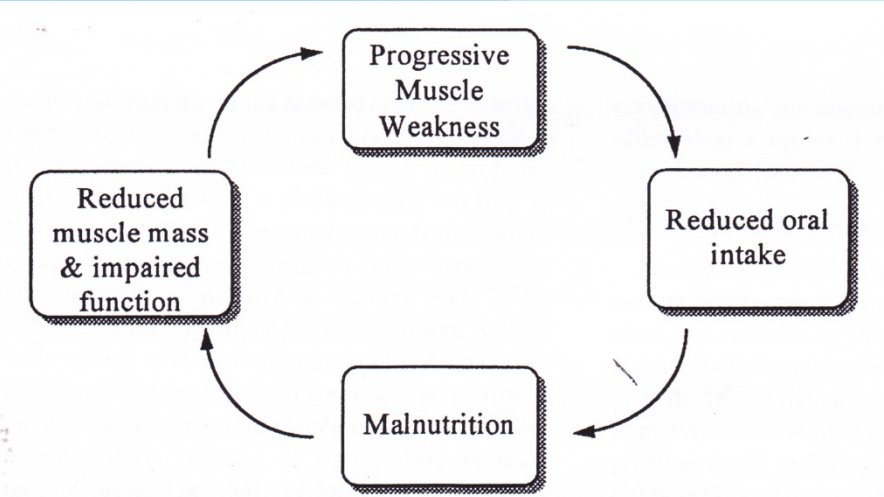
Nutrition for PPS

Coby Wijnen dietitian Spierziekten Nederland

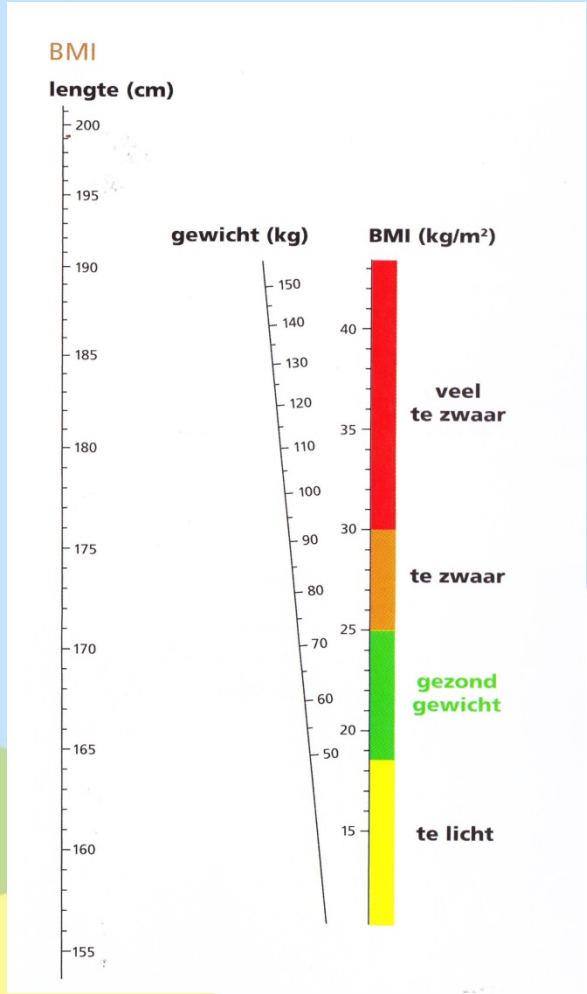
energy intake = energy expenditure

possible causes undernutrition:
dysphagia
fatigue
depression
pain
loss of taste (older people)

undernutrition
reduces condition and resistance
increases loss of muscle mass
leads to vicious circle



too high weight
overweight BMI 25-30
obesity BMI > 30



possible causes too high weight PPS

lower metabolic rate

Bargieri Ann Nutr Metab 2008

less activities although energycost is higher

Brehm Arch Phys Med Rehabil 2006

mechanical ventilation reduces energy expenditure in rest

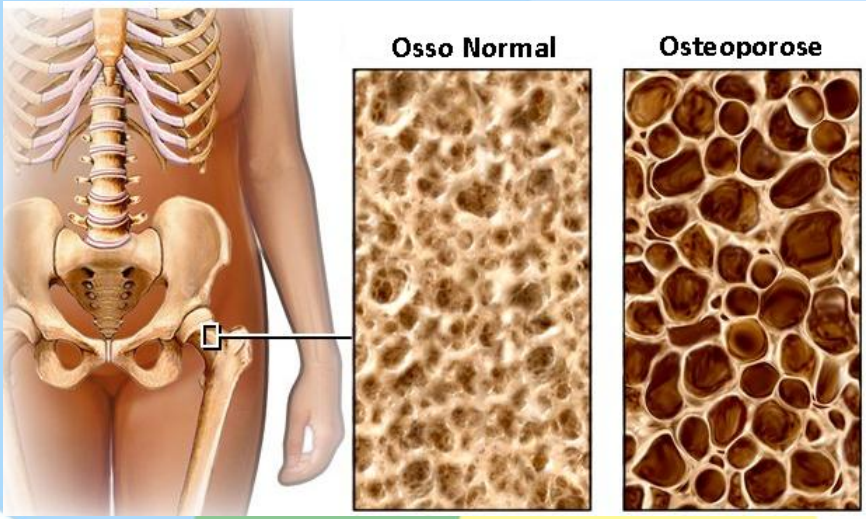
spontaneous breathing: 1378 kcal/24 h

mechanical ventilation :1080 kcal/24 h

Barle Acta Anaesthesiol Scand 2005

osteoporosis
common in PPS
more in smokers and persons with reduced mobility
more frequent in the weaker than in the stronger hip

Haziza Arch Phys Med Rehabil 2007, Mohammad Eur Neurol 2009



dyslipidemia
common in healthy people and PPS
dyslipidemia is one of the risk factors for cardiovascular disease

other risk factors:
(central) obesity
low HDL cholesterol
elevated blood pressure
elevated fasting glucose / diabetes type 2

one study in PPS
88 patients, 61 % dyslipidemia
only 19 persons had previous diagnosis
only 12 persons had lipid lowering medication

Gawne Arch Phys Med Rehabil 2003

so: screening is important

in normal ageing
progressive loss of muscle massa and strenght = sarcopenia
association between high fat mass and low muscle mass = sarcopenic obesity

nutrition for PPS

undernutrition
additional calories
fullcream cheese, extra sugar, whipping cream
sometimes medical feeding

obesity

up to 250 kcal deficit (minimum 800 kcal/day)
0.8 g protein per kg bodyweight
sufficient macronutrients
sufficient micronutrients

obesity older people

up to 250 kcal deficit (minimum 800 kcal/day)
1.0 g protein per kg of high biological quality, equally divided at breakfast, lunch and dinner
calcium/vitamin D in accordance with RDAs

Morley J Am Med Dir Assoc 2010, Mathus-Vliegen J Clin Gastroenterol 2012

sarcopenic obesity
diet necessary when BMI > 30 + comorbidity

up to 200 kcal deficit (minimum 800 kcal/day)
1.5 g protein per kg of high biological quality,
supplementation of 1000 mg calcium
supplementation of vitamin D 10-20 mcg/day
optimalisation magnesium, vitamin B6, B12 and selenium

Mathus-Vliegen J Clin Gastroenterol 2012

nutrition and exercise according to PPS programme

vitamin D according to national guidelines supplementation in the Netherlands:

women <50 years: with dark skin or not enough sunshine 10 mcg (400 IU)

>50 years: everybody 10 mcg

>70 years: everybody 20 mcg

men <70 years: with dark skin or not enough sunshine 10 mcg

>70 years: everybody 20 mcg

Calcium recommended in the Netherlands

men and women < 50 years 1000 mg

<70 years 1100 mg

>70 years 1200 mg

fibres recommended in the Netherlands 30-40 g/day in low calorie diet supplementation

+ enough liquids (1.5 – 1.7 liter)

interventions dysphagia

-aspiration
-undernutrition

teamwork speechtherapist and dietitian

aspiration
goal: safe swallow
how: adaptation consistency

undernutrition / deficient dietary pattern
goal: sufficient food and liquids
how: raise oral intake / improve dietary pattern