

Part I Basic questions and general principles (all older people)

Provision of energy and nutrients

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| 1. Give about 30 kcal/kg/body weight/day | } Adjust according to individual nutritional status, physical activity level, disease status and tolerance. | B |
| 2. Give at least 1 g protein/kg/body weight/day* | | B |
| 3. Use fibre-containing products for enteral nutrition (25 g per day considered adequate) | | B |
| 4. Give micronutrients according to EFSA or national recommendations for healthy older people unless there is a specific deficiency (correct with supplementation) | | GPP |

Organisation of nutritional care

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| 5. Screen <u>all</u> * older people with a validated tool to identify (risk of) malnutrition | GPP |
| 6. If risk of malnutrition is found undertake systematic assessment, individualised intervention, monitoring and corresponding adjustment of interventions | GPP |
| 7. Establish standard operating procedures for nutritional and hydration care in institutional settings. Regulate responsibilities | GPP |

*Independent of specific diagnosis and including overweight and obese people

Performing nutritional care

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| 8. Perform individualised and comprehensive nutritional and hydration care to: | A |
| ✓ ensure adequate nutritional intake | |
| ✓ maintain or improve nutritional status | |
| ✓ improve clinical course | |
| ✓ improve quality of life | |
| 9. Carry out nutritional interventions as part of a multimodal and multidisciplinary team intervention to: | B |
| ✓ Support adequate dietary intake | |
| ✓ Maintain or increase body weight | |
| ✓ Improve functional outcome | |
| ✓ Improve clinical outcome | |
| 10. Identify and eliminate potential causes of malnutrition and dehydration | GPP |
| 11. Avoid dietary restrictions that may limit dietary intake as these are potentially harmful | GPP |

Part II Recommendations for older people with malnutrition or risk of malnutrition

Supportive interventions to support dietary intake

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| 12. Offer mealtime assistance to those with eating dependency | A/GPP* |
| 13. In institutions provide home-like pleasant dining environment (also supports QoL) | A |
| 14. Encourage shared mealtimes (also supports QoL) | GPP |
| 15. Meals on wheels should be energy dense and/or include additional meals | B |
| 16. Offer nutritional information and education to patient | B |
| 17. Provide nutritional education to HCPs and informal caregivers | B |

Nutritional counselling to support dietary intake and improve/maintain nutritional status

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| 18. Offer individualised nutrition counselling to patient/caregiver | B |
| 19. It should be delivered by a qualified dietitian, consist of at least 2 individual sessions which may be combined with group sessions, telephone contact and written advice. Maintain over a longer period of time (at least 8 weeks) | GPP |

Food Modification to support/facilitate dietary intake

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| 20. Offer fortified food** | B |
| 21. Offer additional snacks and/or finger foods | GPP |
| 22. Offer texture-modified, enriched foods to those with signs of oropharyngeal dysphagia | GPP |

*Grade A for institutions and GPP for home setting

**Increases energy and protein intake, evidence insufficient to make recommendations on food fortification with micronutrients

Oral Nutritional Supplements (ONS)

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| 23. Offer ONS when dietary counselling and food fortification not sufficient to increase dietary intake and reach nutritional goals in patients with chronic conditions | GPP |
| 24. Offer ONS to hospitalised patients to: | A |
| ✓ Improve dietary intake | |
| ✓ Improve body weight | |
| ✓ Lower risk of infection | |
| ✓ Lower risk of readmission | |
| 25. Offer ONS after hospital discharge to: | A |
| ✓ Improve dietary intake | |
| ✓ Improve body weight | |
| ✓ Lower risk of functional decline | |
| 26. ONS offered shall provide at least 400 kcal and ≥30 g protein/day | A |
| 27. ONS shall be continued for at least 1 month. Assess efficacy and benefit of ONS at least once a month | GPP |
| 28. Assess compliance with ONS regularly. Adapt type, flavour, texture and time of consumption to patient's taste and eating capacities | GPP |

Exercise interventions in addition to nutritional interventions

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| 41. Encourage physical activity and exercise to maintain or improve muscle function and mass | GPP |
| 42. Provide adequate amounts of energy and protein during periods of exercise interventions to maintain body weight and maintain or improve muscle mass | B |

Enteral Nutrition (EN) and Parenteral Nutrition (PN)

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| 29. Offer EN if reasonable prognosis and oral intake expected to be impossible for >3 days or <50% of energy requirements for >1 week despite interventions to ensure adequate oral intake to: | GPP |
| ✓ Meet nutritional requirements | |
| ✓ Maintain or improve nutritional status | |
| 30. Evaluate expected benefits and potential risks on an individual basis and re-assess regularly and when clinical condition changes | GPP |
| 31. Offer comfort feeding instead of EN when intake low in the terminal phase of illness | GPP |
| 32. If EN indicated, start EN without delay | GPP |
| 33. Use NG tube when EN required for <4 weeks | GPP |
| 34. Use PEG when EN required for >4 weeks or when NG not wanted or tolerated by patient | GPP |
| 35. Encourage maintenance of oral intake as far as safely possible in tube fed patients | GPP |
| 37. EN, PN and hydration are medical treatments (not basic care), use only if there is realistic chance of improvement/maintenance of patient's condition and QoL | GPP |
| 38. Do not use pharmacological sedation or physical restraint to make EN, PN or hydration possible | GPP |
| 39. Start EN and PN early, gradually increase over first 3 days to avoid refeeding syndrome | GPP |
| 40. Monitor blood levels of PO ₄ , Mg, K and thiamine over first 3 days of EN and PN in malnourished older patients. Supplement even in case of mild deficiency | GPP |

Part III Recommendations for older people with specific conditions

Hip fracture/ orthopaedic surgery

Hip fracture/ orthopaedic surgery

43. Offer ONS post op to: **A**
 ✓ improve dietary intake
 ✓ reduce risk of complications
44. Do not offer supplementary overnight EN unless EN indicated for other reasons **GPP**
45. Post op ONS may be combined with peri op PN to: **O**
 ✓ improve nutritional intake
 ✓ reduce risk of complications
46. Give nutritional interventions as part of individually tailored, multidimensional, multidisciplinary team intervention to: **A**
 ✓ ensure adequate dietary intake
 ✓ improve clinical outcomes
 ✓ maintain QoL

Delirium and risk of delirium

Delirium and risk of delirium

47. To prevent delirium, give a multi-component non-pharmacological intervention that includes hydration and nutritional management to **older patients hospitalised to have urgent surgery** **A**
48. To prevent delirium, give a multi-component non-pharmacological intervention that includes hydration and nutritional management to all **older patients admitted to a medical ward and at moderate to high risk of delirium** **A**
49. In hospitalised older patients screen for dehydration and malnutrition as potential causes or consequences of delirium **GPP**

Depression

Depression

50. Screen for malnutrition **GPP**
51. Do not routinely give nutritional interventions unless risk of malnutrition or malnourished **O**

Pressure ulcer/risk of pressure ulcer

Pressure ulcer/risk of pressure ulcer

52. Offer nutritional interventions to older people **at risk of pressure ulcers (PU)** to: **B**
 ✓ prevent development of PU
53. Offer nutritional interventions to older patients **with PU** to: **B**
 ✓ improve healing

Overweight or obesity

Overweight or obesity

54. Avoid weight reducing diets in overweight older people to: **GPP**
 ✓ prevent loss of muscle mass
 ✓ prevent accompanying functional decline
55. In obese older people with weight-related problems consider weight reducing diets only after careful and individual weighing of benefits and risks **GPP**
56. If weight reduction is considered in obese older people, restrict energy only moderately to: **GPP**
 ✓ achieve slow weight reduction
 ✓ preserve muscle mass
57. If weight reduction is considered in obese older people, combine dietary interventions with physical exercise to: **A**
 ✓ preserve muscle mass

Diabetes Mellitus

Diabetes Mellitus

58. Screen for malnutrition with a validated tool **GPP**
59. Avoid restrictive diets to: **GPP**
 ✓ prevent malnutrition and accompanying functional decline
60. Manage malnutrition and risk of malnutrition according to the recommendations for malnourished older people without diabetes (see section II above/overleaf) **GPP**

Part IV Recommendations to identify, treat and prevent dehydration in older people

Low intake dehydration

Fluid intake

61. Offer at least 1.6 L of drink/day to older women and at least 2.0 L/day to older men unless there is a clinical condition that requires a different approach **B**
62. Offer a range of appropriate (i.e. hydrating) drinks according to older peoples preferences **B**

Identification of low-intake dehydration

63. Consider risk of low-intake dehydration in all older people. Encourage consumption of adequate amounts of drinks **GPP**
64. Screen for low-intake hydration when older people are: **GPP**
- ✓ in contact with the healthcare system
 - ✓ if clinical condition changes unexpectedly
 - ✓ malnourished or at risk of malnutrition (screen periodically for low-intake dehydration)
65. Measure serum or plasma osmolality to identify low-intake dehydration **GPP**
66. Use the cut off of >300 mOsm/kg (directly measured serum osmolality) to identify low-intake dehydration **B**
67. Alternatively when directly measured serum osmolality not available, use the osmolarity equation to identify low-intake dehydration (osmolarity = $1.86 \times (\text{Na}^+ + \text{K}^+) + 1.15 \times \text{glucose} + \text{urea} + 14$ (all measured in mmol/L) with an action threshold of >295 mmol/L) **B**
68. Do not use the following common tests to assess low-intake dehydration: skin turgor, mouth dryness, weight change, urine colour or specific gravity **A**
69. Do not use bioelectrical impedance to assess hydration status as it is not diagnostically useful **A**
70. Appropriate tools may be used by older people and their informal carers to assess fluid intake. They should ask healthcare providers to assess serum osmolality periodically **GPP**

Treatment of low-intake dehydration

71. Encourage increased fluid intake from preferred drinks in older people **who appear well** and who have measured serum or plasma osmolality >300 mOsm/kg (or calculated osmolality >295 mmol/L) **GPP**
72. Offer subcutaneous or intravenous fluids in parallel with encouraging oral fluid intake in older adults **who appear unwell** and who have measured serum or plasma osmolality >300 mOsm/kg (or calculated osmolality >295 mmol/L) **A**

73. Consider intravenous fluids for older adults **unable to drink** with who have measured serum or plasma osmolality >300 mOsm/kg (or calculated osmolality >295 mmol/L) **A**

Interventions to support older adults to drink well and prevent low-intake dehydration

74. Implement multicomponent strategies across institutions for all residents **B**
75. Strategies should include high availability, varied choice and frequent offering of drinks and staff awareness of the need for adequate fluid intake, staff support for drinking and in taking older people to the toilet quickly when they need it **B**
76. At regulatory level, consider mandatory monitoring and reporting by institutions of hydration risks in individual residents and patients **GPP**
77. Record individual preferences for drinks, how and when served and continence support in care plans in institutions. Assess individual barriers and promoters of drinking. **GPP**
78. Experienced speech and language therapist should assess, treat and follow up older adults with signs of dysphagia. Monitor nutrition and hydration status in consultation with speech and language therapist and dietitian **GPP**
79. Include older people, staff, management and policymakers when to develop strategies to support adequate fluid intake **B**

Volume depletion

80. Assess volume depletion following excessive blood loss using postural pulse change from lying to standing (≥ 30 beats per minute) or severe postural dizziness resulting in inability to stand **B**
81. Assess volume depletion following fluid and salt loss with vomiting or diarrhea by checking a set of signs. A person with at least four of the following seven signs is likely to have moderate to severe volume depletion: confusion, non-fluent speech, extremity weakness, dry mucous membranes, dry tongue, furrowed tongue, sunken eyes **B**
82. Older adults with mild/moderate/severe volume depletion should receive isotonic fluids orally, nasogastrically, sub-cutaneously or intravenously **B**