

In this article...

- Malnutrition as a risk factor for pressure ulcers and tools for assessing nutritional status
- The role of supplementation, including enteral feeding
- Ensuring adequate hydration and evaluating tolerance of enteral feeding

Pressure ulcer education 7: supporting nutrition and hydration



Key points

People who are well nourished have a lower risk of pressure ulcers than malnourished individuals

All patients at risk of pressure ulcers should have a comprehensive nutritional assessment

Patients with a nutritional deficit should have an individualised nutritional intervention plan

Dietetic support is usually needed, but others in the team also play a role in maintaining good nutrition and hydration

Steps should be taken to discuss other forms of nutritional support with patients when adequate nutrition is not possible through normal diet or fortified foods

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Abstract Dietary deficiencies are a recognised risk for developing pressure ulcers and international guidance recommends using a nutritional screening tool to assess risk factors, including malnutrition. This article, the seventh in an eight-part series on the development of a core education curriculum for pressure ulcer prevention and management, looks at effective nutrition and hydration assessment and support.

Citation Fletcher, J (2020) Pressure ulcer education 7: supporting nutrition and hydration. *Nursing Times* [online]; 116: 4, 46-48.

Nutrition and hydration play a key role in keeping the skin healthy. Dietary deficiencies are recognised as a risk for developing pressure ulcers and international guidance recommends using a nutritional screening tool to assess risk of malnutrition and other risk factors (European Pressure Ulcer Advisory Panel et al, 2019). People who are well nourished are at lower risk of developing pressure ulcers than malnourished individuals, but both may develop skin integrity issues under certain circumstances.

The importance of adequate nutrition and hydration, and its role in maintaining tissue viability, is covered by a module in the aSKINg framework – the new educational framework for pressure ulcer prevention and management, summarised in part 1 of this series (Fletcher, 2019). The module aims to give an understanding of:

- Basic nutritional groups and key nutritional concepts in wound healing;
- The impact of disease on nutritional-need absorption;
- Assessment tools, including: food and fluid charts and food diaries; malnutrition universal screening tool (MUST); body mass index (BMI);

mid-upper arm circumference (MUAC) measurement, interpreting blood results; feeding risks and protein energy malnutrition (PEM) assessment;

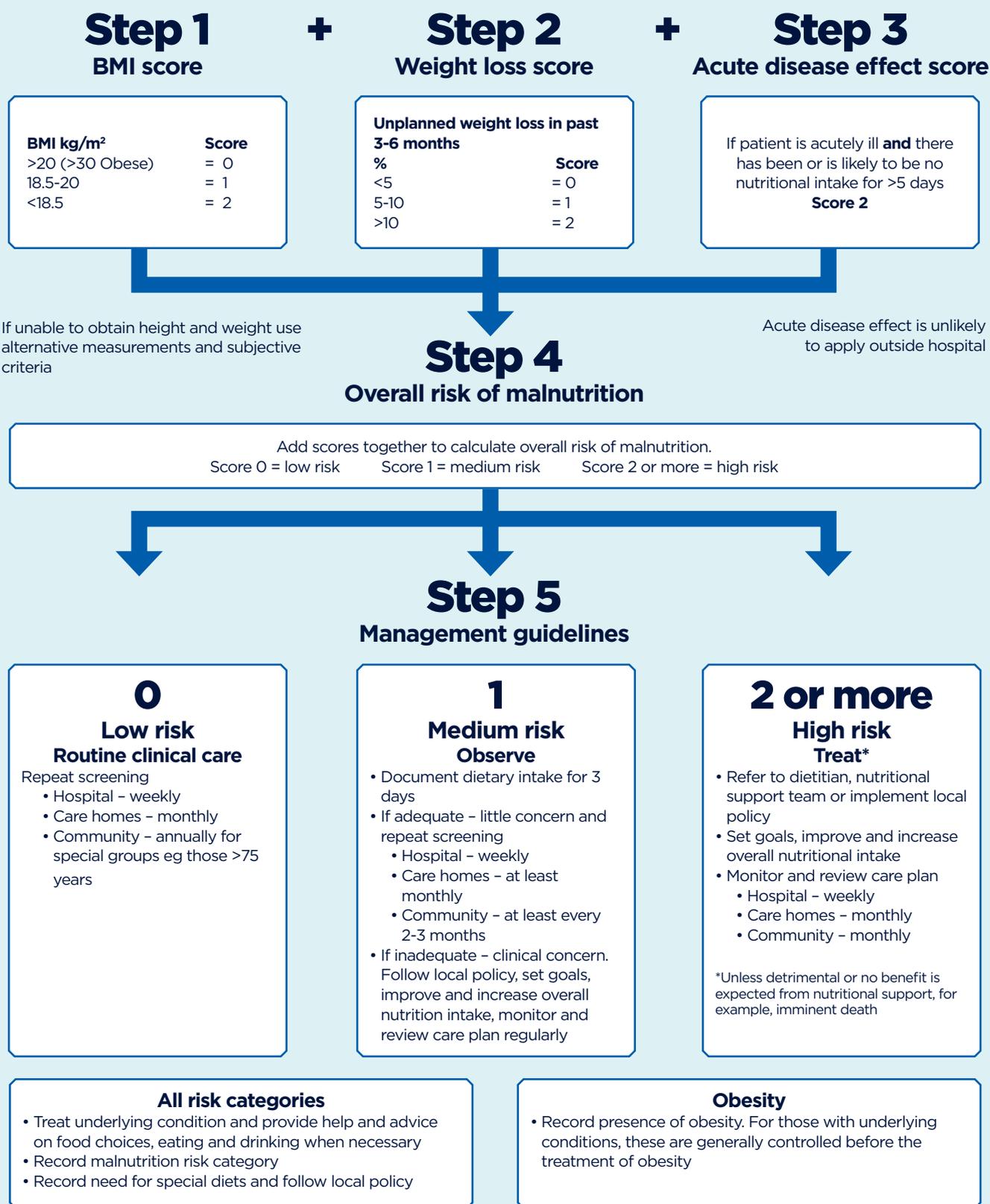
- Food fortification, nutritional supplementation and moderation of dietary restrictions in the event of pressure ulcers;
- The role of the multidisciplinary team, including dietitians, speech and language therapists and occupational therapists (NHS Improvement, 2018).

There is good evidence to suggest malnutrition, or poor nutritional status, and variables that indicate potential malnutrition (for example, low body weight and poor oral food intake) are independent risk factors for developing pressure ulcers (EPUAP et al, 2019). There are also clear links between unintended weight loss and developing pressure ulcers. While much discussion centres on overweight patients, underweight patients are at equal, or even greater, risk (EPUAP et al, 2019).

Assessing nutritional status

All patients considered at risk of developing pressure ulcers should have a comprehensive nutritional assessment by a member of the multidisciplinary team, including:

Fig 1. Malnutrition universal screening tool



Re-assess patients identified at risk as they move through care settings

See the MUST Explanatory booklet for further details Bit.ly/BAPENMust

- Food history and adequacy of nutritional intake;
- Anthropometric measures (height, weight and BMI);
- Weight history;
- Biochemical data such as blood tests for albumin (based on the patient's diagnosis/conditions);
- Medical tests and procedures;
- Nutrition-focused physical assessment that includes muscle wasting, oedema, micronutrient deficiencies and functional status (for example, handgrip);
- Ability to eat independently.

In most organisations a nutritional screening tool is a standard part of the admission process – for example, MUST (BAPEN, 2016), Mini Nutritional Assessment (mna-elderly.com) or Nutrition Risk Screening (Bit.ly/NutritionRisk2002), and should be used to trigger onward referral or initiation of basic nutritional support. The tool that is most commonly used in the UK is MUST (Fig 1, p47).

Once patients are identified as malnourished, they will usually be referred for dietetic support, but others in the multidisciplinary team (Table 1) also have a role in maintaining good nutrition and hydration; for example, physiotherapists and occupational therapists may enable patients to regain independence to feed themselves following a stroke.

Once the health professional has completed the assessment and identified a nutritional deficit, it is important to initiate an individualised nutritional intervention plan. As well as identifying the type and amount of nutrients required, the plan should address the most appropriate route and the clinical goals of care. In end-of-life and palliative care settings, provision of adequate nutrition and hydration should be compatible with the individual's condition and wishes. Adequate nutritional support is desirable, however, it may not be achievable for patients who are unable or refuse to eat.

Frail older people may also have difficulty maintaining adequate nutrition, as their appetite reduces and their ability to prepare or consume food declines. They may also be anxious about drinking fluids if they are taking diuretics because of the need to visit the toilet frequently. This can cause anxiety about incontinence and may also be a considerable effort for them.

Supplementation

Where it is not possible to achieve the nutrition required through normal diet, fortified foods should be considered. If oral

Table 1. Multidisciplinary roles in nutrition and hydration

Clinician	Suggested roles (may overlap/be more extensive)
Nurse	Initial screening, assistance with eating and drinking
Dietitian	Specialist screening, developing individualised plan
Speech and language therapist	Assessment of swallow reflex
Physiotherapist	Exercises to strengthen arms and head control
Occupational therapist	Environmental assessment, provision of specialist crockery and cutlery
Medical staff	Review of comorbidities and medication
Pharmacist	Advice on nutritional supplements

intake is inadequate, enteral nutrition (via gastrointestinal tract) or parenteral nutrition (via intravenous route) may be recommended if it is consistent with the patient's wishes. Enteral feeding is the preferred route if the gastrointestinal tract is functioning. The risks and benefits of nutrition support should be discussed with patients and caregivers at an early stage, and should reflect their preferences and goals for care (EPUAP et al, 2019).

As well as nutritional intake, patients' inability to absorb nutrients must also be considered. Certain diseases and medications can hinder absorption of specific nutrients; for example, Crohn's disease, lactose intolerance and prolonged use of antibiotics and drugs that may injure the lining of the intestine, such as tetracycline or cholestyramine.

If tube feeding is used, care should be taken at the site to ensure pressure damage is not caused by the siting and attachment of the tube.

Hydration

Water is important to allow the body to absorb and transport through the body vitamins, minerals, glucose and other nutrients and to eliminate waste products. In healthy individuals who are adequately hydrated, water released from food and metabolism accounts for 20% or more of total water intake

A high temperature, vomiting, profuse sweating, diarrhoea, and/or heavily exuding wounds increase the need for water intake to replace losses. Those consuming high levels of protein may also require additional water intake.

Tolerance of enteral feeding should be evaluated daily through physical examination, regularity of stool and flatus, and experience of gastrointestinal signs and symptoms (for example, vomiting, abdominal distension, nausea and

discomfort). If diarrhoea does occur, care should be taken to prevent the associated skin damage.

Conclusion

Assessing nutritional status can be complex and should consider the ability to prepare, eat and absorb food, as well as the impact of any comorbidities or medications used. The multidisciplinary team plays a large role in assessing needs and abilities and should be involved in regular reassessment of patients' requirements.

The final article in this series will look at how to communicate effectively with patients, carers and the multidisciplinary team about all elements of pressure ulcer prevention. **NT**

References

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