



# A Guide to Managing Adult Malnutrition in the Community

Including a pathway for the appropriate use of Oral Nutritional Supplements (ONS)

*Produced by a multi-professional consensus panel*



[www.malnutritionpathway.co.uk](http://www.malnutritionpathway.co.uk)

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## Consensus Panel

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**NB:** Previous panel members on the 2012 edition of the document included some of the current consensus panel as well as Dr Ailsa Brotherton; Senior Research Fellow, Pamela Mason; Community Pharmacy and Nutrition Consultant and Dr Rachel Pryke; Royal College of General Practitioners Clinical Champion for Nutrition for Health.

The panel members declare that they have no conflicts of interest in relation to this document. Costs of time, travel and accommodation for attending meetings and printing this document were met by an unrestricted educational grant from Nutricia Advanced Medical Nutrition ([www.nutricia.co.uk](http://www.nutricia.co.uk)). The content and key messaging has been developed and agreed by the expert consensus panel. Library services were provided by Nutricia Medical Affairs department upon request.

## Introduction

This document is a practical guide to support healthcare professionals in the community to **identify and manage** individuals at risk of malnutrition and particularly **disease-related malnutrition**, including the appropriate use of oral nutritional supplements (ONS).

This document has been written and agreed by a multi-professional consensus panel with expertise and an interest in malnutrition, representing their respective professional associations. Members of the public were involved in developing the patient/carer resources.

### The aim of this document is to:

- Assist healthcare professionals to optimise patient outcomes through good nutritional care
- Raise awareness of key patient groups who are at particular risk of malnutrition and should benefit from intervention
- Address inappropriate prescribing whilst at the same time ensuring we are identifying those most at risk of malnutrition
- Reduce the financial impact of malnutrition on health and social care - malnutrition is estimated to cost more than £19 billion each year in England alone<sup>1</sup> which equates to over £90 million per average sized CCG<sup>1,2</sup>

### Topics covered:

- Disease-related malnutrition
- How to undertake nutritional screening to identify malnutrition
- Management according to the degree of malnutrition risk
- Evidence-based management pathway for using oral nutritional supplements appropriately

### Topics not covered:

- Parenteral nutrition
- Enteral tube feeding
- Acute hospital setting
- Paediatrics (patients under 18 years of age)
- Eating disorders

This document is based on clinical evidence, clinical experience and accepted best practice. Local guidance may be available; contact your dietetic department for information or refer to your local formulary.

Disease specific guidance is also available:

- COPD - 'Managing Malnutrition in COPD' ([www.malnutritionpathway.co.uk/copd](http://www.malnutritionpathway.co.uk/copd))
- Lung Cancer – 'A Practical Guide for Lung Cancer Nutritional Care' ([www.lungcancernutrition.com](http://www.lungcancernutrition.com))

For more detailed support on complex conditions it is suggested advice is sought from a registered dietitian.

### NICE Endorsement Statement - Managing Adult Malnutrition in the Community

This booklet supports the implementation of recommendations in the NICE guideline on nutrition support for adults ([www.nice.org.uk/guidance/cg32](http://www.nice.org.uk/guidance/cg32)). It also supports statements 1, 2 and 5 in the NICE quality standard for nutrition support in adults ([www.nice.org.uk/guidance/qs24](http://www.nice.org.uk/guidance/qs24)).

National Institute for Health and Care Excellence. December 2017

## Malnutrition Overview

While malnutrition can refer to either over or undernutrition **this document refers specifically to undernutrition**; a deficiency of energy, protein and other nutrients that causes adverse effects on the body (shape, size and composition), the way it functions and clinical outcomes<sup>3</sup>. Most malnutrition is disease-related, although some social and mechanical (e.g. dentition) factors can also have an impact<sup>4</sup>.

### Size of the problem

- At any point in time more than 3 million people in the UK are malnourished or at risk of malnutrition, most (~93%) live in the community<sup>5</sup>

#### Malnutrition (undernutrition) affects:

- 35% of people recently admitted to care homes<sup>6</sup>
- 29% of adults on admission to hospital<sup>7</sup>
- 30% attending hospital outpatients<sup>8</sup>
- 11% of people at GP practices<sup>9</sup>

### Clinical consequences of malnutrition

- Increased falls risk<sup>12,13</sup>
- Impaired recovery from illness and surgery<sup>4</sup>
- Poorer clinical outcomes e.g. higher mortality<sup>4</sup>
- Impaired immune response<sup>4</sup>
- Reduced muscle strength<sup>4</sup> and frailty<sup>10,11</sup>
- Impaired wound healing<sup>4</sup>
- Impaired psycho-social function<sup>4</sup>

### Cost implications of malnutrition

The healthcare cost of managing individuals with malnutrition is three to four times greater than that of managing non-malnourished individuals, due to higher use of healthcare resources<sup>1</sup>.

#### Malnourished people have<sup>1</sup>:



**Malnutrition costs in excess of £19 billion per annum in England alone**, based on malnutrition prevalence figures and the associated costs of both health and social care<sup>1</sup> (based on 2012 data).

- This breaks down to a cost of over £90 million per CCG based on 207 CCGs in England<sup>1,2</sup>
- It is estimated that the cost of healthcare for a malnourished patient is £5763 (based on the point prevalence of malnutrition and annual expenditure on malnutrition) and £1645 for social care compared to that for non-malnourished patients of £1715 and £440, respectively<sup>1</sup>

### Tackling malnutrition can improve nutritional status and clinical outcomes and reduce health care use and associated costs<sup>1</sup>.

- The National Institute of Health and Care Excellence has shown substantial cost savings can result from identifying and treating malnutrition: implementation of the Clinical Guideline 32: Nutrition Support for Adults<sup>14</sup> and supporting Quality Standard 24<sup>15</sup> have been shown to be high impact with respect to cost savings<sup>16</sup>
- The cost of managing malnutrition using prescribable nutrition support (including oral nutritional supplements, tube feeds and parenteral nutrition) is low at <2.5% of the total expenditure on malnutrition<sup>17</sup>

### Groups at risk of malnutrition include those with:

**Chronic disease<sup>4,5</sup> (consider acute episodes):** chronic obstructive pulmonary disease (COPD), cancer, gastrointestinal disease, renal or liver disease and inflammatory conditions such as rheumatoid arthritis, inflammatory bowel disease

**Progressive neurological disease<sup>5</sup>:** dementia, Parkinson's disease, motor neurone disease (MND)

**Acute illness<sup>5</sup>:** where adequate food is not being consumed for more than 5 days (more commonly seen in a hospital than a community setting)

**Debility<sup>4</sup>:** frailty, immobility, old age, depression, recent discharge from hospital

**Social issues<sup>5</sup>:** poor support, housebound, difficulty obtaining or preparing food

**Rehabilitation:** after stroke<sup>5</sup>, injury<sup>4</sup>, cancer treatment<sup>4</sup>

**End of Life/Palliative Care<sup>18,19</sup>:** tailor and adjust advice according to phase of illness

## Identification of Malnutrition - Nutrition Screening

Malnutrition can be identified using a validated screening tool such as the '**Malnutrition Universal Screening Tool**' ('**MUST**')<sup>3</sup> - see [www.bapen.org.uk](http://www.bapen.org.uk) NB: Healthcare professionals using screening tools should have appropriate skills and training.

### When to screen

Opportunistically – On first contact within a new care setting e.g. upon registration with GP, first home visit, first outpatients appointment, on admission to a hospital or residential care setting<sup>14,15</sup>. Other opportunities for screening include contact with district nurse or community pharmacist, for example at medication usage review (MUR).

Upon clinical concern - examples include: unplanned weight loss, appearing thin, fragile skin, poor wound healing, pressure ulcers, apathy, muscle wasting, poor appetite, altered taste sensation, difficulty swallowing,

altered bowel habit, loose fitting clothes or prolonged intercurrent illness.

Also consider groups at risk of malnutrition (see page 4).

### Recommended screening frequency

- Once an individual has been highlighted at risk of malnutrition, regular screening and monitoring is recommended to determine any improvement or deterioration and action required<sup>14</sup>
- Frequency is determined by risk category as per 'MUST' score (see page 8)

## Management of Malnutrition

• In most cases malnutrition is a treatable condition that can be managed using first line dietary advice to optimise food intake and oral nutritional supplements (ONS) where necessary<sup>20</sup>

### • Management of malnutrition should be linked to the level of malnutrition risk (see page 8)

- People who are malnourished or at risk of malnutrition should have a care plan
- For all individuals: → record risk → correct/manage underlying causes → advise → agree goals of intervention → monitor
- When possible treat or manage the factors contributing to the cause of malnutrition
- Consider a multidisciplinary team approach to determine the optimal nutritional strategy, according to the individual's clinical condition and social situation. The team may include GP, dietitian, nurse, occupational therapist, physiotherapist, speech and language therapist, community matron and community pharmacist

- Management options, also known as oral nutritional support, may include providing advice on a balanced diet, dietary advice to maximise oral intake (including food fortification, snacks and nourishing fluids), ONS to complement dietary strategies as well as practical measures such as assistance with eating, addressing social issues, ensuring ability to shop (physical and financial) and prepare food and texture modification<sup>14</sup>
- Screening and monitoring for malnutrition should be in line with your organisational policy and follow national guidance where possible

### Goal Setting

#### Agree goals of intervention with individual/carer

- Set goals to assess the effectiveness of intervention (see examples in box)
- Consider disease stage and treatment, adjusting goals of intervention accordingly. For example nutritional interventions in some groups, such as palliative care and patients undergoing cancer treatment, may not result in improvements in nutritional status, but may provide a valuable support to slow decline in weight and function
- Discuss intervention with patient/carer to ensure that it is feasible for them to implement/tolerate

#### Monitoring the intervention

- Monitor progress against goals and modify intervention appropriately
- Consider weight, strength, physical appearance, appetite, ability to perform activities of daily living compared with the goals originally set
- Frequency of monitoring depends on setting, treatment, anticipation of patients likely projection and organisational policy (see pages 8 and 9)

### Examples of Goals

#### Goals are not limited to but can include:

- To optimise recovery e.g. pressure ulcers, post-operatively
- Improving mobility
- Reducing risk of frailty and falls
- Preventing further weight loss
- Increase weight/muscle mass
- Improving strength
- Increasing nutritional intake
- Improving the individual's quality of life or ability to undertake activities of daily living
- Reduce infections, recurrence or exacerbation of a condition



# Optimising Nutritional Intake – An Evidence Based Approach to Managing Malnutrition

## NICE Guidance (CG32<sup>14</sup> and QS24<sup>15</sup>)

- NICE CG32 recommends considering oral nutrition support to improve nutritional intake for people who can swallow safely and are malnourished or at risk of malnutrition (based on high quality/A-grade evidence)
- NICE QS24 emphasises the need for all care services to take responsibility for the identification of people at risk of malnutrition, to provide nutritional support for everyone who needs it and to take an integrated approach to the provision of services

## Dietary advice to optimise nutritional intake

- Check with local dietitian or local policy and guidance
- Give Yellow leaflet - 'Your Guide to Making the Most of Your Food'
- Advise on adjusting choices of everyday foods (e.g. cheese, full fat milk) added to the diet to increase energy and protein content without increasing volume of food consumed
- Encourage small, frequent meals and snacks with a focus on nutrient rich foods and fluids
- Overcome potential barriers to oral intake: physical (e.g. dentition, illness related loss of appetite, changes in taste), mechanical (e.g. need for modified texture diet/thickened fluids following a swallow assessment) and environmental (e.g. unable to prepare food, financial issues). Consider referral to other healthcare professionals such as a dietitian, occupational therapist, speech and language therapist
- Whilst there is some evidence for managing malnutrition with dietary advice alone, data on clinical outcomes or cost is limited<sup>21</sup>
- Care should be taken when using food fortification to ensure that requirements for all nutrients including protein and micronutrients are met<sup>14</sup>. Consider a multivitamin and mineral supplement
- Acute and chronic disease may adversely affect appetite and the ability to consume, source and prepare meals and drinks. Dietary advice can only be effective if it is feasible, acceptable and acted on by the individual or carer

## Oral nutritional supplements (ONS) to optimise oral intake

- ONS are typically used in addition to the normal diet, and not as a food replacement, when diet alone is insufficient to meet daily nutritional requirements
- An individual should be encouraged to take ONS when they most feel like taking them, this may be between meals, like a snack, first thing in the morning or before bed. ONS can also be incorporated into everyday foods e.g. in jellies and sauces
- ONS not only increase total energy and protein intake, but also the intake of micronutrients<sup>14,22</sup>

- Evidence shows that ONS do not reduce intake of normal food over a 12 week period<sup>22,23</sup>
- Evidence from systematic reviews including work by NICE demonstrate that ONS are a clinically and cost effective way to manage malnutrition particularly amongst those with a low BMI (BMI < 20kg/m<sup>2</sup>)<sup>14,24-26</sup>. Two recent studies demonstrated cost effectiveness specifically in the community setting<sup>27,28</sup>
- ONS increase energy and protein intakes, can improve weight and have functional benefits (e.g. improved hand grip strength and quality of life)<sup>14,22-25,27</sup>
- Clinical benefits of ONS include reductions in complications (e.g. pressure ulcers, poor wound healing, infections)<sup>21,24</sup>, mortality (in acutely ill older people)<sup>14,22</sup>, hospital admissions and readmissions<sup>24-28</sup>
- Clinical benefits of ONS are often seen with 300-900kcal/day (e.g. 1-3 ONS servings per day) with benefits seen in the community typically with 2-3 month's supplementation<sup>14,22,25</sup>, however supplementation periods may be shorter, or longer (up to 1 year) according to clinical need

## ONS - range and selection of products

There are a wide range of ONS styles (milk, juice, yogurt, savoury), formats (liquid, powder, pudding, pre-thickened), types (high protein, fibre containing, low volume), energy densities (1-2.4kcal/ml) and flavours available to suit a wide range of needs and individual preferences. Check for any local guidance.

Standard ONS provide ~300kcal, 12g of protein and a full range of vitamins and minerals per serving<sup>33</sup>.

The majority of people requiring ONS can be managed using the most commonly used standard ONS (1.5-2.4kcal/ml); these are often used for people who are frail, elderly or with diagnoses of dementia, COPD and cancer.

There are a number of different ready to use ONS which may be of benefit in specific groups: the type chosen will depend on the specific individual, their condition and circumstances:

- **High protein ONS** are suitable for individuals with COPD, wounds, post-operative patients, some types of cancer, and older people with frailty
- **Fibre-containing ONS** are useful for those with GI disturbances (not suitable for those requiring a fibre-free diet)
- **Pre-thickened ONS** and puddings are available for individuals with dysphagia or an impaired swallow. Seek speech and language therapist advice
- **Low volume high energy ONS** may aid compliance<sup>30,31</sup> and may be better tolerated by patients who cannot consume larger volumes e.g. those with COPD

In addition to ready to use ONS, a number of powdered nutritional supplements are available on prescription (and for self-purchase) and can be useful in addition to the diet.

Social, clinical and practical issues that may affect adherence should be considered when deciding on the most appropriate product; such considerations may include renal function and dietary intolerances (e.g. lactose), cost and affordability, palatability, and the ability of the individual to buy milk and make up a powdered product.

### Commencing ONS (see Managing Malnutrition with ONS sheet for further information on products available)

- Aim to establish preferred flavours, likes and dislikes e.g. milk or juice, sweet or savoury
- Test preferences and compliance with a prescribable 'starter pack' (offers a range of products/flavours) or samples
- Prescribe preferred product or range of products / flavours; 2 ONS per day (1-3 per day), initially for up to 3 months (see pathway on page 9 for guidance)<sup>14, 22,24-26</sup>
- For those that require ONS as a sole source of nutrition and those with complex nutritional needs, referral to a registered dietitian is recommended
- ONS that provide only one or two nutrients e.g. protein or carbohydrate (modular products) should be used under the supervision of a registered dietitian
- If poor compliance to ONS, explore reasons and refer to a dietitian or other healthcare professional if appropriate

### Prescribable indications - ACBS (Advisory Committee for Borderline Substances) indications for prescribing standard ONS<sup>33</sup>

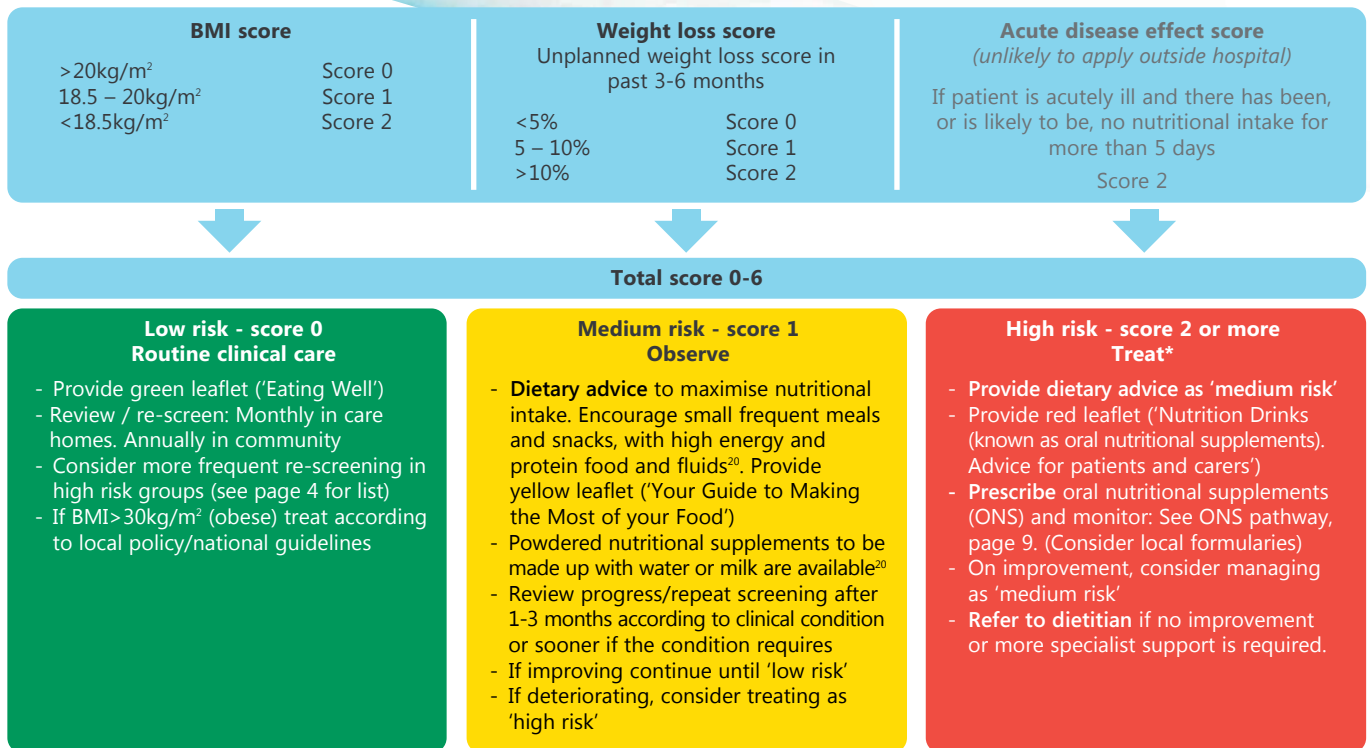
Disease-related malnutrition
Short bowel syndrome
Intractable malabsorption
Pre-operative preparation of patients who are undernourished
Proven inflammatory bowel disease (IBD)
Following total gastrectomy
Dysphagia
Bowel fistulae

There may be individuals who fall outside this criteria but who you think, based on clinical judgement, may benefit from ONS – for example someone with a new diagnosis who is starting to lose weight but does not yet reach the 'MUST' criteria for risk of malnutrition. If you are prescribing for someone who does not meet the ACBS criteria, take care to document your rationale for ONS.

### Discontinuing ONS

Discontinue ONS when adequate oral intake is established, targets are achieved and the individual is stable<sup>14</sup> and no longer at risk of malnutrition. Continue to monitor to check individual remains stable (consider relapsing remitting conditions e.g. COPD, IBD).

# Managing Malnutrition According to Risk Category using 'MUST'\*<sup>3</sup> – Management Pathway



\*The 'Malnutrition Universal Screening Tool' ('MUST') is used here with the permission of BAPEN (British Association for Parenteral and Enteral Nutrition). For more information and supporting materials see [www.bapen.org.uk](http://www.bapen.org.uk) NB: Healthcare professionals using screening tools should have appropriate skills and training

## The following subjective indicators can be used collectively to estimate risk or malnutrition in the absence of height and weight (measured or recalled)<sup>3</sup>:

- Thin or very thin in appearance, or loose fitting clothes/jewellery
- History of recent unplanned weight loss
- Changes in appetite, need for assistance with feeding or swallowing difficulties affecting ability to eat (consider referral to speech and language therapist)
- A reduction in current dietary intake compared to 'normal'

## If only using clinical judgement, the following may act as a guide:

Estimated risk of malnutrition	Indicators
Unlikely to be at-risk (low)	Not thin, weight stable or increasing, no unplanned weight loss, no reduction in appetite or intake
Possibly at-risk (medium)	Thin as a result of disease/condition or unplanned weight loss in previous 3-6 months, reduced appetite or ability to eat
Likely to be at-risk (high)	Thin or very thin and/or significant unplanned weight loss in previous 3-6 months, reduced appetite or ability to eat and/or reduced dietary intake

## For all individuals:

- Explore and address/manage factors contributing to the cause of malnutrition
- Discuss when to seek help e.g. ongoing unplanned weight loss, changes to body shape, strength or appetite. Don't overlook individuals with a high BMI in whom malnutrition arising from impaired intake and weight loss may not be obvious e.g. post-bariatric surgery, COPD
- Ensure that care plans are communicated between care settings<sup>15</sup>
- Where possible patients should be encouraged to self-assess and manage the risk of malnutrition
- Refer to other HCPs if additional support is required (e.g. dietitian, physiotherapist, GP)



# Pathway for using Oral Nutritional Supplements (ONS) in the Management of Malnutrition

NB: timing and duration will vary depending on appetite and nutritional requirements – this is a guide based on evidence and best practice.

## Individual identified as high risk (page 8)

### Chronic Conditions e.g. COPD, Cancer, Frailty:

Longer term needs  
2 ONS per day (range 1-3) in addition to oral intake<sup>14,22,24</sup> for up to 12 weeks duration according to clinical condition /nutritional needs

Prescribe 1 'starter pack', check compliance then monthly prescription of preferred ONS (1-3 per day). Pharmacists can advise on flavours

Provide red leaflet: 'Nutrition Drinks (known as oral nutritional supplements) Advice for patients and carers'

Consider ACBS (Advisory Committee for Borderline Substances) indications (see page 7)<sup>33</sup>

Communicate goals and expected outcomes across care settings

At 12 weeks

### Acute illness/recent hospital discharge:

ONS Prescription for 4-6 weeks (1-3 ONS per day\*) in addition to oral intake<sup>32</sup>

Provide red leaflet: 'Nutrition Drinks (known as oral nutritional supplements) Advice for patients and carers'

Consider ACBS (Advisory Committee for Borderline Substances) indications (see page 7)<sup>33</sup>

Communicate goals and expected outcomes across care settings

At 4-6 weeks

### Monitor Progress:

Check compliance with ONS prescription; amend type/flavour if necessary to maximise nutritional intake  
Review goals set before intervention  
Consider weight change, strength, physical appearance, appetite, ability to perform activities of daily living  
Monitor every 1-3 months or sooner if clinical concern

### Goals met/Good progress:

Encourage oral intake and reinforce dietary advice  
Consider reducing to 1 ONS per day for 2 weeks before stopping  
Maximise nutritional intake, consider powdered nutritional supplements which can be prescribed or self purchased, if suitable (see advice on pages 6 and 7)  
Monitor progress, consider treating as 'medium risk' (see page 8)

### Goals not met/Limited progress

Evaluate compliance to ONS and dietary advice; amend prescription as necessary, increase number of ONS per day  
Reassess clinical condition, if no improvement, consider more intensive nutrition support or seek advice from a dietitian or GP  
Consider goals of intervention, ONS may be provided as support for individuals with deteriorating conditions

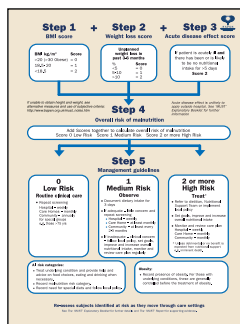
### When to stop ONS prescription

Goals of intervention have been met  
Individual is clinically stable/acute episode has abated  
Individual is back to their normal eating and drinking pattern<sup>14</sup> and is no longer at risk of malnutrition  
If no further nutritional intervention would be appropriate

ONS – oral nutritional supplements/sip feeds/nutrition drinks as per BNF appendix 2: Borderline substances, Table 2 Nutritional Supplements (non-disease specific)<sup>32</sup> (see pages 6-7)

Advice on ONS prescription according to consensus clinical opinion. ONS prescription-units to prescribe per day e.g. 2 ONS = 2 bottles/units of ONS per day  
\* Some individuals may require more than 3 ONS per day – seek dietetic advice

## Useful Resources & Websites



### BAPEN

British Association for Parenteral and Enteral Nutrition [www.bapen.org.uk](http://www.bapen.org.uk)

Key documents and reports

'MUST' toolkit, including 'MUST', explanatory booklet, e-learning and 'MUST' calculator



### NICE

National Institute for Health and Care Excellence

[www.nice.org.uk](http://www.nice.org.uk)

NICE CG32: Nutrition Support for Adults

NICE QS24: Nutrition Support in Adults



### E-Guidelines

Clinical guidelines summaries for primary care [www.guidelines.co.uk](http://www.guidelines.co.uk)

Guidelines for managing adult malnutrition in the community

[www.guidelines.co.uk](http://www.guidelines.co.uk)



### BDA

British Dietetic Association [www.bda.uk.com](http://www.bda.uk.com)



### Managing Adult Malnutrition In The Community website:

[www.malnutritionpathway.co.uk](http://www.malnutritionpathway.co.uk)

**Patient leaflets:** A range of leaflets are available to download from the website - [www.malnutritionpathway.co.uk/leaflets-patients-and-carers](http://www.malnutritionpathway.co.uk/leaflets-patients-and-carers)

**Red leaflet – 'Nutrition Drinks (known as Oral Nutritional Supplements). Advice for patients and carers'** – leaflet for patients at high risk of malnutrition who have been prescribed oral nutritional supplements

**Yellow leaflet – 'Making the Most of Your Food'** – dietary advice for patients at medium or high risk of malnutrition

**Green leaflet – 'Eating Well'** – healthy eating advice for those at low risk of malnutrition

**'Managing Malnutrition with Oral Nutritional Supplements – a guide for healthcare professionals'** – leaflet outlining types of product available and their suitability for different patient groups

[www.malnutritionpathway.co.uk/files/uploads/Managing\\_MalNutrition\\_with\\_ONS](http://www.malnutritionpathway.co.uk/files/uploads/Managing_MalNutrition_with_ONS)

**Care plans** for use by nurses in residential and care home settings [www.malnutritionpathway.co.uk/careplans](http://www.malnutritionpathway.co.uk/careplans)

**GP surgery poster** – An A4 printable poster, for display in the GP surgery, outlining the care pathway that should be followed for individuals at risk of malnutrition in the community, copies are also available to order [www.malnutritionpathway.co.uk/posters](http://www.malnutritionpathway.co.uk/posters)



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This document has been produced by a panel of healthcare professionals experienced in working with patients who are malnourished.

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