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## **How to undertake a nutritional assessment in adults**

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# How to perform a nutritional assessment in adults

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## Short description

Reading this module will help you to update your knowledge and skills in nutritional assessment

## Rationale and key points

This module aims to assist healthcare practitioners to perform a nutritional assessment. It focuses on:

- Supporting patients with their nutritional needs is a fundamental aspect of nursing care but it is not always considered a high priority.
- Observation is an essential part of assessment, but a patient's nutritional status cannot be ascertained on appearance alone.
- A structured approach to nutritional assessment, such as the MUST (Malnutrition Universal Screening Tool) or Mini Nutritional Assessment (MNA), should be undertaken.

## Keywords

Assessment and screening, malnutrition, MNA, MUST, obesity, nutrition, observation, undernutrition, weight gain, weight loss.

**Before starting this module, test your knowledge on this subject by answering five multiple choice questions.**

*Which of the following is NOT a common sign of malnutrition*

A: reduced skin elasticity

B: Unplanned weight loss

C: Headache

D: Muscle wasting

*What percentage of those admitted to acute care are malnourished?*

A: 50%

B: 29%

C: 39%

D: 15%

*Nutritional assessment begins with:*

A: Observation of the person

B: Weighing the person

C: Asking about food intake

D: Asking about changes to appetite

*A full nutritional assessment should take place:*

A: Within 24 hours of meeting the person

B: As part of the initial admission procedure

C: Over 2 weeks

D: Over several days

*A bedside swallow assessment should be carried out:*

A: If you observe drooling and/or difficulty swallowing saliva during the initial admission procedure

B: As part of all admissions

C: Within 24 hours of admission

D: Prior to offering any oral intake

**After reading this module you should be able to:**

- Identify the common signs of malnutrition.
- Describe the approach for performing nutritional assessment in an effective and person-centred manner.
- Describe the screening tools most commonly used to identify adults who are malnourished, at risk of malnutrition or clinically obese.
- Understand the evidence to support proactive nutritional assessment of patients.

- Identify the risks if nutritional requirements are not fully assessed.

### **Preparation and equipment**

- Inform the patient about the procedure and obtain consent.
- The patient should be in a comfortable position for the assessment.
- The healthcare practitioner should ensure that all equipment required is available and in good working order, including:
  - Accurate calibrated scales
  - Height measure
  - Tape measure

*Height and weight measure may be combined.*

### **What do you know?**

- List the equipment required to perform nutritional assessment.
- Describe the approach for undertaking an effective nutritional assessment.
- Identify the risks if nutritional requirements are not fully assessed.

### **Procedure**

1. An effective nutritional assessment begins on first contact with the patient and involves the observational skill of looking carefully at the patient while assessing for the common observable signs of malnutrition, including:

Fit of clothing – loose fitting clothing may be an indication that there has been significant unintentional weight loss.

Muscle wasting – severe malnutrition results in muscle breakdown (as an energy source) creating a skeletal appearance often particularly evident in the arms and face. The face can look sunken with very prominent cheek bones and sunken eyes.

Reduced skin elasticity – this is caused by a reduction of collagen in the skin but is easier to assess in younger people as there is a natural thinning of the skin as part of the normal aging process. The simple test is to gently pinch the skin and observe for natural recoil of the skin; remember that recoil of the skin will be slower in older adults.

Hair – Hair loss (thinning of the hair) is common in people with malnutrition although this can be challenging to assess when meeting a patient for the first time.

Brittle Nails – A sub optimal diet that is lacking in the main food groups (particularly protein) will slow and damage nail growth.

2. Assess normal dietary intake; including portion size, frequency of intake and range of food stuffs consumed. A simple way to find out this information is to ask the patient what they had eaten the previous day.

3. While discussing normal intake, assess oral health by observing fit of dentures and mouth dryness; in severe malnutrition the tongue can be dry, redder than normal and swollen which interferes with swallow ability.
4. Ask the patient if they have weighed themselves recently and/or if they think their weight has changed recently. Also ask if they know what their normal weight is and if there has been any unplanned weight loss in the past few months.
5. Ask the patient if there has been any changes to appetite, taste, smell or sight. Sensory changes can have a significant effect on enjoyment of food, desire to eat and appetite.
6. Ask the patient how they feel about their energy level, mood (in particular how they feel about eating) and concentration. Lack of energy, low mood, loss of interest in food and increased irritability are features of many illnesses and can impact on nutritional intake as well as being a consequence of malnutrition.
7. Ask the patient about ability to access food, including shopping for groceries, and ability to store food stuffs and cook.
8. Observe the patient for any motor skills deficits (such as those created by Stroke, Parkinson's disease, Multiple Sclerosis or Motor Neurone Disease) that may affect ability to eat. Ask the patient if there is anything that affects ability to eat.
9. Ask the patient about swallow ability; for example 'do you ever choke when drinking?', 'do food stuffs or liquids ever go down the wrong way?'. Also, ask if it is ever difficult to swallow or if food stuffs ever get 'stuck?'
10. Observe for ability to swallow saliva and the presence of any drooling that may indicate an altered ability to swallow saliva.
11. Assess the patient using a nutritional assessment tool such as MUST or MNA. Follow action plan based on scores and recommended interventions.

A full nutritional assessment it likely to take place over a period of time, several hours or days to allow for a full assessment of ability and reassessment, therefore some of the steps do not have to take place as part of the initial assessment.

12. If necessary (based on what you observed in step 10) carry out a bedside swallow assessment; please note that this will not be required in the majority of cases. If a swallow deficit is detected, implement a swallow deficit action plan to reduce the risk of aspiration and ensure fluid and nutritional intake is adequate.
13. When the patient is eating and drinking assess ability to use cutlery, plates, bowls, cups and move food effectively from plate to mouth. This might indicate the need for assistive equipment such as adapted cutlery, non-slip mats or plate guards.
14. Reassess as guided by the nutritional screening tool used, if the person's condition changes or if your clinical judgement suggests that more frequent assessment is warranted.

### Learning points

- Nutritional assessment is an on-going process that can take place over several days.
- A full nutritional assessment involved assessment of physical, psychological and social issues.
- Unplanned weight loss is a key indicator of nutritional risk.
- Poor oral health can have a significant impact on ability to eat.
- A bedside swallow assessments is essential if difficult swallowing saliva is detected.

## What have you learned?

- List the equipment required to perform a nutritional assessment.
- Describe the approach for undertaking an effective nutritional assessment.
- Identify the risks if nutritional requirements are not fully assessed.

## Evidence base

Supporting patients with their nutritional needs is a fundamental aspect of nursing care but it is not always considered a high priority despite malnutrition affecting more than 3 million people in the UK (NHS England 2015). It is estimated that 29% of adults admitted to acute care are malnourished, with 41% admitted from care homes and 23% admitted from home being malnourished (Russell and Elia 2014). This suggests that it is a more serious issue for older adults living in long-term care settings and thus an issue nurses must be aware when caring for older adults.

Patients who are overweight are often malnourished. However, malnutrition in obese patients is more likely to be related to a diet deficient in essential nutrients, such as vitamins and minerals, than protein energy undernutrition.

Assessment of nutritional care is a key standard in health care and must be carried out when a person is admitted to hospital or added to a community case load (Health Improvement Scotland 2014); this extends to the need for regular screening of risk and the development of a nutritional care plan.

The Council of Europe (2009) developed a resolution on Food and Nutritional Care in Hospitals in partnership with each of the four countries of the UK identifying ten key characteristics of nutritional care in hospital. The first two characteristics noted are the need for screening for malnutrition on admission, then weekly, as well as the development of a care plan that identifies nutritional needs and a plan how to meet these needs.

Observation is an essential part of assessment, although Willis (2017) notes that observing the signs of malnutrition becomes easier with more interaction with the patient. The Malnutrition Universal Screening Tool (MUST) identifies unintentional weight loss as a key indicator of risk (British Association of Parenteral and Enteral Nutrition 2017) but identifying this can rely on previous knowledge of the patient, information gained from the patient or carer, or the more subjective observation of the fit of clothing.

Unplanned weight loss in older people is associated with higher rates of mortality and morbidity but it is not always possible to identify a clear pathophysiological cause (Gaddey and Holder 2014). Alterations in body composition associated with aging, such as a gradual loss of muscle mass over time, a decline in digestive function due to decreased gut motility, a reduction in strength and tone and a reduction in sensory feedback (Tortora and Derrickson 2013) does not account for significant or rapid weight loss in older adults. Other issues such as physical ability and lifestyle must therefore play a role in the development of malnutrition and must be included in assessment of nutritional need.

There are many issues that can affect a person's ability to maintain nutritional health and they may not all be identified through the screening tool. Booker and Nicol (2011) discuss the importance of an initial nursing assessment that identifies dietary history and changes in appetite, as well as the need to consider individual lifestyle issues such as ability to carry shopping, distance to grocery stores and limited budgets (Willis 2017). Willis (2017) added that frailty in older people and social isolation can also affect nutritional intake therefore must be considered; frailty however is not inevitable and full assessment which identifies nutritional risk can impact positively on frailty (Wallington 2016).

People at risk of developing malnutrition extend beyond those with chronic, progressive and acute illness to include individuals who are frail, have reduced mobility, are depressed, have limited social support, are housebound and are living in poverty (Brotherton et al 2012). It is clear that nutritional assessment must take account of a wide range of issues to ensure that a plan of care is holistic with the ability to support individual needs. Risk of developing malnutrition can be more clearly quantified with the use of a tool such as MUST or the Mini Nutritional Assessment (MNA), which can indicate the need for referral to other healthcare professionals and the implementation of an individualised plan of care.

MUST is the most commonly used tool in the UK, although the MNA was more specifically designed for use in older people. A study by Young et al (2012) found little significant difference between screening tools when comparing nutritional assessment methods and noted that all screening tools accurately identified malnutrition in older adults and can, therefore, be recommended for use. There is a statistically significant link between poor outcomes and malnutrition (identified using a MUST tool) in stroke patients (Gomes et al 2016). In addition there are higher mortality rates and longer hospital stays with those identified as being malnourished creating higher healthcare costs (Gomes 2016). Evidence certainly supports the use of an assessment tool but no single tool is better than another suggesting the act of screening rather than the tool used is more important. Use of the MUST tool as the most commonly used tool in the UK can, therefore, be supported although the use of another tool such as the MNA will also accurately identify nutritional risk.

## Learning points

Malnutrition is common in older adults admitted to acute care with a prevalence of close to 30%.

Both overweight and underweight people can be malnourished.

The importance of nutritional assessment is internationally recognised.

Frailty and nutritional risk are interrelated.

Disclaimer: please note that information provided by RCNi Learning is not sufficient to make the reader competent to perform the task. All clinical skills should be formally assessed at the bedside by a nurse educator or mentor. It is the nurse's responsibility to ensure their practice remains up to date and reflects the latest evidence.

## Reflective practice

How to modules can help update your practice and ensure it remains evidence based. Apply this module to your practice. Reflect on and write a short account of:

1. How reading this module will change your practice when performing a nutritional assessment.
2. Any further learning needs you have identified to extend your professional development.

## Useful resources

British Association of Parenteral and Enteral Nutrition (BAPEN) (2017) Malnutrition Universal Screening Tool. [www.bapen.org.uk/pdfs/must/must\\_full.pdf](http://www.bapen.org.uk/pdfs/must/must_full.pdf)

The Malnutrition Pathway (2012). <http://www.malnutritionpathway.co.uk/>

## References

Booker C and Nicol M (2011) *Alexander's Nursing Practice* (4<sup>th</sup> Edition), Edinburgh Churchill Livingstone Elsevier.

Botherton A, Holdoway A, Mason P, et al (2012) *Managing Adult Malnutrition in the Community*. Accessed on-line at <http://www.malnutritionpathway.co.uk/> (September 15<sup>th</sup> 2017)

British Association of Parenteral and Enteral Nutrition (BAPEN) (2017) Malnutrition Universal Screening Tool. [www.bapen.org.uk/pdfs/must/must\\_full.pdf](http://www.bapen.org.uk/pdfs/must/must_full.pdf) (Last accessed: September 12 2017.)

Council of Europe Resolution (2009) *Food and Nutritional Care in Hospitals*. [www.nrls.npsa.hhs.uk/resourse/?entryid45=59865](http://www.nrls.npsa.hhs.uk/resourse/?entryid45=59865) (Last accessed: September 12 2017.)

Gaddey HL, Holder K (2014) Unintentional Weight loss in Older Adults. *American Family Physician* 1, 89, 9, 718-722



Gomes, F, Emrey PW, Weekes CE (2016) Risk of Malnutrition Is an Independent Predictor of Mortality, Length of Stay and Hospitalisation Costs in Stroke Patients. *Journal of Stroke and Cardiovascular Diseases*, 25, 4, 799-806

Health Improvement Scotland (2014) Food, fluid and nutritional care. Health Improvement Scotland.

NHS England 2015 Guidance: Commissioning Excellent Nutrition and Hydration. NHS England

Russell CA and Elia M 2014 Nutrition Screening Surveys in Hospitals in the UK, 2007-2014. BAPEN. [www.bapen.org.uk/pdfs/nsw/bapen-nsw-uk.pdf](http://www.bapen.org.uk/pdfs/nsw/bapen-nsw-uk.pdf) (Last accessed: September 12 2017.)

Tortora GJ and Derrickson B (2013) *Essentials of Anatomy and Physiology*. Hoboken, NJ John Wiley and Sons

Wallington SL (2016) Frailty: a term with many meanings and a growing priority for community nurses. *British Journal of Community Nursing*, 21, 8, 385-389.

Willis D (2017) Causes, assessment and treatment of malnutrition in older people. *Nursing Older People* 29,2, 20-25

Young AM, Kidson S, Banks MD, et al (2013) Malnutrition screening tools: Comparison against two validated methods in older medical inpatients. *Nutrition*, 29, 101-106