Factors associated with reduced meal intake in older adults residing in nursing homes – a nutritionDay study

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Rationale

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

Methods

The intake of the main meal of 20,253 older adults (≥65 y) in 366 European nursing homes was assessed yearly on one day (nutritionDay) between 2007 and 2012. The association of 32 demographic, disease and nutrition related factors with meal intake (≤50% or >50% of the main meal consumed) was examined by multivariate logistic regression (backward stepwise elimination with $P<0.05$ as final selection criterion).

Results

In total 38.5% of the older adults consumed ≤50% of their main 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=0.37), intoxication/injury (OR=0.77), a blenderized diet (OR=0.82) or a normal diet (OR=0.84), subcutaneous nutrition (OR=0.83) or having diabetes (OR=0.73) or diseases of the brain/nerve (OR=0.89) ($P<0.05$).

Table 1. Factors independently associated with ≤50% meal intake

Factor	OR	P
Number of comorbidities	1.08	<0.001
Unable to walk without assistance	1.11	<0.001
Higher age	1.23	<0.001
Swallowing/chewing problems	1.27	0.01
Female	1.31	<0.001
Mentioning "Other reasons for not eating well in the past week"	1.64	<0.001
Nausea	2.13	<0.001
Tooth problems	2.22	<0.001
Loss of appetite	2.46	<0.001
Mentioning "Meals are not adequately prepared for elderly"	3.56	<0.001

Conclusion

More than one-third of older adults in nursing homes 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.

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