Gepaste Voedingzorg

VOEDING EN FYSIOLOGIE

AA van Bodegraven

AA van Bodegraven
MDL-arts
Zuyderland MC,
Sittard-Geleen-Heerlen
&
MUMC+

OPENBAARMAKING VAN MEDICO-FINANCIELE BELANGEN SPREKER

DEZE BIJEENKOMST IS GESPONSORD DOOR NVMDL/NVGE

DEZE PRESENTATIE IS NIET GOEDGEKEURD DOOR DONALD J JONGEN

Geen (potentiële) belangenverstrengeling

- *Verdien mijn geld als praktiserend MDL-arts in Zuyderland MC*

Sponsoring onderzoek of onderwijsprogramma's:

TEVA/Ferring

Relaties in de vorm van lezingen, *consultancy*, *advisory board*, onderwijsprogramma's, contractonderzoek

AbbVie/Abbott/AlfaSigma/ARENA/Astra/Aventis/Biogen/BMS /Braun/Cablon/Celltrion/Chemocentrix/Disphar/FALK/ Ferring/Galapagos/Janssen/Lilly/Merck/MSD/Novimmune/ Nycomed/Parexel/Pfizer/Quintiles/IQVIA/Roche/Shire/ Takeda/TEVA/Tramedico/Toray/ UCB/Vifor.

Aandeelhouder of risicodragend kapitaal:

geen

Andere relaties:

CCUVN/CCNl, Min van VWS, RIVM, CVZ, CBG, ZIN, RABO-bank, MediRisk, Fipra-consultancy, MAG Medische Advies Groep, MEDtalks, Schuttelaar Consultants, POA pharma, Valueproof

NVMDL; voorzitter Cie Farmacotherapie & lid Cie IBD en Cie Voeding, *peer reviewer* o.a. editorial board AP&T

ENERGY(DIS)BALANCE AND DISEASE

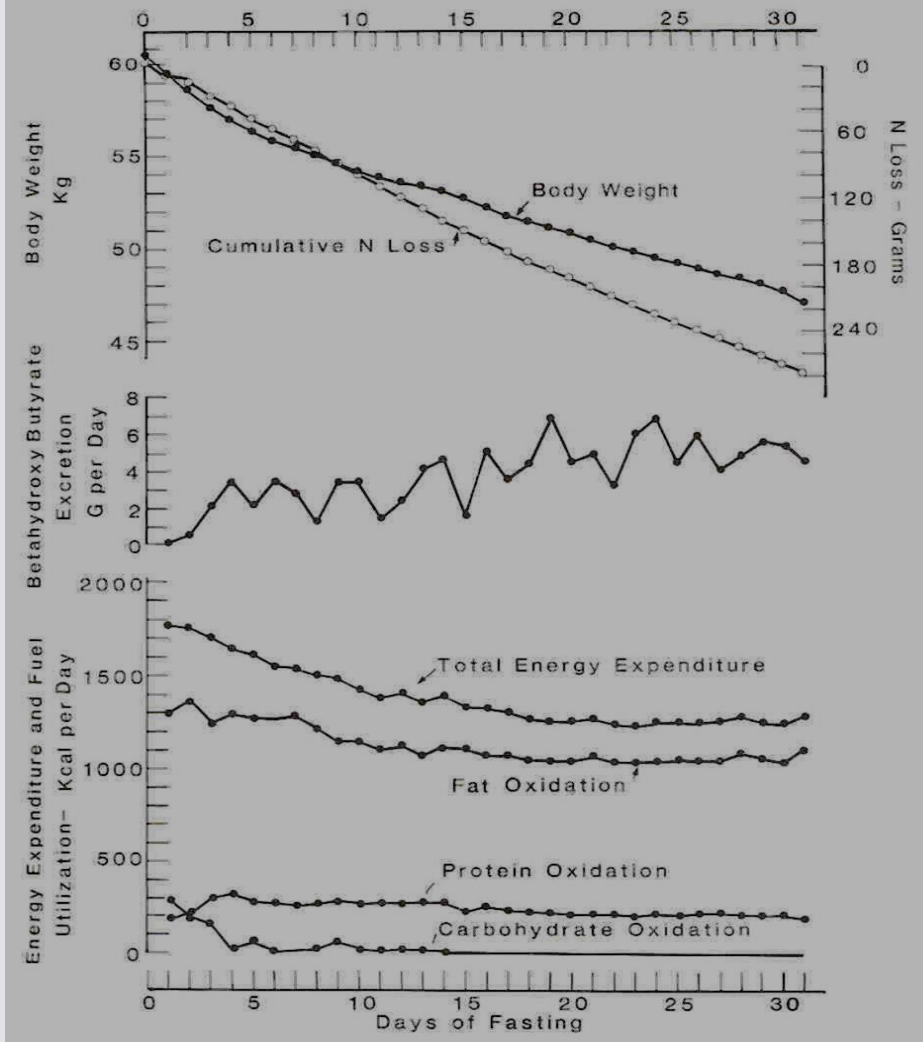


Figure 4.12. Data adapted from Benedict (39). Loss of body weight and N, and daily values of total energy expenditure, fat, protein, and carbohydrate oxidation, and beta-hydroxybutyrate excretion in a man fasted for 31 days.

VASTEN

Betahydroxy Butyrate Excretion G per Day

0
2
4
6
8

Expenditure and Fuel Oxidation- Kcal per Day

2000
1500
1000
500

Total Energy Expenditure

Fat Oxidation

Protein Oxidation

BOSTON, Mass., May 15.—Agostino Levanzin, a young lawyer from the Island of Malta, broke the thirty-one-day fast today which he has kept under scientific

BREAKS 31 DAYS' FAST.

Levanzin Lost Weight, but Felt Better Mentally.

Special to The New York Times.

the Harvard Medical School, the subject fi excellent health. There was a marked loss of weight, but no decrease of Levanzin's physical or mental powers.

During the fast, Levanzin made no change in his mode of living. He walked about the city, took carriage rides and read the papers, all of course under the scrutiny of Dr. Francis Gano Benedict, Director of the laboratory and other scientists interested in the experiment.

Readings were recorded at stated intervals of the subject's heart action and various other organic manifestations which might be influenced by lack of food. Tests also were made of Levanzin in the respiration calorimeter.

The first three days of the fast Levanzin complained of being hungry. After that he said he had lost any desire for food and that he experienced a feeling of exhilration. He said his brain was clear and that he cou and concisely.

Small quantities o taken by Levanzin u a normal condition. increased day by da the laboratory unt strength.

Although it has be vanzin might sacrif experiment, this is authorities. Accordi vard Faculty the days without food ha an experimenter w days.

Levanzin has mad While in the Univer stained from food f out any difficulty. this country for th is deemed by medic value in showing ju man body can exist and the effect such deprivation has.

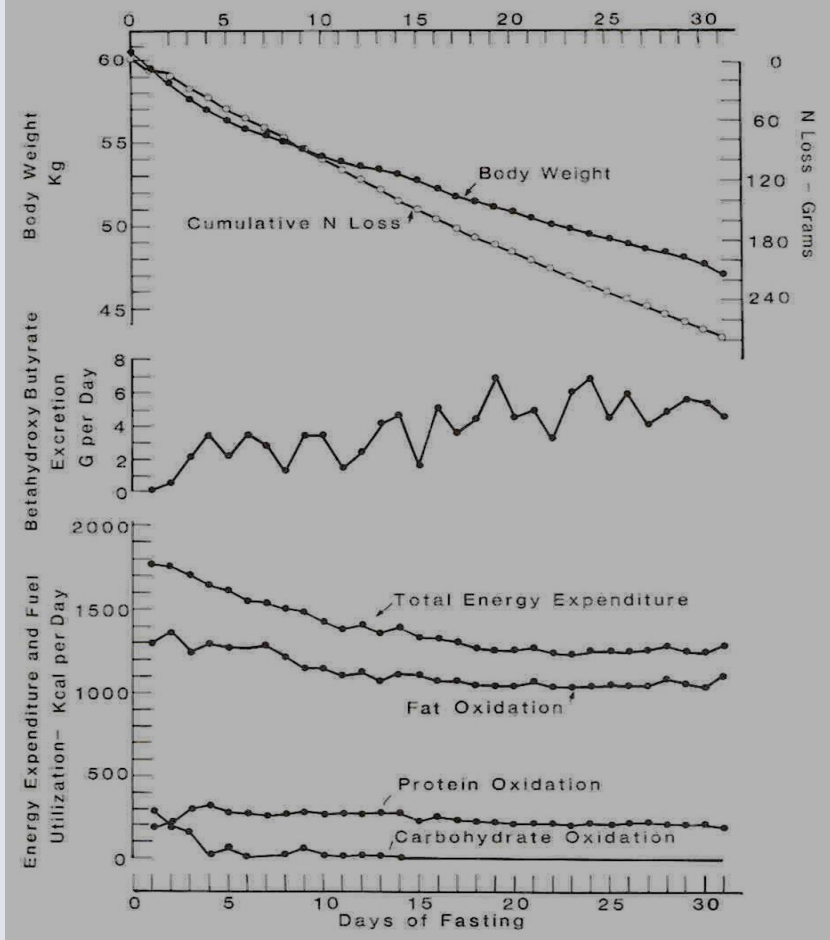


Figure 4.12. Data adapted from Benedict (39). Loss of body weight and N, and daily values of total energy expenditure, fat, protein, and carbohydrate oxidation, and beta-hydroxybutyrate excretion in a man fasted for 31 days.

VASTEN

LEERDOELEN

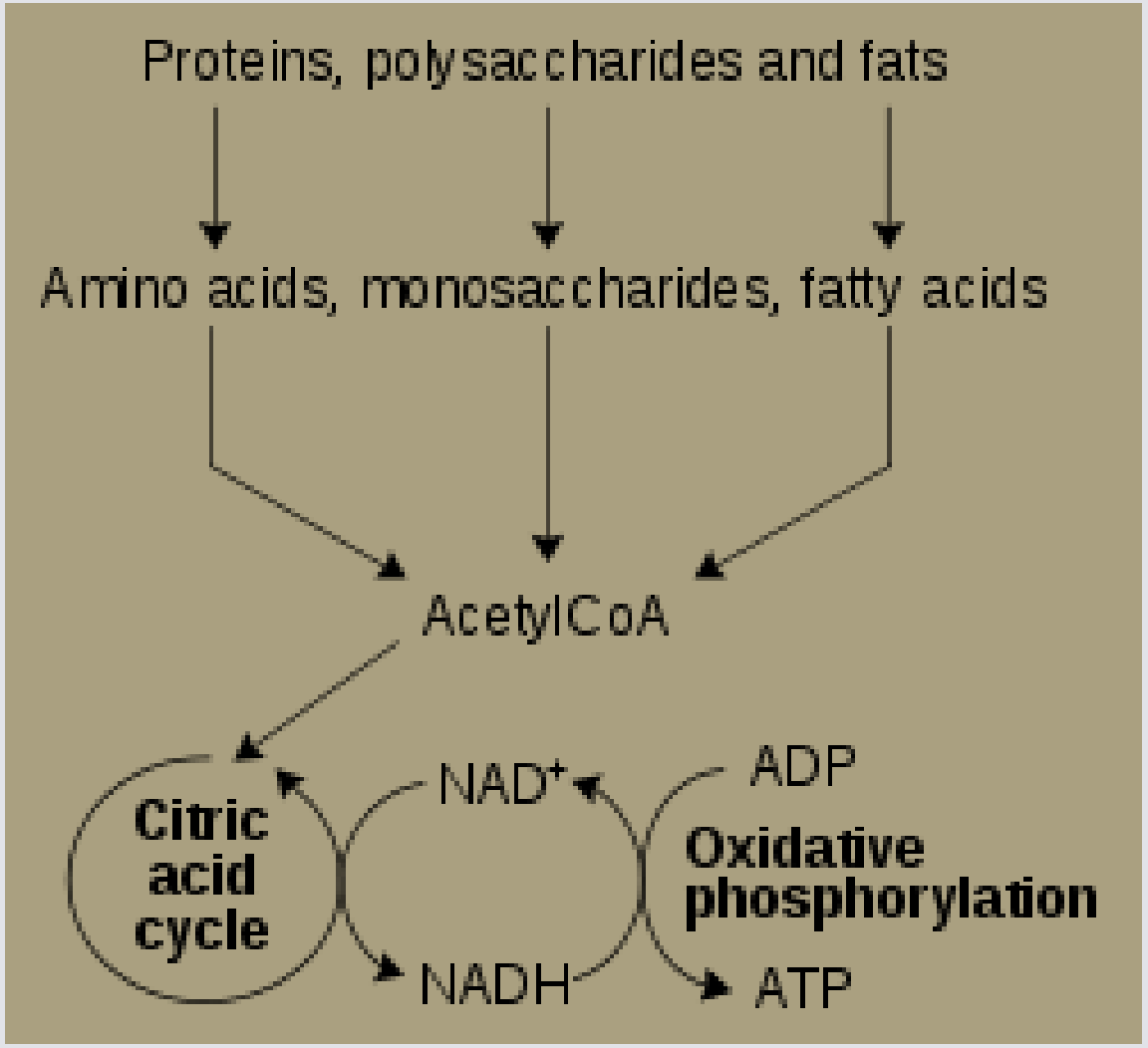
vaststellen dat verteren (en metabolisme) één van de twee hoofdfuncties van de *tractus digestivus* is

leren herkennen dat fysiologie van de *tractus digestivus* in gezondheid en ziekte een onderdeel is van het basis kennispakket van een MDL-arts

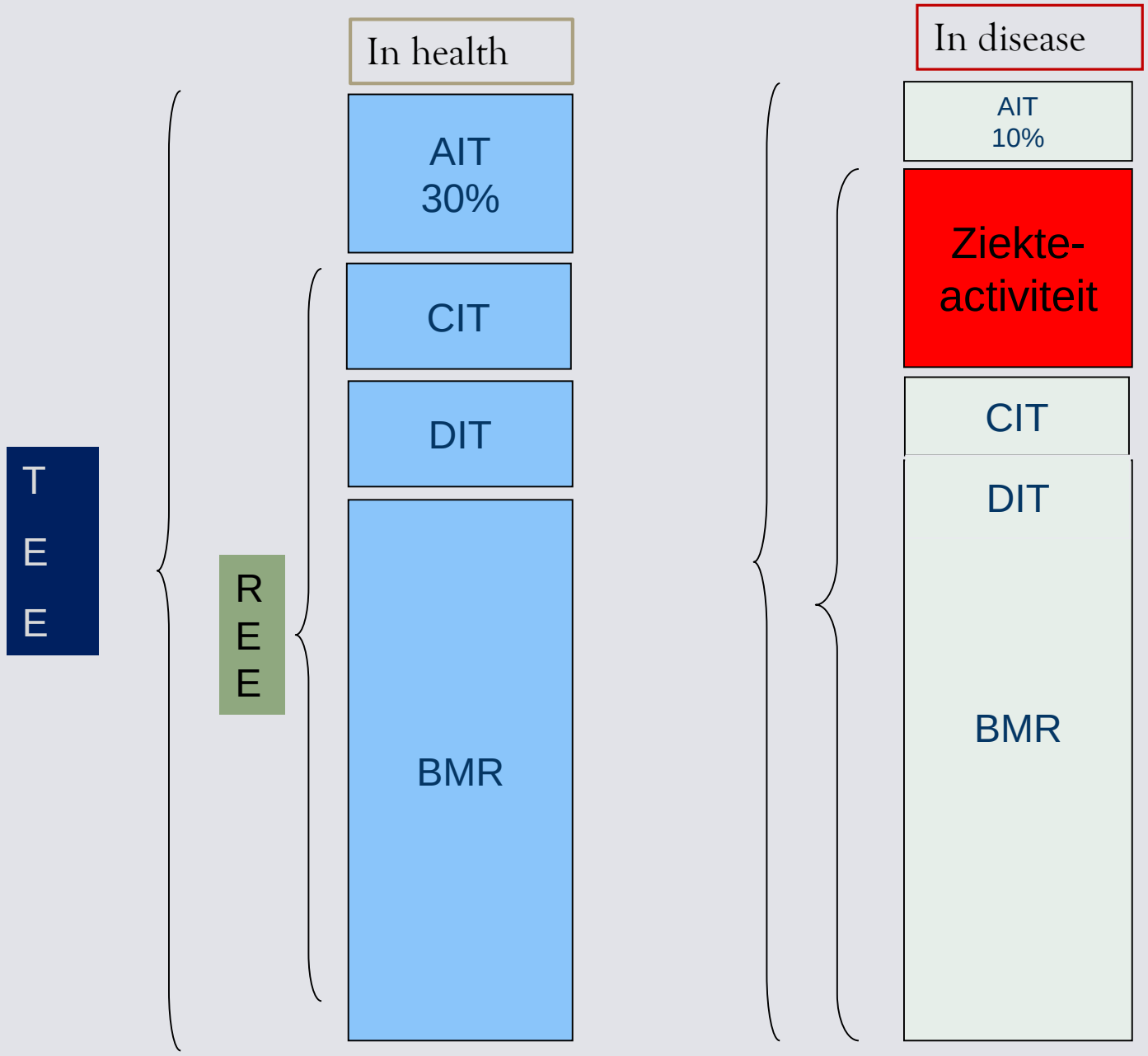
MACRONUTRIENTEN

ACROSS THE STOMACH

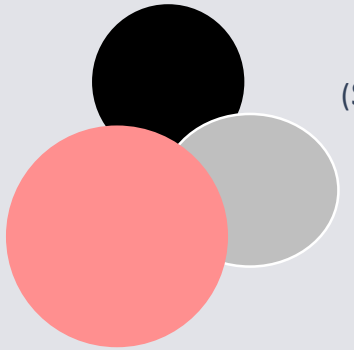
ENERGY IN HUMANS



USE OF ENERGY



ONDERVOEDINGSYNDROMEN



Cachexie:

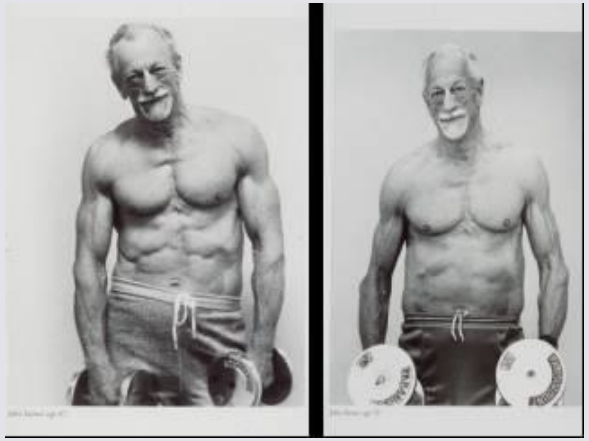
ziekte + gebrek aan voeding
(spiermassa ↓70-80%)

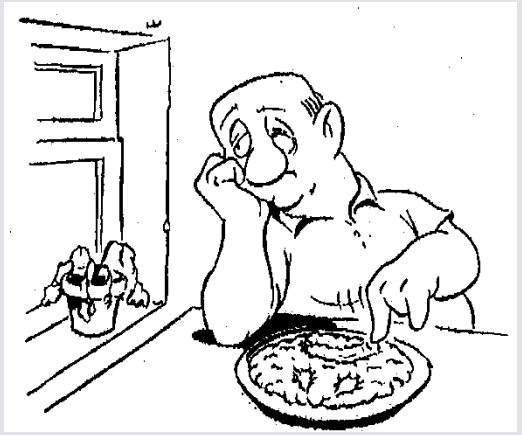
Wasting:

medisch (spiermassa ↓ 20-30%)

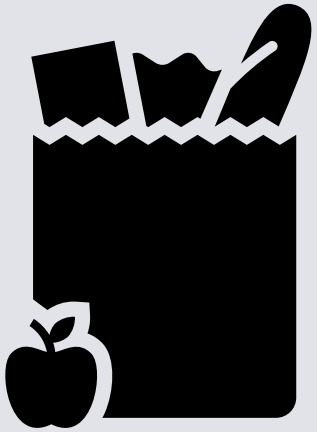
Sarcopenie:

veroudering bij bedrust: 3% ↓ in 7 dd

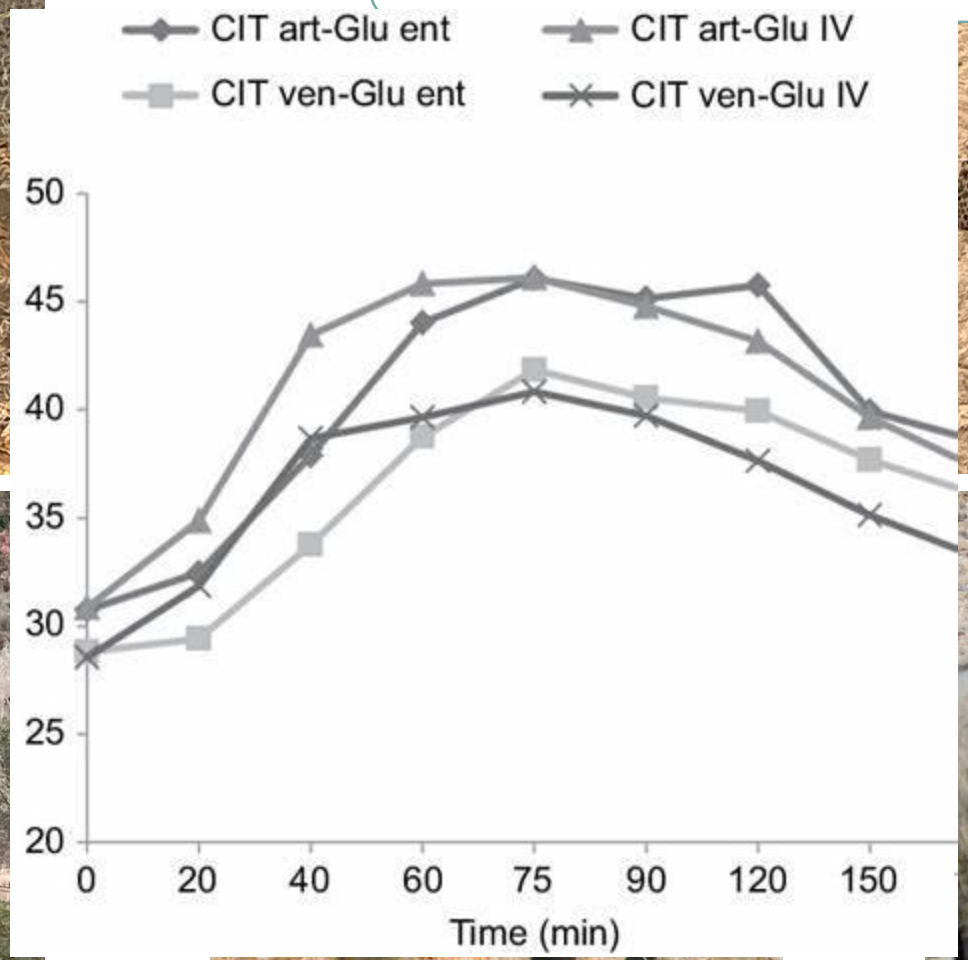


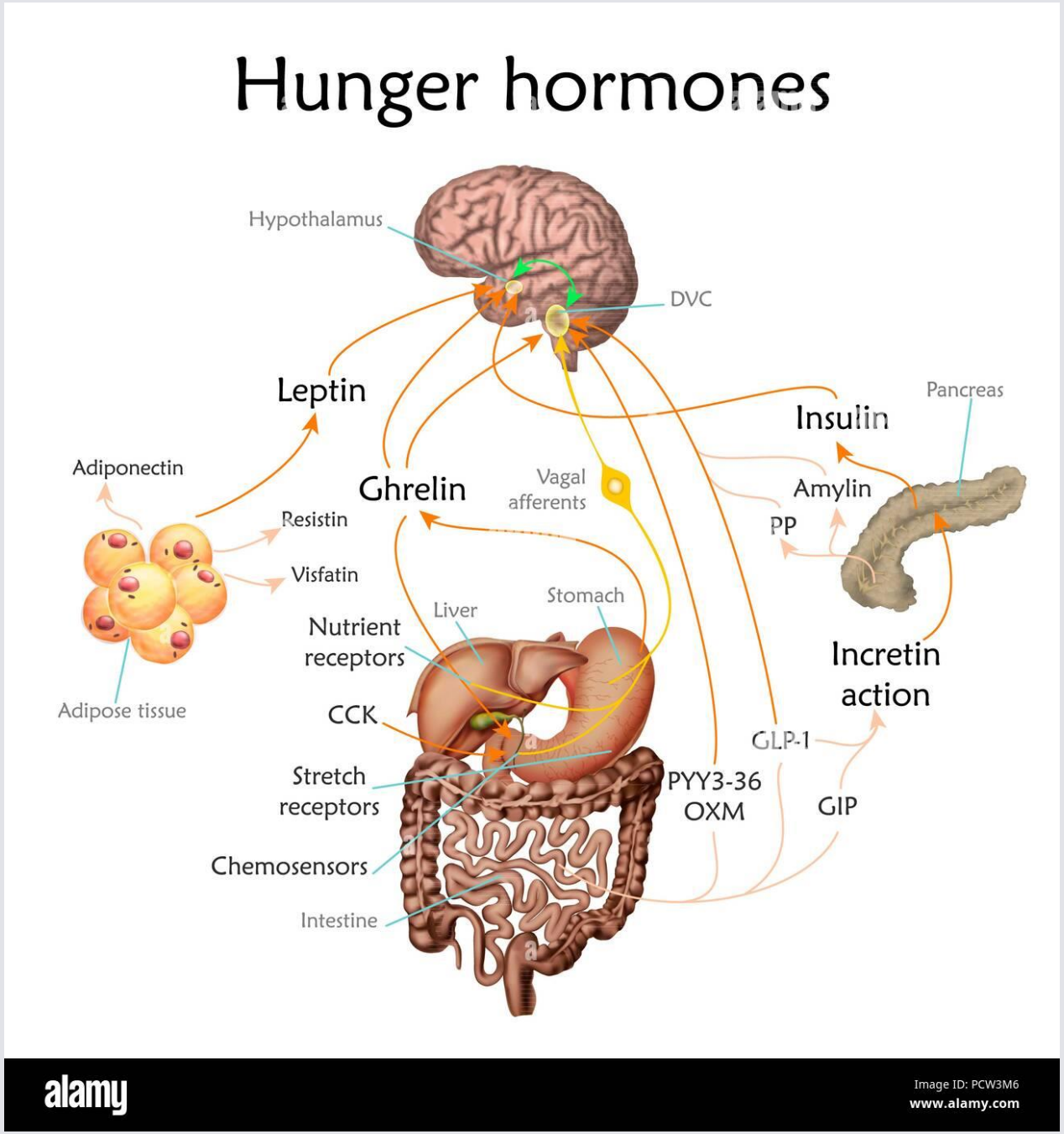


APPETIJTELIJKE HONGERGEVOELENS



Vergelijkende zoölogie der vertebraten

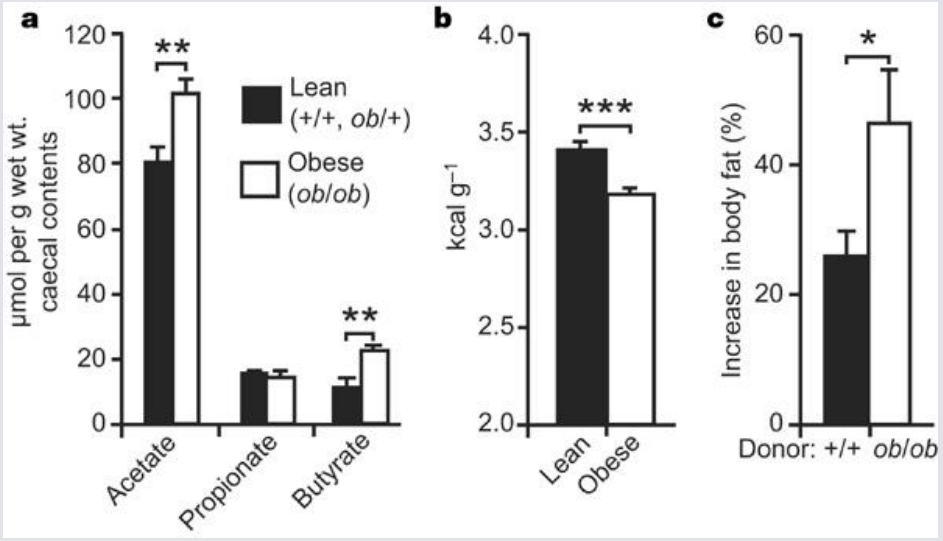




APPETIJTELIJKE HONGERGEVOELENS


WAT 'GOEDE' EN
'SLECHTE'
MACRONUTRIENTEN
ONDERSCHEIDT…

WHAT'S THE DIFFERENCE?

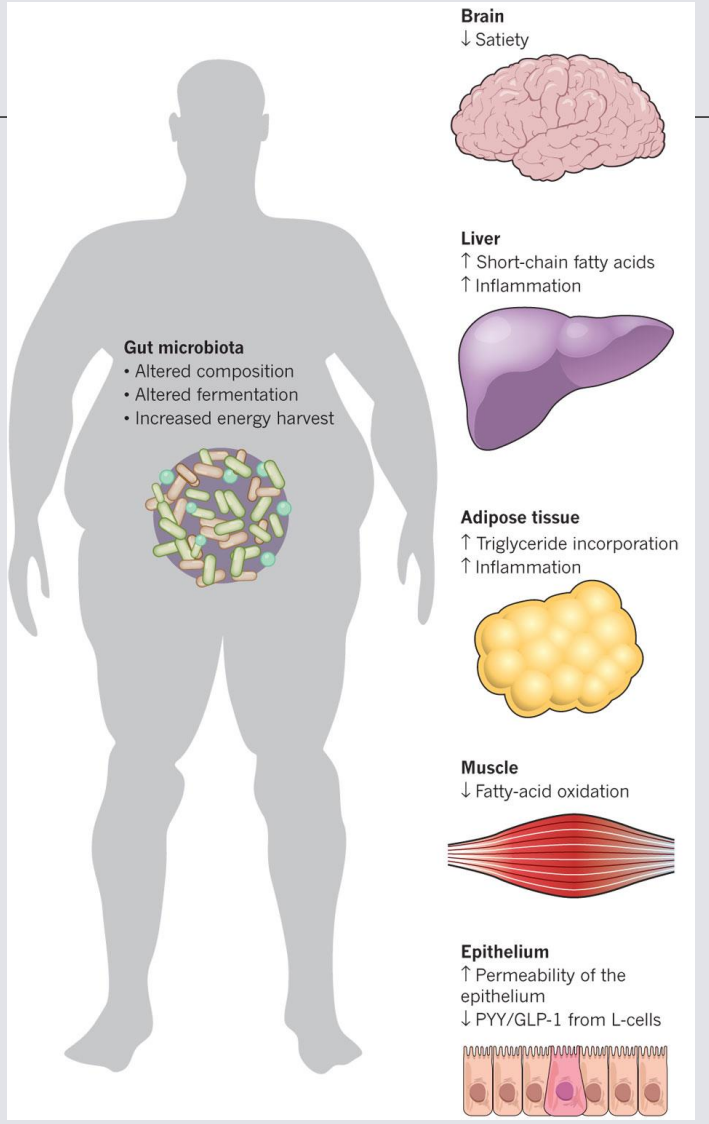


Nature **444**, 1027-1031 (21 December 2006)

An obesity-associated gut microbiome with increased capacity for energy harvest

Peter J. Turnbaugh, Ruth E. Ley, Michael A. Mahowald, Vincent Magrini, Elaine R. Mardis & Jeffrey I. Gordon

OF MICE AND MEN: MISSING LINK



VAN BIOCHEMIE NAAR FYSIOLOGIE NAAR MDL-ARTS

Intro in de spannende wereld van verteren en assimilatie

over variatie in gewone goede voeding

- van ultraprocessing

over de invloed van de fysiologie van het darmkanaal op voeding (=kortedarmyndroom)