6.3 Oral nutritional support

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Key points

- The role of the dietitian is to provide evidence-based advice on the most appropriate oral nutritional support for patients, and tailor dietary advice to their needs.
- Oral nutritional support aims to improve the nutritional intake of macronutrients and micronutrients; approaches include fortified foods, snacks, nourishing drinks and oral nutritional supplements (ONS).
- Dietary strategies improve intake, weight and body composition, and can have some benefits on functional outcomes, but clinical efficacy has not been fully assessed.
- ONS has been shown to improve intake, weight, and body composition, with other clinical and economic benefits, e.g. improved function, reduced complications and readmissions to hospital.
- All patients receiving oral nutritional support should be monitored regularly against the goals of the intervention.

Oral nutritional support is a collective term used to describe the nutritional options available via the oral route, to manage people who have been identified as malnourished or at risk of malnutrition (see Chapter 6.2, Malnutrition). Oral nutritional support should consider macronutrients (energy, carbohydrate protein, fat) and micronutrients (NICE, 2006a). Oral nutritional support options include any of the following methods to improve nutritional intake, as defined by NICE (2006a):

- Fortified foods with protein, carbohydrate and/or fat plus vitamins and minerals.
- Snacks.
- Altered meal patterns, practical help with eating.
- Oral nutritional supplements (ONS).
- Provision of dietary advice – including all the preceding points, and tailoring counselling to the patient's clinical, nutritional, social and psychological needs.

Who should receive oral nutritional support?

Oral nutritional support should be considered for patients with inadequate food and fluid intakes to meet requirements, unless they cannot swallow safely, have inadequate gastrointestinal function or if no benefit is anticipated, e.g. end-of-life care (NICE, 2006a) (see Chapter 7.16, Palliative and end-of-life care). For other nutritional support options, see Chapter 6.4 Enteral nutrition and Chapter 6.5, Parenteral nutrition. Healthcare professionals should consider oral nutritional support to improve nutritional intake in people who can swallow safely and are malnourished or at risk of malnutrition (NICE, 2006a) (see Chapter 6.2, Malnutrition). This is an 'A grade' recommendation in the NICE CG32 Nutritional Support in Adults (2006a), which is the highest classification of recommendations based on the highest level of evidence. NICE reviewed the evidence in 2014 and 2017 and found nothing to affect the recommendations. Other national bodies also highlight the need for nutritional management including:

- Care Quality Commission (2015), as part of the Health and Social Care Act, which states that people must have their nutritional needs assessed, and that food must be provided to meet those needs; this includes prescribed nutritional supplements.
- Department of Health (2010) Essence of Care Framework similarly highlights that nutritional support should be considered for people who are at risk of malnutrition or who are malnourished.
- Statement 2 of NICE Quality Standard 24 states that people who are malnourished or at risk of malnutrition should have a management care plan that aims to meet their nutritional requirements (NICE, 2012).
- British Dietetic Association (BDA, 2012) – Policy Statement: The care of nutritionally vulnerable adults in community and all health and care settings.

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Companion website: www.manualofdieteticpractice.com

Role of the dietitian in oral nutritional support

The role of the dietitian is to provide evidence-based advice on the most appropriate oral nutritional support option for the patient. The dietitian provides tailored dietary advice according to the patient's disease, symptoms and treatment regimen, while considering the patient's social, physical, psychological, clinical and nutritional needs. Advice may be given on dietary fortification (in addition to the encouragement to eat), food choice and preparation, and how to overcome anorexia or specific difficulties with eating, perhaps due to side effects or symptoms associated with a disease or its treatment. Dietary strategies encompass food fortification, i.e. extra snacks and nourishing drinks that can be used on their own or in combination with other nutritional support strategies such as ONS and artificial nutrition. Individual patient needs should always be taken into consideration; dietary strategies alone may be adequate for some patients, whereas, for others, ONS may be the most clinically effective option and should not be delayed.

The effectiveness of dietary advice will depend on many factors, including the method of counselling used, content and form of the advice given, and the patients themselves. The efficacy of dietary advice may be limited in the very sick, those with poor consciousness or limited comprehension, and when there are possible time constraints in acute settings. In all settings, dietitians can provide invaluable encouragement and advice (both verbal and written) in the treatment of malnutrition and in the nutritional management of many complex disease states. However, dietetic services can sometimes be sparse, which means dietitians are unable to oversee the management of every individual who needs nutritional support. Therefore, dietitians have an important role as educators of medical, social care and nursing staff, particularly in the primary and social care sectors, regarding measures that can be taken to improve oral intake. There are several examples of evidence-based pathways that have been developed nationally to improve the use of oral nutritional support, and specifically ONS. These can be used by dietitians to support the development of local guidelines for other healthcare professionals to follow, e.g. managing adult malnutrition in the community (www.malnutritionpathway.co.uk).

Oral nutritional support strategies to improve nutritional intake

There are several oral nutritional support strategies available, as shown in Figure 6.3.1.

Fortified food

The aim of food fortification should be to increase the nutrient density, and not the actual amount of food consumed. In practice, food fortification, primarily with the addition of energy-rich foods, mostly results in increasing energy intakes. Food fortification practices include the following:

- Fortifying milk by adding four tablespoons of skimmed milk powder to 1 pint of milk. This can then be used throughout the day in drinks, on cereals, or for custard, milk puddings, etc.
- Adding grated cheese to soup, savoury dishes and mashed potato.
- Adding double cream to soup, mashed potato, sauces or desserts.
- Adding butter or oil to vegetables, pasta and scrambled egg, and during cooking.
- Adding jam, syrup or honey to breakfast cereals, milk puddings or other desserts.
- Adding sugar to foods or drinks.
- Avoidance of low-fat, low-sugar and diet foods and drinks.

However, NICE (2006a) stated that care should be taken when using dietary fortification in isolation, as this approach tends to supplement energy but not other nutrients. Ideally, patients should be encouraged to fortify their diets with foods that are energy and nutrient dense.

The use of food fortification may be an attractive option for patients with anorexia, as the quantity and volume of food consumed does not increase and familiar food ingredients are used. However, dietary fortification may alter the sensory properties of foods, which may or may not be desirable for individual patients. Fortification using high-fat foods (especially those with a high saturated fat content, such as butter, cream and hard cheese) may not be desirable for some patients, e.g. those with high cholesterol levels. There may also be practical difficulties on busy hospital wards or if patients are physically (e.g. disability or fatigue) or mentally unable or unwilling to modify their diets at home without help, thereby reducing compliance. For all patients, the costs of this approach need to be considered, along with issues of purchasing, preparation and storage. Thought should also be given to dietary recommendations that other family members may be following, and which may conflict with the strategies for managing malnutrition, e.g. weight-reducing advice for the management of obesity.

Snacks

Additional food items in the form of snacks can be used in the treatment of malnutrition with the aim of increasing nutritional intake. As with food fortification, consideration should be given to improving energy, protein and micronutrient intakes. Compliance with such a strategy may be good, as snacks are familiar and generally well liked. Examples include cake or malt loaf, yoghurt, custard, toasted crumpets or teacakes with butter, and cheese and crackers. It may also be helpful to recommend eating small amounts of food as snacks throughout the day. Snacks may not be effective in patients with anorexia who may be unable to eat more food, or in patients with physical difficulties with eating (chewing, swallowing). For free-living patients, there are also cost considerations and issues of purchase, preparation and storage.

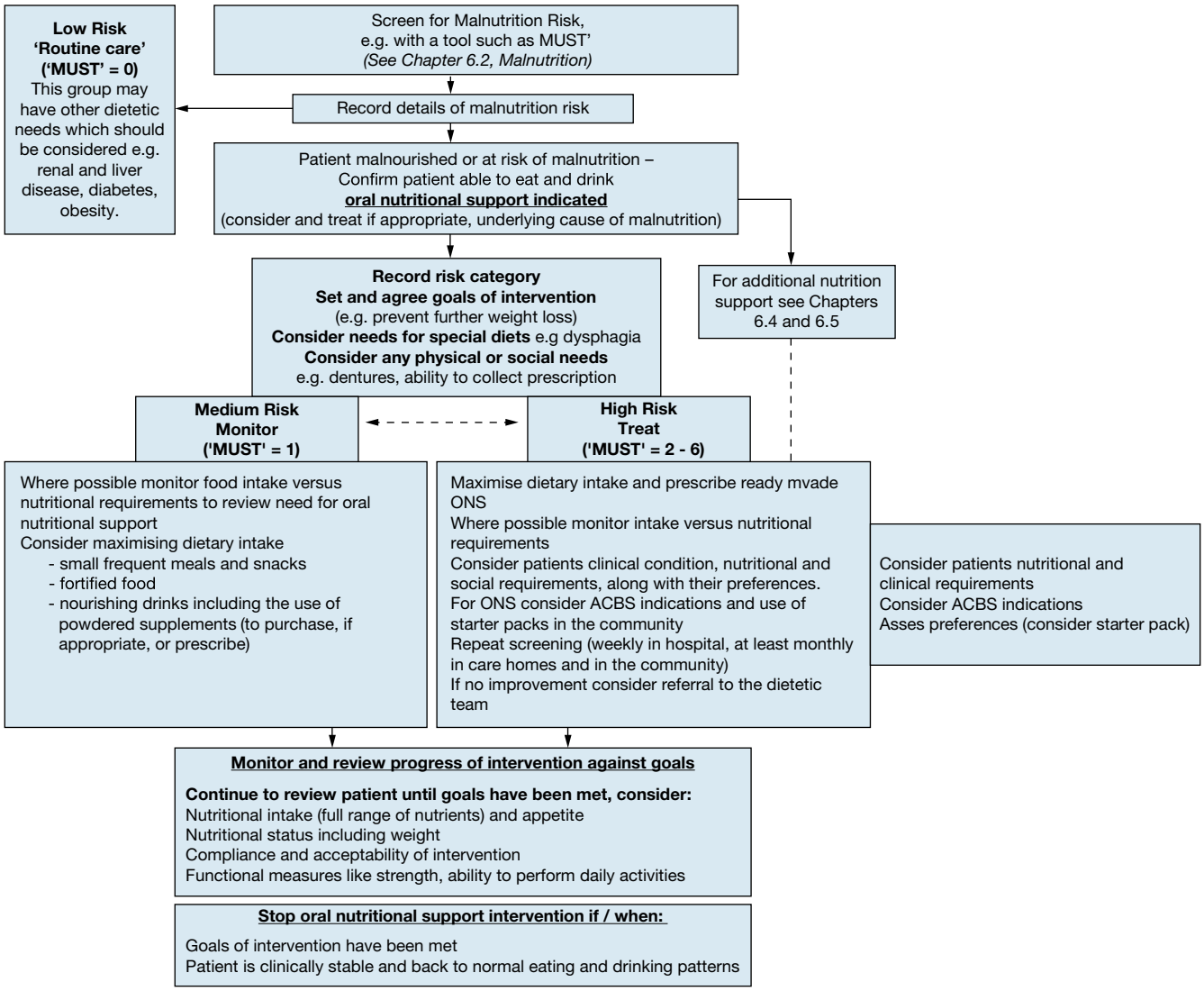

Figure 6.3.1 Algorithm for oral nutrition support in the management of malnutrition

Nourishing drinks

As far as possible, patients should be encouraged to consume drinks that are better sources of nourishment than just tea, coffee or water. Liquids tend to be less satiating than solid foods, so can be a good option to increase the nutritional intake in patients with very poor appetites. Depending on individual patients and their clinical conditions, suitable suggestions include the following:

- Milky drinks, e.g. cocoa, drinking chocolate, malted milk drinks, milkshakes, and coffee made with either full-fat milk, fortified milk, or calcium-enriched alternatives.
- Soup (especially condensed or 'cream of' varieties).
- Fruit juices or smoothies (or drinks enriched with micronutrients).
- Powdered supplements that can be made up with water or milk, e.g. Complan and Meritene; these can be purchased, although some are available on prescription.

Oral nutritional supplements (ONS)

ONS, sometimes referred to as sip feeds, typically contain a mix of macronutrients (protein, carbohydrate and fat) and micronutrients (vitamins, minerals and trace elements). As with tube feeds, ONS are foods for special medical purposes (FSMPs), and as such are regulated under the Foods for Specific Groups Regulation 609/2013 and the Food Information for Consumers Regulation 1169/2011. These regulations define and categorise the products, give compositional guidelines and set out labelling requirements. These products are specially formulated, intended for the dietary management of patients who are unable to meet their nutritional needs through diet alone, and should be used under medical supervision. ONS can be prescribed in the community (BMJ Group and the Royal Pharmaceutical Society of Great Britain, 2011) for the management of disease-related malnutrition. Prescribing details can be found in the British National Formulary (BNF) section 9.4.2

(www.bnf.org). Other prescribable indications include short bowel syndrome, intractable malabsorption, preoperative preparation of undernourished patients, inflammatory bowel disease, total gastrectomy, bowel fistulae and dysphagia; dietitians can prescribe ONS. When prescribing, the cost of ONS is often a consideration. However, despite the enormous public expenditure on malnutrition (see Chapter 6.2, Malnutrition), that on treatments including ONS is low (~1% of the overall prescribing budget) (Stratton & Elia, 2010), and interventions (mainly ONS) to combat malnutrition save rather than cost money, with estimated net cost savings of £172.2–£229.2 million due to reduced healthcare (Elia, 2015). Nevertheless, ONS, as with all forms of oral nutritional support, should be used appropriately.

Most ONS are liquid feeds, although puddings and powders are available (see Appendix A6). There are a range of types (high protein, fibre containing), styles (juice, milkshake, yoghurt, savoury, pre-thickened), energy densities (1–2.4 kcal/mL, or 4.18–10.0 kJ/mL) and flavours available to suit a wide range of patient needs. Most provide around 300 kcal (1.25 MJ), 12 g of protein and a full range of vitamins and minerals per serving. ONS type, dose and duration are used according to clinical judgement. However, most prescriptions range from one to three supplements/day, with clinical benefits typically seen with >300 kcal/day (1.25 MJ/day). Supplementation periods range from weeks (in elderly patients who are acutely ill or post-surgical) to months for chronically ill patients in the community. Many ONS are nutritionally complete when consumed in a certain volume (2–7 servings/day, depending on the type of supplement); therefore, the supplement contains sufficient micronutrients to meet the daily requirements.

Liquid ONS tend not to suppress intake from normal food, and, in some groups, may help to stimulate appetite (NICE, 2006a; Stratton & Elia, 2007). ONS should not replace the provision of good food or nutritional care (including help with feeding and meal provision) in hospitals and care homes, or in a person's own home. Patients likely to benefit from ONS across both hospital and community settings include acutely ill hospitalised patients (especially the elderly, and hip fracture and gastrointestinal surgical patients); malnourished patients recently discharged from hospital; and those with chronic conditions such as cancer, chronic obstructive pulmonary disease (COPD), neurological conditions, and renal and liver disease (NICE, 2006a; Stratton & Elia, 2007). ONS are also used before and after surgery and perioperatively, as part of the nationally recognised Enhanced Recovery After Surgery (ERAS) programme to improve outcomes after surgery, reduce complications, and promote early discharge of patients (see Chapter 7.17.5, Surgery). Suitability of ONS for specific ethnic groups, people with allergies, vegans and those with other special requirements should always be checked.

Patients find ONS an acceptable form of nutritional support (NICE, 2006a), and compliance with ready-made ONS has been shown to be good (78% of prescribed volume consumed), although this varies across settings (Hubbard *et al.*, 2012). It should however be remembered that the efficacy of ONS may be limited if compliance is poor. Optimising compliance with ONS will prevent waste and maximise clinical benefits. Practical tips to aid compliance could include the following:

- Testing the patient's preferences by offering a variety. In the community, a prescribable starter pack of a range of types and flavours can be tried.
- Consider using varied flavours and a choice of different types and consistencies. *Note*: Some patients are also happy to use only one type and flavour.
- Encouraging ONS to be taken in small doses at intervals throughout the day or as a medication as opposed to a food.
- Using more energy- and nutrient-dense ONS (Hubbard *et al.*, 2012).
- Consider offering practical advice to patients, e.g. serving ONS chilled or warmed, or using ONS within everyday recipes.
- In some patient groups, e.g. the elderly or those with COPD, the combination of ONS with physical activity programmes (resistance training) may facilitate improvements in intake (Anker *et al.*, 2006; Volkert *et al.*, 2006).

Other strategies

Other strategies that may help to increase dietary intake include optimising dining room ambience, sensory enhancement of foods (flavour and odour enhancement), use of music, and resistance training or exercise, particularly in the elderly living in long-term care settings. In children, behavioural therapy may be useful.

Tailoring dietary advice for oral nutritional support (including practical considerations)

Many factors can impair nutritional intake, with the main factors being disease and its treatment (Stratton *et al.*, 2003). Whenever possible, the underlying cause impairing intake should be identified and addressed. In addition to disease, other factors include social, functional, physical, mechanical and environmental issues; these differ depending on where the patient resides (own home, care home, hospital, living alone, etc.). Considerations when tailoring dietary advice for oral nutritional support may include the following:

- Effect of the disease or its management (treatment, surgery), e.g. side effects such as nausea and vomiting, taste changes, dry or painful mouth, and the need for modified texture.
- Ability to shop (physical, financial) or collect prescriptions.
- Ability to prepare food or the need for assistance with eating.
- Dentition, loss of appetite, fatigue, and early satiety, e.g. stomach resection, abdominal tumours or ascites often result in people feeling full when consuming a small quantity of food.

In addition to advising on the most suitable form of oral nutritional support, dietary advice can also be tailored and personalised for each individual patient. Some of the practical suggestions discussed in following text may be of help.

Social and functional considerations

These will include factors such as the ability to shop, collect prescriptions or prepare food. Useful strategies include the following:

- Encourage patients to ask for and accept help from neighbours and friends.
- Encourage patients to make use of local support services, e.g. social services, home help, meals on wheels and day care facilities, which can provide practical help in terms of shopping, cooking or meal provision, and perhaps lessen the social isolation of those who live alone.
- If the patient has limited functional ability and/or no carer or home support, consider readymade meals, snacks, drinks and ONS as appropriate.
- Encourage the use of a pharmacy delivery service if ONS are prescribed.

Physical considerations

Physical considerations include poor appetite, tiredness and early satiety, which may be addressed by considering the following:

- Increase energy and nutrient density and/or decrease amount or volume of food or supplement.
- Offer a smaller portion size and avoid overwhelming platefuls of food (little and often).
- Advise light physical exercise which may improve appetite, e.g. a short walk.
- A small amount of alcohol before or with a meal (if allowed) can stimulate appetite.
- Try spreading meals and snacks throughout the day or try nourishing drinks.
- Consider eating when appetite is best.
- Make use of convenient, simple-to-prepare foods or meals.
- Choose foods that are particularly fancied, regardless of the time of day.
- Avoid strong cooking smells that could be off-putting.
- Take time to eat and relax after meals or between courses.
- Avoid filling up with large volumes of liquid before, during or after meals.
- Some patients (particularly those with early satiety) may find that fatty, greasy or rich foods exacerbate their feelings of fullness and would benefit from avoiding these.
- If appetite is poor, e.g. in acute illness or the post-operative period, patients may find nourishing drinks and ONS less satiating than additional food stuffs.

Specific symptoms related to illness or treatment side effects

Nausea and vomiting

Nausea and vomiting can occur for several reasons; they are a consequence of many disease states and a common side effect of treatments, e.g. chemotherapy. If nausea and vomiting are severe and food cannot be taken at all, hydration is the first priority. Antiemetics and additional nutritional support can be considered. Useful strategies include the following:

- Make use of times when the feeling of nausea is less to eat or prepare foods. Eat anything that is fancied when it is wanted.
- Avoid cooking smells or letting smells linger in the house. Ask someone else to cook, or make use of convenience foods (e.g. readymade foods, drinks, snacks and supplements) that create little smell.
- Avoid fatty and fried foods.
- Avoid drinks with meals and serve food relatively dry (unless on a modified consistency diet).
- Sipping drinks and ONS through a straw may be helpful (less likely to detect odour of fluid, resulting in lower taste sensitivity).
- Cold foods (e.g. cold meat, cheese and sandwiches) may be better tolerated than hot foods, as they have less smell.
- Savoury foods and drinks may be more acceptable than sweet-tasting items.
- Ginger-flavoured drinks and foods may be helpful, e.g. ginger ale, ginger beer, ginger biscuits and ginger tea.
- Early-morning nausea may be alleviated by dry carbohydrate-based foods such as unbuttered toast, cream crackers and plain biscuits.
- Eating or drinking something as soon after vomiting as possible. Ice lollies/ice cubes can clear the mouth.
- Avoid lying down after eating.

Taste problems

Some people are born with taste disorders, but most develop after an illness or injury. People may experience a reduced ability to taste (hypogeusia), an inability to taste (ageusia) or a distorted or altered ability to taste (dysgeusia); many taste disorders are linked to smell disorders. Causes of taste problems include the following:

- Upper-respiratory and middle-ear infections.
- Radiation therapy for cancers of the head and neck.
- Medications, including some antibiotics and antihistamines.
- Head injury.
- Some ear, nose and throat surgeries.
- Poor oral hygiene and dental problems.

Useful strategies include the following:

- Prepare foods with a variety of colours and textures.
- Use aromatic herbs and spices to add more flavour.
- Avoid combination dishes such as casseroles that can hide individual flavours and dilute taste.

- Allow hot food to cool a little before consumption; high temperatures can accentuate unpleasant taste sensations.
- If meat tastes unpleasant, try alternatives such as fish, eggs, cheese and dairy products. Cold meats may taste better than hot meats. Marinades and sauces can also be helpful.
- Use sharp-tasting foods and drinks that are refreshing, e.g. fresh fruit, boiled sweets, mints, lemonade, fruit juice and tonic water.
- If using ONS, consider more tart flavours or a different style, e.g. juice and yoghurt.

Specific taste problems

- Bitterness – avoid foods sweetened with saccharine which can exacerbate this sensation.
- Metallic – gargle with lemon juice in water before eating; use plastic cutlery.
- Sweetness – can be offset by adding lemon juice or diluting drinks with soda or mineral water. Adding spices such as ginger, nutmeg or cinnamon to desserts and puddings may reduce the sensation of sweetness.
- Saltiness – avoid salt and salty foods or accompaniments, e.g. salted nuts or crisps, packet soups, gravy, sauces, bacon, ham, and other types of preserved or canned meat. Adding a pinch of sugar to some foods before serving may be useful.

Dry mouth (xerostomia)

This is a common consequence of damage to the salivary glands, usually as a result of surgery or radiotherapy to the head and neck region. The resulting lack, or even absence, of saliva makes mastication and swallowing difficult. Lack of saliva can predispose to tooth decay, and hence good oral hygiene should be encouraged in all patients. Artificial saliva sprays, gels or salivary-stimulant pastilles are prescribable for dry mouth associated with radiotherapy or other conditions.

Useful strategies include the following:

- Moisten meals with gravy, sauces, butter, cream or evaporated milk.
- Avoid very dry hard foods, e.g. biscuits, crackers or toast.
- Sip drinks frequently, particularly with meals.
- Suck items that help stimulate saliva flow, e.g. boiled sweets, fruit pastilles, pineapple chunks, grapefruit segments and ice cubes (perhaps flavoured with lemon juice or made from fruit juice); avoid in patients who have a sore mouth.
- Choose sharp-tasting foods, e.g. lemon-flavoured foods, grapefruit, gooseberry or rhubarb; avoid in patients with sore mouths.

Sore or painful mouth

This may result from infection, inflammation or ulceration of the oral areas, making eating painful and difficult. Stomatitis (inflammation of the mucous lining of the mouth, e.g. cheeks, gums, tongue, roof or floor of mouth) and mucositis (painful inflammation and ulceration of the gastrointestinal tract, including the mouth) may follow radiotherapy in the head and neck area, or as a side effect of some chemotherapy drugs. It is important to ensure that patients are receiving effective pain control at appropriate times to avoid compromising food intake more than is necessary. Appropriate mouth care should be undertaken. Useful strategies include the following:

- Eat soft, moist foods by adding sauces, gravy, custard, etc. Some foods may be easier to eat if they are mashed or liquidised.
- Avoid very dry or rough-textured foods, e.g. toast, raw vegetables, cereal bars or crisps.
- Avoid foods and drinks at extremes of temperature that can exacerbate pain.
- Avoid salty or highly spiced foods, e.g. salted crackers, salted nuts, crisps, pepper, chilli, curry powder and soya sauce.
- Avoid tart beverages, e.g. pure orange juice and grapefruit juice.
- Use ice lollies, ice cubes or frozen ONS for a soothing effect.

Swallowing difficulties (dysphagia)

Swallowing difficulties may seriously compromise nutritional intake, and it is important that dysphagia be properly assessed and managed. Improving nutritional intake in patients with dysphagia can be achieved with oral nutritional support. Dysphagia is a prescribable indication for ONS; a variety of thickeners and prethickened ONS (stage 1–3) are available. Tube feeds may be necessary if the swallowing difficulty severely limits or prevents safe oral intake (see Chapter 7.3, Dysphagia).

Summary of the evidence for oral nutritional support strategies

Dietary fortification

Trials in institutions (including hospitals) have shown that dietary fortification, using food items (e.g. cream) and glucose polymers, can significantly increase energy intakes (e.g. Barton *et al.*, 2000; Gall *et al.*, 1998; Odlund-Olin *et al.*, 2003). However, these trials do not assess patient outcomes or the cost-effectiveness of this approach. The addition of food snacks can increase energy (Turic *et al.*, 1999; Simmons *et al.*, 2010) and protein intakes (Smoliner *et al.*, 2008) in nursing home residents and children with cystic fibrosis (Hanning *et al.*, 1993). There are relatively few studies with data on outcomes (functional or clinical) or the cost-effectiveness of these strategies, and findings are inconsistent (Baldwin & Weekes 2012; Kimber *et al.*, 2015). For some patient groups, food snacks may be less effective at improving nutritional intakes than liquid ONS (e.g. Turic *et al.*, 1999; Stratton *et al.*, 2006). Dietary advice (tailored advice from a dietitian) may lead to improvements in

weight, body composition and quality of life in some patient groups (COPD, cancer) (Baldwin & Weekes, 2011; Ravasco *et al.*, 2005; Weekes *et al.*, 2009). However, the impact of dietary strategies on clinical outcome and healthcare costs in most patient groups and settings has not been fully addressed in well-designed randomised controlled trials, and is a research priority.

Oral nutrition supplements

There is a large evidence base for ONS in different patient groups, in both hospital and community settings. Current evidence from systematic reviews and meta-analyses (Avenell & Handol, 2010; Baldwin & Weekes, 2011; Cawood *et al.*, 2012; Collins *et al.*, 2012; Elia *et al.*, 2005, 2006; Koretz *et al.*, 2007; Milne *et al.*, 2006, 2009; NICE, 2006a; Potter *et al.*, 1998; Stratton *et al.*, 2003, 2005; Stratton & Elia, 2007) suggest that total nutritional intake is significantly improved by ONS in most patient groups in hospital and community settings. In the community, improvements in intake are more likely in those who are underweight (BMI <20 kg/m^2). Food intake tends not to be reduced.

Improvements in body weight and composition (and growth in children) occur with supplementation. ONS tend to attenuate weight loss in the acutely ill hospitalised patient, and significantly increase weight gain in chronically ill community patients, with weight gain being more likely in those who are underweight (BMI <20 kg/m^2) and have recently lost weight. Improvements in weight in the acutely ill who consume ONS are related to improvements in physical function. Functional improvements, which vary according to the patient group, can occur with supplementation. These include increased muscle strength, quality of life, walking distances, activities of daily living, immunological benefits, reduced fatigue and improved wound healing. In those with chronic disease, improvements in function are more likely in those who are underweight (BMI <20 kg/m^2) and who gain weight with supplementation.

Systematic reviews and meta-analyses indicate fewer complications such as infections and pressure ulcers with ONS. These can also prevent pressure ulcers in at-risk groups. Reductions in mortality have been consistently shown with ONS versus routine care in acutely ill, hospitalised and elderly patients with a range of conditions.

ONS can reduce hospital stay length and the number of hospital admissions and readmissions (Stratton *et al.*, 2013), with potential cost savings. Cost analysis indicates that intervention with ONS can reduce healthcare costs and be cost-effective in those at risk of malnutrition across hospital and community settings, showing that the investments to implement better nutritional care is more than offset by the returns (Cawood *et al.*, 2010; Elia *et al.*, 2016a, 2016b; NICE, 2006b). Cost-effectiveness analyses take into account the benefits of the intervention balanced against the costs of the intervention, including the use of healthcare professional resources, e.g. review and monitoring.

Monitoring of oral nutritional support strategies

Specific targets or goals of oral nutritional support that are appropriate for the individual patient, which may vary depending on disease and setting of the patient, should be recorded. These could include the following:

- Measures of energy and nutritional intake.
- Appetite.
- Nutritional status.
- Anthropometric measurements (weight, BMI, mid-arm-muscle circumference, triceps skinfold thickness).
- Functional measures, e.g. strength using hand grip dynamometry.
- Clinically relevant outcomes, e.g. pressure ulcer size, infection, quality of life, daily activities.

Regular monitoring of patients receiving oral nutritional support should be undertaken to:

- Assess compliance and acceptability.
- Monitor effectiveness against goals.
- Encourage compliance where appropriate.
- Assess whether current strategy is still required or if other forms of nutritional support, e.g. tube feeding, are warranted.
- Monitor changes in clinical and nutritional status.

Patients receiving oral nutritional support in the community should be monitored every 3–6 months, or more frequently if there is any change in clinical condition (NICE, 2006a). Patients receiving oral nutritional support in the hospital setting should be monitored daily initially, reducing to twice weekly when stable (NICE, 2006a).

Discontinuation strategy

Oral nutritional support should be stopped when the patient is established on adequate oral intake from normal food, or when the decision is made to feed solely via another route, e.g. enteral or parenteral nutrition.

Further reading

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Internet resources

British National Formulary (BNF) section 9.4.2, www.bnf.org

Lung cancer nutrition, http://lungcancernutrition.com

Malnutrition pathway, www.malnutritionpathway.co.ukMalnutrition pathway for COPD, https://staging.malnutritionpathway.co.uk/copd

NICE (2006 (updated 2017)) Guideline CG32 Nutrition support in adults, http://guidance.nice.org.uk/CG32/NiceGuidance/pdf/English

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