

Is a standard oral nutritional supplement right for all patients?



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With over 140 oral nutritional supplements (ONS) available in the UK market, it is important for dietitians and healthcare professionals to understand and identify which nutritional products are appropriate for our patients who are malnourished or at risk of malnutrition.

The aim of this article is to explain the importance of using specialist ONS when indicated, to suit the individual patient's needs. Additionally, it will explore assessment tools on how to identify this as early as possible in the patient's journey.

Background & malnutrition

Malnutrition or undernutrition is a state in which a deficiency of nutrients, such as energy, protein, fats (macronutrients), vitamins and minerals (micronutrients), cause measurable adverse effects on tissue and body form (body shape, size, and composition), body function and/or clinical outcome.¹

Malnutrition is both a cause and consequence of poor health primarily occurring due to an inadequate energy intake. This results in weight loss and depletion of both body fat and muscle.² An inadequate intake of macro and micronutrients can, over time, cause deficiencies with widespread metabolic, functional and physiological effects on the body.³

The association between poor nutritional status and adverse clinical outcomes is well established. It is associated with delayed recovery, increased complications and increased mortality.⁴ People suffering from malnutrition may be admitted to hospital more often, have longer hospital stays, visit their GP more frequently and have increased prescription costs.⁵

Malnutrition is estimated to affect at least three million adults in the UK. This commonly affects older adults, with about 1.3 million over the age of 65,⁶ predominately living in the community, in homes and social care settings. A report published by the National Institute for Health

Research Southampton Biomedical Research Centre (NIHR Southampton BRC) and the British Association for Parenteral and Enteral Nutrition (BAPEN) estimates that the cost of malnutrition, for both adults and children, in England alone is a staggering £19.6 billion a year.⁶ This is only set to increase with an ageing population and the rising costs of health and social care.

Identification of malnutrition & indication of oral nutrition support

As per the National Institute for Health and Care Excellence (NICE) guidelines and recommendations by BAPEN, the Department of Health and Social Care and the Care Quality Commission (CQC), screening for malnutrition should be carried out at the earliest convenience by healthcare professionals in community and hospital settings.^{7, 8, 9} The most common screening tools used in UK include Nutritional Risk Screening 2002 (NRS2002) and the 'Malnutrition Universal Screening Tool' ('MUST'). The new RMAPP (Remote Malnutrition in the Primary Practice) App is also available to assist healthcare professionals to screen and monitor patients remotely for malnutrition and muscle mass and function loss. It incorporates both the 'MUST' and the SARC-F (5-item questionnaire: strength, assistance with walking, rise from a chair, climb stairs and falls) tool: www.rmapptool.com/en.

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Screening tools, such as the above, should assess body mass index (BMI), percentage of unintentional weight loss and also consider if a patient's current nutritional intake has been reduced and/or the likelihood of future impaired nutrient intake.

Treatment of malnutrition – oral nutrition support

Dietitians and healthcare professionals should consider using oral nutrition support for people who are either malnourished or at risk of malnutrition as identified in **Figure 1**. Potential swallowing problems (dysphagia) should also be considered.

During assessment it is vital to identify any other underlying factors that are contributing to malnutrition. This should include, but not be limited to, the patient's medical conditions, dentition, and socio-economic and environmental factors, such as cooking provision, meal preparation and social support.

Treatment should always be individualised, taking a patient's needs and preferences into consideration. As per NICE guidance on nutrition support for adults,⁴ malnourished people should have every opportunity to make informed decisions about their care and treatment, in partnership with their healthcare professionals.

In general terms, if a person can eat and drink safely and does not have a diminished appetite, then it is important to encourage a 'food first' approach. This would be in the form of dietary counselling or advice which would include encouraging increased food intake with energy and protein dense meals, the addition of snacks between meals, desserts, nourishing drinks (e.g. malted drinks, hot chocolate, enriched milk, homemade milkshakes). Further suggestions include changing from low-fat to higher fat products and the use of food fortification, such as adding milk powder, vegetable oil or double cream to food.

Treatment of malnutrition – ONS

If the patient is at high risk of malnutrition or is malnourished, and it is not possible to meet their nutritional requirements from food and drink alone, and food first approaches have been exhausted, ONS should be initiated. ONS should usually only be prescribed under the supervision of a dietitian and/or doctor or specialist nurse following local policy where possible.

ONS are widely used within the acute and community health settings. They come in a variety of preparations, including liquids, semi-solids or powders, providing a range of macro and micronutrients. They are commercially produced and prescribed to improve nutritional status, treat malnutrition, and have been proven to have good outcomes when used appropriately.¹⁰ Evidence from the highest quality studies (systematic reviews¹¹) suggested ONS can reduce mortality rates, increase overall energy intake, support weight gain in a variety of clinical conditions, as well as decrease complications and length of hospital stay.

ONS may be prescribed in the short-term during acute illness, but also for individuals with long-term chronic conditions affecting their appetite and food intake (e.g. chronic obstructive pulmonary disease [COPD], cancer, neurological disease), complex nutritional and clinical needs, and pre- or post-surgery. However, to be prescribed they must meet the Advisory Committee on Borderline Substances (ACBS) diagnostic criteria,¹² which includes (but not limited to):

- Short bowel syndrome
- Dysphagia
- Intractable malabsorption
- Pre-operative preparation of undernourished patients
- Inflammatory bowel disease
- Total gastrectomy
- Bowel fistulae
- Disease-related malnutrition (chronic/acute).

Figure 1: Indications for nutrition support

Those who are malnourished meet the following criteria:^{4,7}

- A BMI of less than 18.5 kg/m²
- Unintentional weight loss greater than 10% within the last 3–6 months
- A BMI of less than 20 kg/m² and unintentional weight loss greater than 5% within the last 3–6 months.

Those at risk of malnutrition meet the following criteria:^{4,7}

- Have eaten little or nothing for more than 5 days and/or are likely to eat little or nothing for the next 5 days or longer
- Have a poor absorptive capacity, and/or have high nutrient losses and/or have increased nutritional needs from causes such as catabolism.

As previously mentioned, there is a wide variety of supplements available, with the majority available on prescription. A standard 1 kcal/ml ONS is not appropriate in certain patient groups. An initial dietetic assessment is therefore essential to ensure the following has been considered:

- Anthropometry – weight, height, BMI, % weight loss, hand grip strength, etc.
- Biochemical markers
- Clinical factors – swallowing status, symptoms, medication, past medical history
- Dietary – including patients' taste and texture preferences
- Environmental, religious and cultural factors
- Nutritional requirements individualised to the patient's clinical needs.

This will ensure the ONS prescription is appropriate and tailored to their needs, e.g. if the patient dislikes milk or milky drinks, a juice-style supplement is likely to be better tolerated. This, as well as other key assessment questions listed in **Figure 2**, are key in establishing the appropriateness of ONS and type - this improves patient overall compliance and cost-effectiveness by reducing wastage.

NICE guidance⁴ advises the prescription should be reviewed according to the person's progress and following local policy and prescribing guidance. Care should also be taken when:

- Using food fortification which tends to supplement energy and/or protein without adequate micronutrients and minerals
- Checking supplement's nutritional composition, as they may indicate nutritionally complete at a certain volume but may not provide adequate micronutrients and minerals when used in a supplementary role.

Conclusion

In summary, individual dietetic assessment using clinical judgement is imperative to ensure the most appropriate oral nutritional supplement is initiated and early in the patient's care. This intervention would help achieve patient adherence alongside reducing the risk of associated negative health outcomes of disease-related malnutrition. Clinical conditions where it could be

difficult to meet requirements with diet and food first approach alone would also see benefit with the initiation of ONS following an individualised assessment and treatment plan. Extensive research confirms oral nutritional supplements can be one of the most effective way of improving total energy, protein and micronutrient intakes when used alongside the diet. This results in improvements to the patient's physical function and clinical outcomes, and reductions in healthcare use. NICE has given the use of oral nutritional support to manage malnutrition an A grade recommendation and highlighted its cost-effectiveness. Therefore, dietitians and healthcare professionals play an important role in identifying patients at high risk of malnutrition, or with malnutrition, and should use their assessment to focus on asking the appropriate questions to ensure that the patient's individual nutritional needs are met safely and effectively with oral nutritional support to optimise their overall nutritional status.

Figure 2: Key assessment questions for initiating specialist ONS

1. Does the patient have dysphagia? Ensure the patient has an appropriate modified consistency directed by a speech and language therapist in terms of the International Dysphagia Diet Standardisation Initiative (IDDSI) level required.
2. What is the patient's usual bowel habit? Does the patient have a history of constipation and low dietary fibre intake? Would they benefit from an ONS with added fibre?
3. Does the patient have difficulties with food preparation and/or poor hand dexterity? A powdered ONS is likely to be inappropriate, therefore a pre-made bottled sip feed should be considered.
4. Is there a history gastrointestinal (GI) symptom/s? Is there any significant past medical history that may predispose patient to GI intolerance? E.g. irritable bowel syndrome (IBS), inflammatory bowel disease (IBD), gastroparesis, pelvic radiation therapy. Symptoms of malabsorption or maldigestion such as diarrhoea, steatorrhoea, nausea/vomiting/reflux, abdominal pain. Experience other functional gut symptoms, e.g. bloating, excess flatulence. Consider a peptide-based ONS.
5. Do they have higher calorie needs due to COPD, pressure ulcer or wound or a recent fall/fracture? Consider a high protein and/or 2 kcal/ml ONS.
6. Do they have diabetes and a history of poorly controlled blood glucose levels? Think about prescribing an ONS with lower carbohydrate content, e.g. milk-based or fibre-based ONS.
7. Could larger volume supplements be a challenge for your patient? A compact style (125 ml), ready-to-drink ONS may be better tolerated. Only use a powdered-style ONS if you have assessed the ability of the patient to make up a powdered product.
8. If your patient is suffering with taste fatigue or taste changes? Consider a variety of flavours, or trial a different style, such as a juice-style or a yoghurt-style ONS.

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