



MALNUTRITION



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Sadly, malnutrition is a nutritional problem that is all too often overlooked and one in which registered dietitians can have an important role. In a survey of GPs in 2010, a large proportion of GPs were unaware of malnutrition (1).

It is a serious condition that occurs when a person's diet does not contain the correct balance of calories and nutrients. It means 'poor nutrition' and can refer to:

- Under nutrition: when people do not take enough calories or nutrients;
- Over nutrition: when people get more calories or nutrients than needed, such as occurs with obesity.

The information in this article focuses on under nutrition which is associated with numerous consequences that have an impact on health and wellbeing and include:

- weight loss
- muscle weakness and fatigue
- apathy, depression and self-neglect
- impaired immune response
- tissue breakdown and impaired wound healing
- increase risk of fracture
- osteoporosis
- constipation
- anaemia



- impaired temperature control
- increased visits to the GP
- increased risk of hospital admission and length of stay

But if the malnutrition is treated then the effects can be reversed.

DEHYDRATION

When looking at malnutrition, it is also important to consider hydration, as they are linked. Dehydration is a considerable issue and 30 percent of admissions to Accident and Emergency Departments from care homes are due to dehydration related issues (2). Dehydration in older people is a risk factor for falls, confusion, pressure ulcers, constipation, urinary tract infections and cognitive impairment (3). ▶

As a Registered Dietitian, all aspects of nutrition enthuse Mabel. She is very interested in malnutrition and has written articles and has been involved in training and strategies on this subject. Mabel is a Member of the BDA and NAGE, Food Counts and Freelance Dietitians specialist Groups.

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Innovation in Nutrition

Malnutrition is a universal and a very costly public health problem. It is considered to be the fourth largest driver of costs in the NHS.

In the NHS many patients are left thirsty and for every patient who dies of malnutrition, about four more have dehydration mentioned on their death certificate. During 2012, NHS Kidney Care ran a campaign to improve inpatient hydration because inadequate hydration is one of the main causes of acute kidney damage which affects around one in five elderly patients admitted to hospital and which is largely preventable (4).

The National Patient Safety Association in their leaflet *Water the forgotten nutrient*, shows that medical evidence stresses that good hydration assists in the management of diabetes, helps to prevent pressure sores, constipation, urinary tract infections, kidneys stones, incontinence, heart disease, low blood pressure, cognitive impairment, falls, poor oral health, skin conditions and many other illnesses (5).

So, rather than spend many millions on medications and treatments, how much more cost effective would it be to provide a glass of water or a cup of tea?

NUMBERS OF PEOPLE SUFFERING FROM MALNUTRITION

In the UK, it is estimated that there are about three million people who are malnourished at any time, plus many more at risk of becoming malnourished. Malnutrition is caused by either a diet providing inadequate calories or nutrients or a health problem preventing taking adequate food or causing malabsorption of nutrients from food. Approximately a third of people admitted to hospital or care homes in the UK are malnourished. In the community it is estimated that 10 percent of people over the age of 65 years suffer from some form of malnutrition. Those with malnutrition:

- see their GP twice as often
- have three times the number of hospital admissions

- stay in hospital more than three days longer than those who are well nourished.

Malnutrition at present occurs in:

- 10 to 14 percent of those in sheltered housing
- 16 to 20 percent of outpatients
- 24 to 34 percent of those admitted to hospital
- 30 to 42 percent of those in residential care homes.

The risk of malnutrition increases with age and it is considered by the European Nutrition and Health Alliance that 70 percent of malnutrition is undetected (6).

COSTS OF THE PROBLEM

Malnutrition is a universal and a very costly public health problem. It is considered to be the fourth largest driver of costs in the NHS due to the costs of malnutrition extending the stay of hospital patients and requiring a greater input for medications and other support (7). In England, the QIPP Programme (Quality, Innovation, Productivity and Prevention) suggested in 2012 that there could be a saving of £200,000 per PCT from the improved diagnosis and treatment of malnutrition in adults (8).

The problem of malnutrition is estimated to cost over £13 billion across the UK (9). Of this, £5 billion is considered to be for direct healthcare costs to the NHS. Yet despite this high cost, it is usually the issues that cost the NHS less which hit the headlines and on which efforts are often focused (10).

DETECTING MALNUTRITION

NHS Choices includes a useful section on malnutrition on their website which cover symptoms of malnutrition as:

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(1 sachet/
scoop)=

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& 2g of
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Parents are also encouraged to ensure that their child's physical development is regularly checked by their GP or health visitor.

- feeling tired all the time;
- low mood;
- an increase in illnesses or infections.

For children the signs can include:

- failure to grow at the expected rate;
- changes in behaviour, such as appearing unusually irritable, sluggish or anxious.

The section advises people to see a GP if the body mass index (BMI) is lower than 18.5 or they experience symptoms. There is also important information regarding under nutrition, as people suffering with this condition can be overweight if they eat a diet high in energy (calories), but low in other nutrients. Parents are also encouraged to ensure that their child's physical development is regularly checked by their GP or health visitor (11).

Malnutrition is defined by the British Association for Parenteral and Enteral Nutrition (BAPEN) as 'a state of nutrition in which a deficiency, excess or imbalance of energy, protein and other nutrients causes measurable adverse effects on body function and clinical outcome'.

This is defined as a Body Mass Index (BMI) $<18.5\text{kg}/\text{m}^2$ and unintentional weight loss greater than 10 percent within the last three to six months, or BMI $<20\text{kg}/\text{m}^2$ and unintentional weight loss greater than five percent within the last three to six months (12).

SCREENING FOR MALNUTRITION

The National Institute for Clinical Excellence

(NICE) recommends that people in hospital or care are screened for malnutrition (13). One of the recommended tools to use is the MUST - Malnutrition Universal Screening Tool. This is very simple and quick to use and is based on five simple steps using a chart to evaluate the scores.

1. Calculate or estimate the patient's BMI score.
2. Note percentage unplanned weight loss and assign score.
3. Establish acute disease effect and score.
4. Add scores together to obtain overall malnutrition risk.
5. Develop care plan using management guidelines or local policy.

A score of 0 indicates a low clinical risk and repeat screening is recommended. This should be weekly in a hospital and monthly in the residential care or annually for those in special groups such as over 75 years (14).

A score of 1 indicates a medium risk and observations are recommended which include observing and documenting food intake for three days. Such documentation means that staff should be trained in how to make records and undertake assessments based on them.

If the intake is good then repeat screening is recommended. In a hospital this should be weekly and monthly in residential care, or every three months for those in the community. If the three-day intake is inadequate, it is recommended to follow local clinical policies. ▶



Registered dietitians are well placed to spearhead initiatives in helping to educate people about malnutrition, as well as get involved in policies and procedures to identify the condition.

A score of 2 or more indicates a high risk and treatment is recommended. Such treatment can include referral to a registered dietitian or nutritional support team, increasing and improving nutritional intake. This should be accompanied by regular MUST screening. (Obviously if the person is on an end-of-life pathway or nutritional support is detrimental then such steps to increase intake are inappropriate.)

THE BRITISH DIETETIC ASSOCIATION

The British Dietetic Association (BDA) considers that, 'Appropriate good nutrition, meeting the clinical and personal needs of all, must be a priority for all health and social care. The potential for good nutrition to improve the health of the vulnerable population is huge.'

The BDA believes that this situation can and must be addressed and recommends that:

- everyone should have access to a nutritious high quality diet;
- commissioners and regulators should recog-

nise the value and potential cost savings of preventing malnutrition through high quality social care, clinical services and catering services. Commissioners can ensure that they commission services to allow all people who need nutrition support to be offered it (15).

SUMMARY

Foods and fluids are relatively inexpensive and indeed are regarded as a key human right (17). Yet despite this and reports such as Age UK's 'Still Hungry to be Heard' and the BDA 'Mind the Hunger Gap', there are still issues (16).

Registered dietitians are well placed to spearhead initiatives in helping to educate people about malnutrition, as well as get involved in policies and procedures to identify the condition. They can help provide strategies to cope with the condition and can ensure adequate nutrition and hydration for patients, as set out in the Nutrition and Hydration Digest: *Improving Outcomes through Food and Beverage Services* produced by the BDA (18).

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Questions relating to: *Malnutrition*

Type your answers below and then **print for your records** or print and complete answers by hand.

Q.1 Define 'poor nutrition' and what conditions it refers to.

A

Q.2 State at least four of the health consequences associated with under nutrition

A

Q.3 What are the causes of malnutrition?

A

Q.4 Why is hydration in the elderly an important nutritional concern?

A

Q.5 Describe why malnutrition is such a costly public health concern. Include the impact that it has on the NHS in your answer.

A

Q.6 Outline the symptoms of malnutrition in adults and children.

A

Q.7 How can a patient who is overweight be suffering from under nutrition?

A

Q.8 What are the BMIs (kg/m²) and the % weight loss (unintentional weight loss) figures that are used to define malnutrition as guided by BAPEN.

A

Q.9 State the five steps of MUST and describe the scoring which identifies the risk of malnutrition.

Q.10 Describe the role that a dietitian can play in addressing the issues of poor nutrition.

A

Please type additional notes here . . .