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Rationale

An insufficient food intake may limit rehabilitation and negatively affect functional recovery. However, little attention has been paid to the nutritional intake of older nursing home rehabilitation patients. The aim of this study was to investigate the nutritional intake and predictors for achieving protein and energy requirements on the 14th day of admission in Dutch nursing home rehabilitation patients.

Methods

From March 2013 until February 2014, 95 patients aged 65+ years newly admitted to nursing home rehabilitation wards were included. Data on potential social, medical, functional, psychological and nutritional status predictors of intake were collected on admission. On the 14th day, nutritional intake was assessed. Intake requirements were defined as:

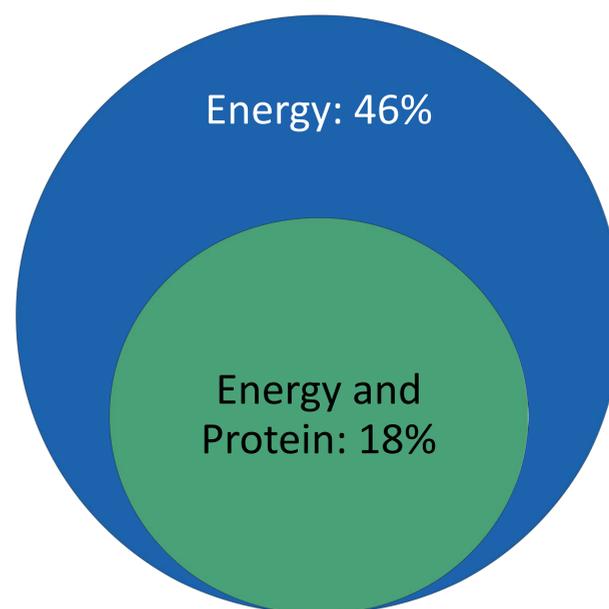
- ≥ 1.2 g grams of protein per kg and
- $\geq 85\%$ of the energy needs based on calculated resting energy expenditure according to Harris & Benedict + 30%.

Multiple logistic (outcome = adequate diet yes/no) and linear (outcome = percentage of coverage of recommended protein needs, continuous) regression analyses were performed to investigate potential predictors.

Results

Protein and energy intake was recorded for 79 patients (67% female, age 82 ± 8 , BMI 25 ± 6), of whom 18% had sufficient protein and energy intake on day 14 after admission. Thirty-six patients (46%) had a sufficient energy intake only. None of the patients solely met the protein requirements. Mean energy intake was 1677 Kcal (± 433) and mean protein intake 68 (± 20) gram. Using sip/tube feeding was a positive predictor for achieving protein and energy requirements, a higher BMI a negative one. Self-perceived undernutrition and using sip/tube feeding were positive predictors for the percentage coverage of recommended protein needs.

Percentage of patients achieving the protein and/or energy requirements



Positive (+) and negative (-) predictors of dietary adequacy

Predictors for sufficient protein and energy intake	+/-	OR	95%CI
BMI (kg/m ²)	-	0.70	0.54 - 0.90
Sip/tube feeding	+	8.52	1.39 - 45.74
Predictors percentage coverage of recommended protein needs	+/-	B	95%CI
BMI (kg/m ²)	-	-1.87	-2.81 - 0.93
Sip/tube feeding	+	16.91	1.75 - 32.07
Self-perceived undernutrition	+	28.70	8.83 - 46.69

Conclusion: Only 18 % of older nursing home rehabilitation patients had a sufficient protein and energy intake at 14 days after admission. Patients with a higher BMI were less likely, while those using sip/tube feeding or with self-perceived undernutrition were more likely to achieve their protein and energy requirements.

