

Managing malnutrition in later life – it's time to revisit and 'refresh'



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What is malnutrition?

“A state of nutrition in which a deficiency or excess (or imbalance) or energy, protein and other nutrients causes measurable adverse effects on body form, function and clinical outcome.”¹

National Institute for Health and Care Excellence (NICE) defines someone as being malnourished if they have:

- ❖ A body mass index (BMI) of less than 18.5 kg/m²
- ❖ Unintentional weight loss greater than 10% within the past 3 to 6 months
- ❖ A BMI of less than 20 kg/m² and unintentional weight loss greater than 5% within the past 3 to 6 months

1. National Institute for Health and Clinical Excellence. (2006) Nutrition support for adults: oral nutrition support, enteral tube feeding and parenteral nutrition. <https://www.nice.org.uk/guidance/CG32>

Why do older people become malnourished?

Social Risk Factors

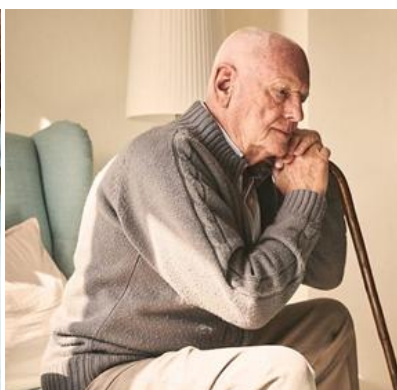
- Eating times
- Poor positioning
- Loneliness and social isolation
- Lack of transport to get to shops
- Bereavement
- Ability to cook nutritious meals
- Reliance on carers to source and prepare food
- Financial issues / poverty
- Culture and beliefs around food

Medical Risk (disease-related) Factors

- Nausea, vomiting or poor appetite caused by ill health / medication
- Conditions affecting the digestive system
- Dementia,
- Chronic obstructive pulmonary disease (COPD)
- Cancer
- Chronic liver disease
- Swallowing difficulties

Physical Risk Factors

- Memory
- Poor appetite, e.g. caused by pain
- Feeling full quickly
- Trouble opening food packaging
- Difficulty reading food labels and instructions
- Inability or difficulty holding cutlery, cutting food or physically feeding oneself
- Taste changes
- Dry mouth
- Loose teeth / dentures
- Sight loss / mobility making it difficult to get to the shops, cook and eat independently



‘Losing weight is not an inevitable part of ageing’

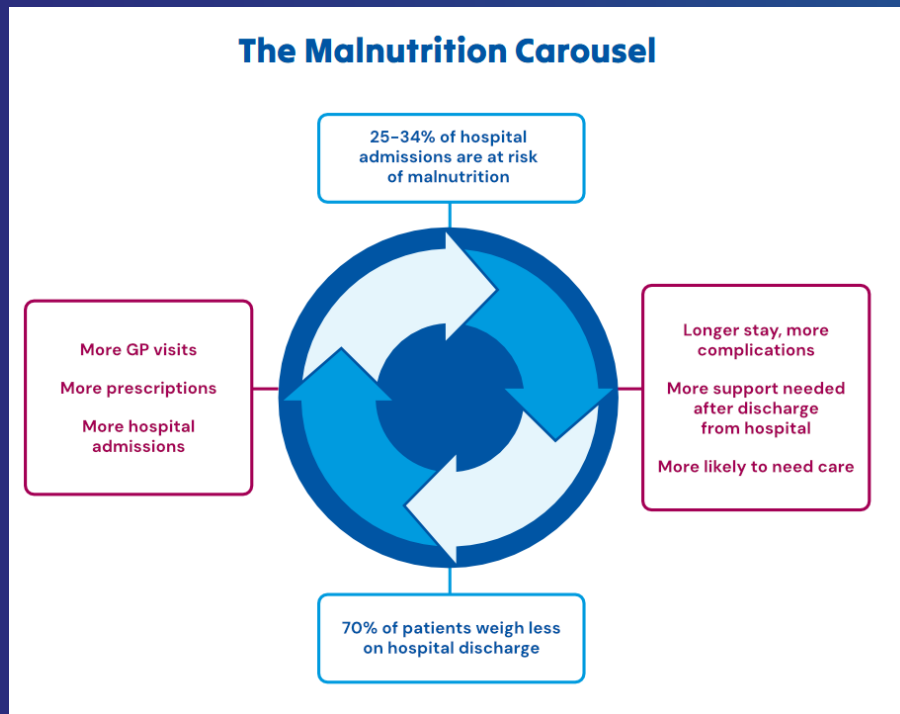
Signs of poor nutrition & hydration



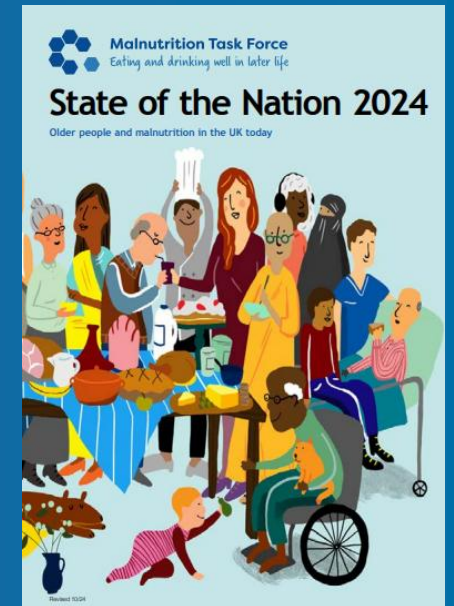
- **Unplanned weight loss**
- **Other ‘warning signs’**
 - **Poor appetite**
 - **Loss of interest in food**
 - **Loss of interest in activities / routines**
 - **Absence at clubs / activities**
 - **Irritability**
 - **Pressure sores / poorly healing wounds**
 - **Urinary infections**
 - **Poor concentration**
 - **Unwell more or for longer than usual**

How widespread is malnutrition?

- Significant gaps in data, despite nationally validated screening tools e.g. 'MUST' (not universally collected/nationally collated)
- In the UK, one in ten (1.3 million) >65 years are malnourished or at risk of malnutrition, 93% live in community



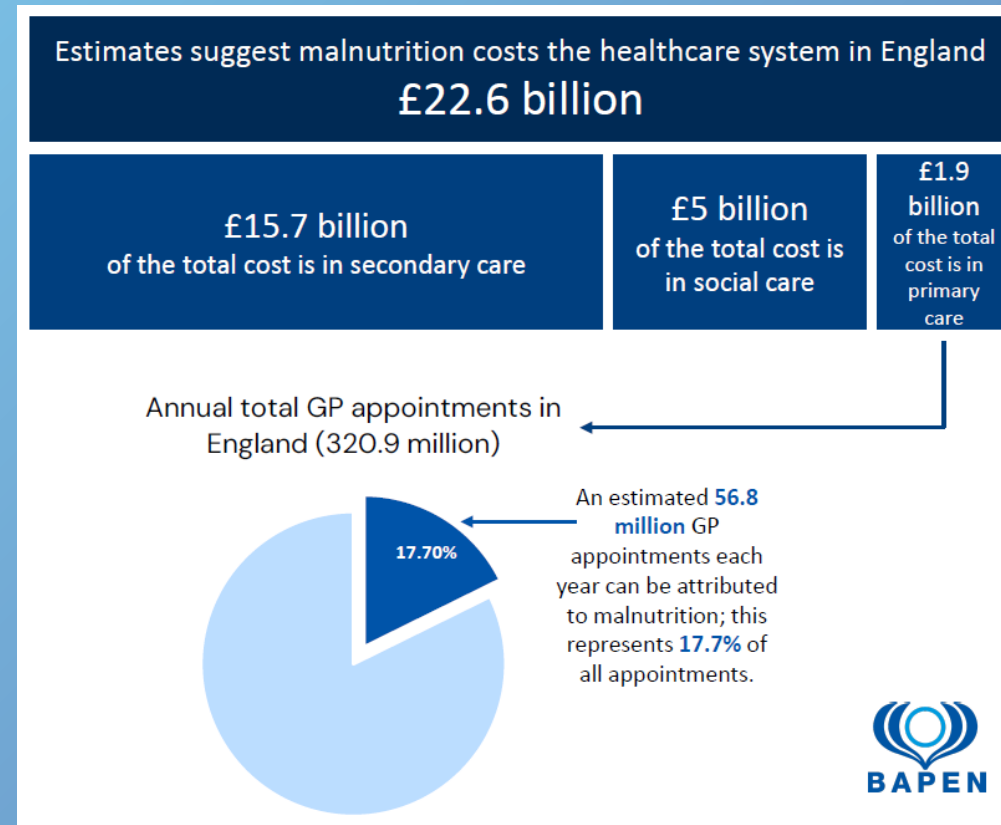
26 -42%
of care home residents
at risk/malnourished



<https://www.malnutritiontaskforce.org.uk/>

Economic impact of malnutrition

Additional cost of a person with malnutrition is £7,775 per person per year at a total cost to the healthcare system in England of £22.6 billion¹



1. <https://www.bapen.org.uk/pdfs/economic-report-full.pdf>
2. <https://www.futurehealth-research.com/>

What's the current guidance for treating malnutrition?

NICE (CG32)¹ - oral nutritional support for adults

- Food based: dietary counselling (meal adaptation, advice on food intake), food fortification (nutrient dense meals, snacks without increasing portion size)
- Second line – Oral Nutritional Supplement (ONS) prescribing

ESPEN guideline² older people aged >65 years

- Interventions be individualized, comprehensive and part of a multimodal and multidisciplinary team approach
 - Energy: 30 kcal/kg body weight/day (adjusted for gender, disease, activity, nutritional status)
 - Protein: at least 1.0 g/kg/d, increasing to 1.2-1.5 g/kg/d (illness, wound healing, recovery)
 - Micronutrients important
- Vitamin D supplement (10ug/d) (DoH 2016)

1. <https://www.nice.org.uk/guidance/qs24/resources/nutrition-support-in-adults-pdf-2098545777349>

2. Volkert et al 2022 Clinical Nutrition 41 958 doi.org/10.1016/j.clnu.2022.01.024.

What's the evidence to support effectiveness of dietary advice and ONS interventions?

Baldwin et al 2021

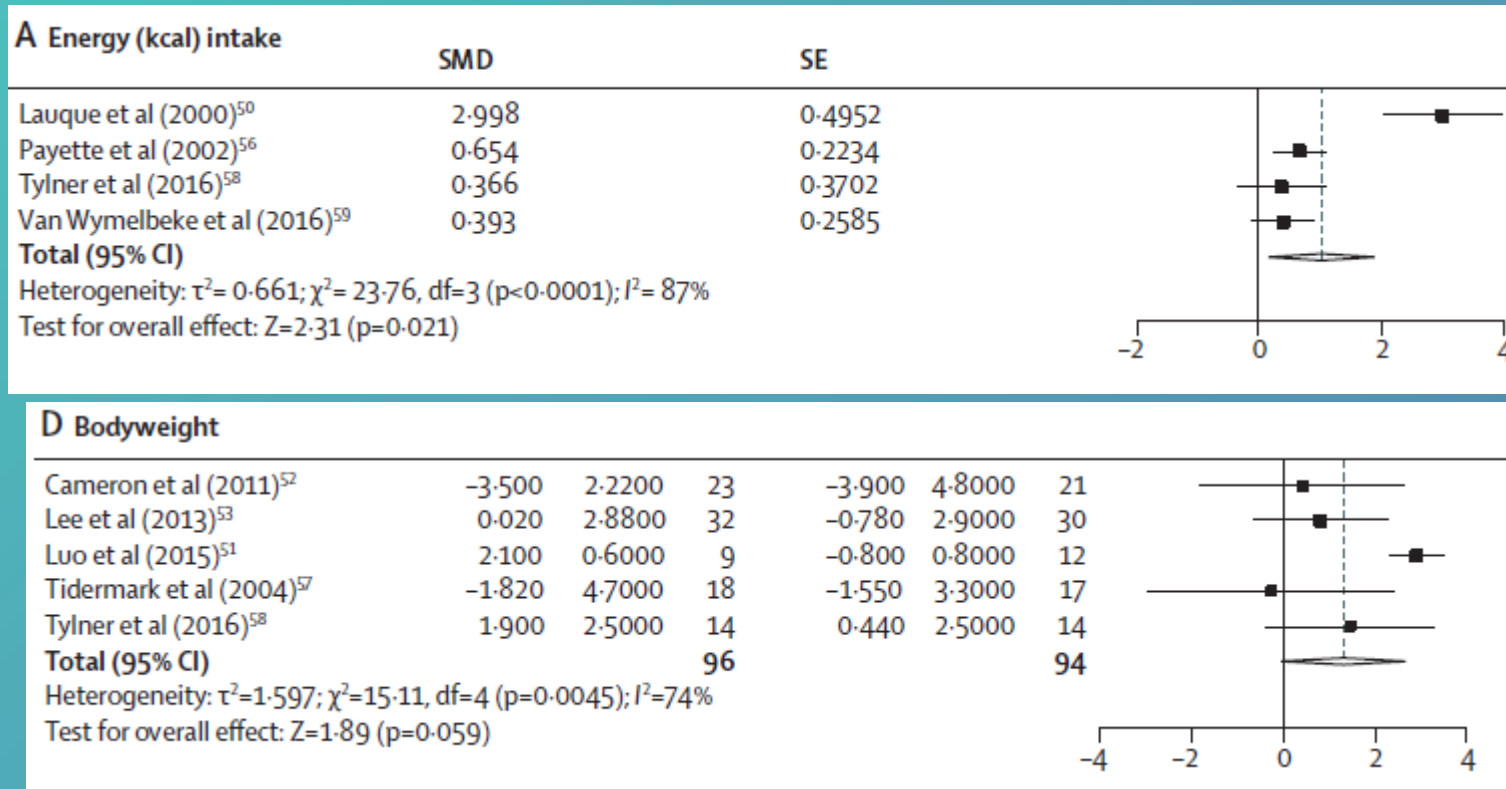
n=94 studies (mostly parallel RCTs 10,284 adults) across many conditions. Hospital, residential care and community

- Possible weight gain with dietary advice and dietary advice+ONS in the short term but benefits of dietary advice compared with ONS are uncertain
- Inconsistent results for other outcomes (intake, length of hospital stay, complications, QoL)
- No data on cost effectiveness

Baldwin et al 2021 Cochrane Database Syst Rev doi: [10.1002/14651858.CD002008.pub5](https://doi.org/10.1002/14651858.CD002008.pub5).

What's the evidence to support effectiveness of dietary advice and ONS interventions?

Thomson et al 2022 (Systematic review/meta analysis) NIHR HTA funded
Effectiveness, cost-effectiveness, and adherence and acceptability of ONS in frail older people who are malnourished or at risk of malnutrition



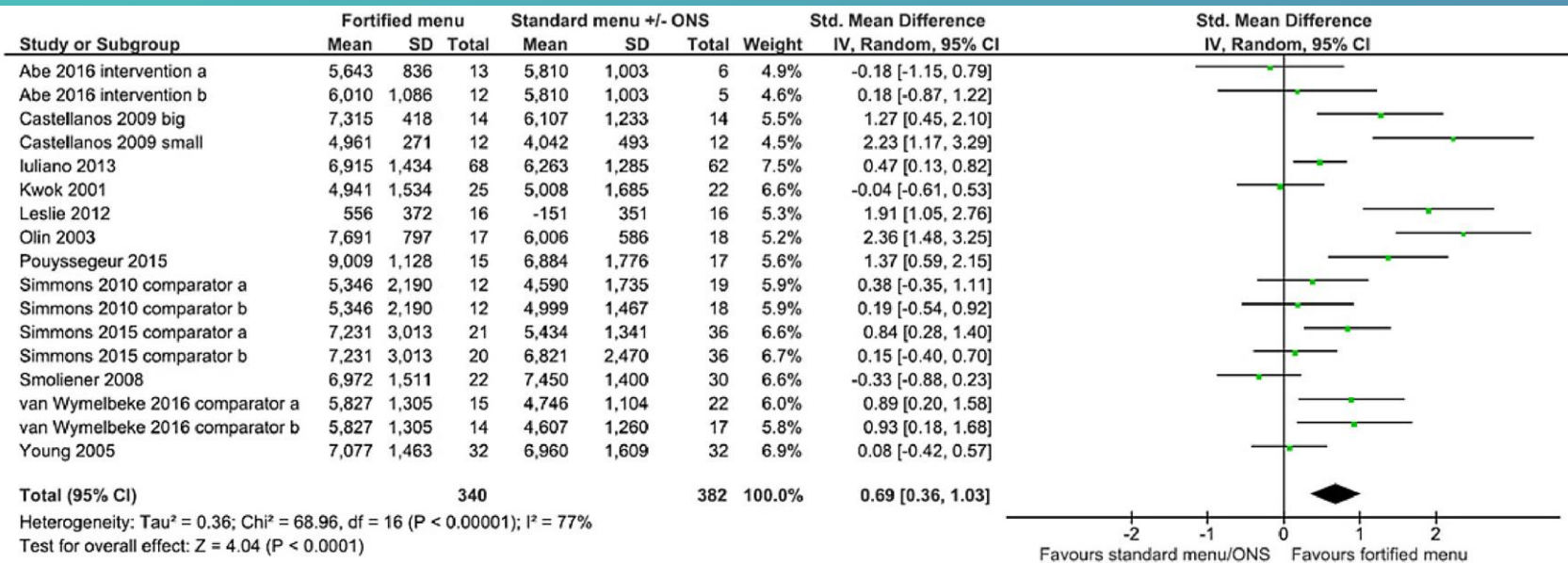
11RCTs, 822 participants (from 8492 records), one economic evaluation in care home setting

Little evidence of ONS reducing malnutrition or its associated adverse outcomes in older people who are frail.

What's the evidence to support effectiveness of dietary advice and ONS interventions?

Sossen et al 2021 (Systematic review/meta analysis)

Effect of nutrition interventions using food fortification, nutrient dense or enriched food in care homes (with or without ONS)



891 participants (from 3098 articles),
16 articles included

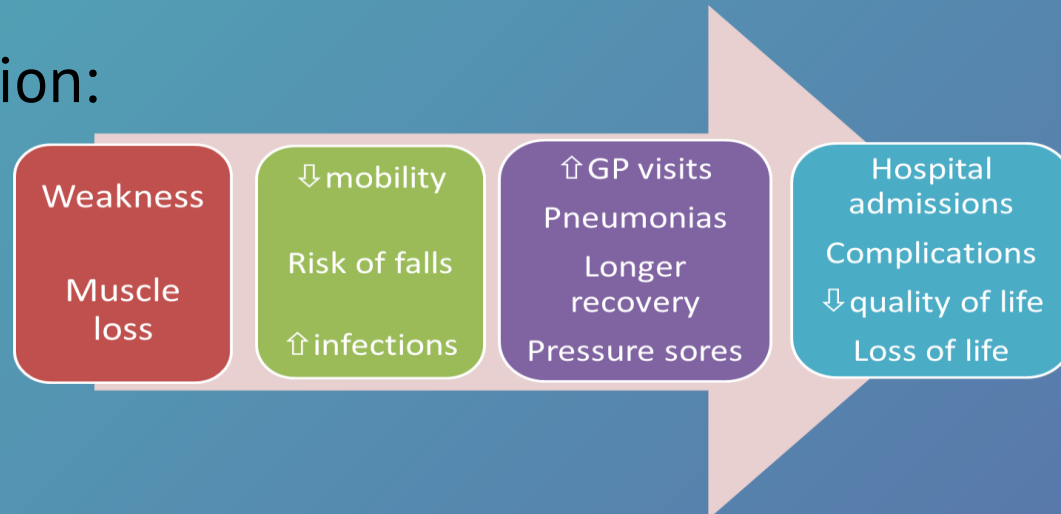
Fortified menus in care homes may
increase energy and protein intake,
compared with standard menu, cost-
effectiveness was inconclusive.

What's the research need?

- Limited evidence in older adults for ONS to reduce malnutrition or associated adverse outcomes (Thomson et al 2022)
- Limited evidence for food-based approaches for managing malnutrition, particularly in care homes and of longer duration (Baldwin et al 2021)
- Need for well-designed research to improve outcomes for diverse groups of older people across health and social care settings (Murphy, 2022)

Care homes have an important role in the provision of good nutritional care

- Approx. 441,479 older people live in UK care homes (11,914 in NI)
- Around 80% have multiple long-term conditions and complex care needs e.g. frailty, dementia.
- 26% - 42% of care home residents are malnourished or at risk of malnutrition
- Escalating cost of ONS (approx £14 million/month, NHS England), ONS costs from wastage?
- Consequences of malnutrition:



Regulation 14: Health & Social Care Act 2008 (regulated activities) Regulations 2010

(1) Where food and hydration are provided to service users as a component of the carrying on of the regulated activity, the registered person must ensure that there is...

(a) a choice of suitable and nutritious food and hydration, in sufficient quantities to meet service users' needs;

(b) food and hydration that meet any reasonable requirements arising from a service user's religious or cultural background;

(c) support, where necessary, for the purposes of enabling service users to eat and drink sufficient amounts for their needs

(2)“food and hydration” includes....., parenteral nutrition and the administration of dietary supplements where prescribed.

What is the clinical and cost-effectiveness of ONS and fortified food on quality of life and nutritional outcomes compared to routine practice in older care home residents?



HTA: NIHR160348

REFRESH trial: nutrition interventions For malnourished older adults in care Homes

*A parallel, three-arm cluster randomised controlled trial over 4 years
To recruit 90 care homes, 1530 residents at risk of malnutrition or malnourished*

- Evaluate the clinical and cost effectiveness of prescribed ONS and Fortified Food compared with routine practice (to improve quality of life and nutritional outcomes, health economic outcomes)
- Each care home will be randomised into one group, residents will receive one of the following:
 - Prescribed oral nutritional supplements
 - Fortified meals and drink
 - Routine care
- Health Economic Evaluation
- Mixed methods process evaluation (trial processes, mechanisms and context)
- Study within a Project (SWAP) (barriers to recruitment and strategies to support retention of older residents from different cultural backgrounds)



HTA: NIHR160348

<https://www.plymouth.ac.uk/research/pencu/refresh-trial>



The REFRESH trial

nutRition intervEntions For malnourished oldEr adultS in care Homes:
a parallel, superiority, three-arm cluster randomised controlled trial.

Trial duration: 1 January 2025 – 31 December 2028

REFRESH trial: nutRition intervEntions For malnourished oldEr adultS in care Homes

What are the intended impacts?

- New evidence to support the most effective approach to treat malnutrition in care homes
- Improve the management of malnutrition, leading to improvements in quality of life, health and wellbeing, pleasure in eating, reduce carer burden and associated costs
- Effective provision of nutritional care and treating malnutrition to reduce resource use (reduced hospitalisations, GP appointments and adverse events e.g. falls/infections requiring NHS resources)
- Adoption across health and care systems and impact evidence-based practice and policy guidelines (NICE) and national/regional care pathways



HTA: NIHR160348

THANK YOU!

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