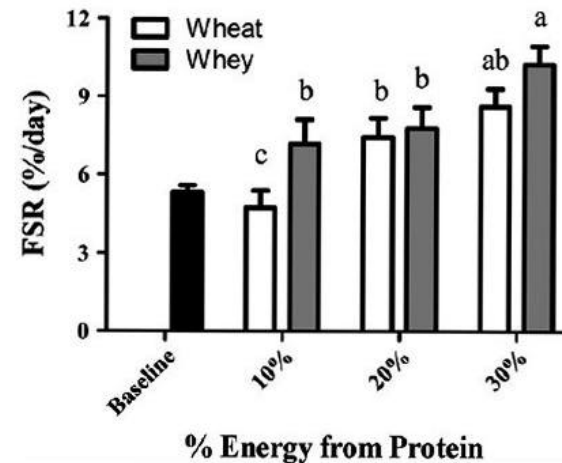


FIGURE 6 Rates of protein synthesis in gastrocnemius muscle of rats fed a complete meal containing either or whey at 3 different total protein contents (10, 20, or 30% of energy). Data are means \pm SEM; $n = 7-8$. Labeled means without a common letter differ, $P < 0.05$. All fed groups except 10% wheat differed from baseline, $P < 0.05$.

Hvad skal vi med proteiner?

- ✍ Klassisk nitrogen balance inkl essentielle aminosyrer
- ✍ Anabolt drive: genopbygning efter natlig faste, fysisk aktivitet, hungersnød og sygdom
- ✍ Ikke-krops-protein funktioner: mental funktion, muskelfunktion, appetitregulation
- ✍ Forskelle på proteinkilder: kød, mælk, fisk, ris, hvede