

Factors associated with reduced meal intake in older adults admitted to hospitals – a nutritionDay study

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Rationale

Suboptimal food intake is a risk factor of malnutrition in older adults. Malnutrition in hospitals is associated with more complications, prolonged hospital stay and higher health care costs. The aim of this study was to identify factors associated with suboptimal hospital meal intake in older hospital patients across Europe.

Methods

The intake of the main hospital meal of 43,603 older adults (≥ 65 y) in 2311 European hospitals was assessed yearly on one day (nutritionDay) between 2006 and 2013. The association of 53 demographic, disease and nutritional factors with meal intake ($\leq 50\%$ or $> 50\%$ of main meal) was examined by multivariate logistic regression (backward stepwise elimination with $P < 0.05$ as final selection criterion).

Results

In total 57% of the older patients consumed $\leq 50\%$ of their hospital meal. Factors independently associated with suboptimal meal intake are displayed in Table 1. Factors associated with a lower odds on suboptimal meal intake were: having eaten normal in the past week (OR=0.40), admitted longer (OR=0.85), waiting for operation (OR=0.90) or having diabetes (OR=0.87), stroke (OR=0.9), COPD (OR=0.88) or brain/nerve disease (OR=0.89) ($P < 0.05$).

Table 1. Factors independently associated with $\leq 50\%$ meal intake

Factor	OR	P
Number of comorbidities	1.05	<0.01
Number of lines/tubes	1.19	<0.001
Number of reasons for eating less	1.11	<0.01
Liver disease	1.29	<0.001
Recent surgery	1.08	<0.01
Age ≥ 75 y	1.18	<0.001
Special diet	1.07	<0.01
On protein/energy supplements	1.17	<0.001
Unable to walk without assistance	1.46	<0.001
Swallowing/chewing problems	1.47	<0.001
Female	1.57	<0.001
Loss of appetite	1.54	<0.001
Nausea	1.51	<0.001
Parenteral nutrition	1.97	<0.001
Enteral+parenteral nutrition	3.26	<0.001

Conclusion

More than half of older hospital patients consumes half or less than half of their main meal, which could predispose them to malnutrition. Identifying the factors associated with reduced meal intake provides valuable information for preventive interventions.