Promoting nutrition for people with mental health problems


Summary
This article examines the issue of nutrition and mental health for adults of all ages with a range of mental health needs.

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Aims and intended learning outcomes
The aim of this article is to raise awareness of nutrition and mental health for nurses working in mental health settings and primary care. After reading this article you should be able to:

- Understand the emerging work on the relationship between food and mental health.
- Appreciate some of the nutritional risks faced by people with mental health needs.
- Carry out more detailed screening and assessment of nutritional risk in people with mental health needs, and offer interventions to improve their nutritional status.
- Be aware of general dietary advice that can improve wellbeing.

Introduction
The issues of nutrition and mental health can be approached from two different perspectives:

- Nutrition can affect mental health in terms of development or exacerbation of mental health symptoms.
- People with a mental health need may be more likely to neglect their nutrition as a direct result of their situation.

This article challenges readers to explore these aspects but, more importantly, it encourages readers to consider nutrition as an essential part of assessment whatever the health needs of the person. It also suggests that health promotion in relation to nutrition is the responsibility of all healthcare professionals, including those working in primary care services, such as district and practice nursing, as well as secondary care services including outpatients, community and ward-based mental health practitioners.

The relationship between food and mental health
The role of diet in preventing and treating physical health disorders is understood and accepted, for example coronary heart disease (CHD) and type 2 diabetes. There is less awareness and acceptance that diet could have an important part to play in mental health and to date the evidence base is less comprehensive. Perhaps at some level we can all appreciate the impact that food has on how we feel. A few days
of overindulgence in particular foods might leave us feeling tired and sluggish. A cup of coffee or a sugary drink can give us an energy boost, improve alertness and counter fatigue, however, too much might make us feel irritable and unable to relax. Chocolate is thought to have mood-enhancing qualities, but there is no evidence for this (Parker et al 2006) and the feeling is often short-lived.

The Food and Mood Project draws attention to the impact that food can have on mental health and offers practical advice. Visit the website at: www.foodandmood.org

In the report Feeding Minds, the Mental Health Foundation (2006) suggests that the increased incidence in mental health problems over recent years might be linked to the change in our diets over the same time frame, with a move to a more refined and processed diet from one containing a wide variety of whole foods. Clearly the incidence of mental health problems is a complex issue most likely to be associated with a range of biological, social and economic factors and therefore, diet might be just one part of this.

The evidence for the impact of diet on mental health appears strongest in the case of clinical depression. The nutrients reported as being of most significance are detailed in Table 1.

Research about the impact of food on mood is still developing. Until the evidence is more comprehensive it will do no harm for nurses to advocate certain foods as part of a healthy diet, particularly if low-fat versions are recommended.

With schizophrenia and Alzheimer’s disease, there is less evidence available although vegetable and fish oils might be helpful in managing symptoms and antioxidants can also have a role (Van de Weyer 2005).

Nurses are not qualified to provide nutritional advice for specific illnesses and should seek advice from a registered nutritionist or dietician who has specialist, up-to-date knowledge, skills and training to assess nutritional balance and can recommend adaptations to diet to enhance physical and mental wellbeing. However, it is within the remit of nursing to advocate a healthy diet and it is nurses’ responsibility to seek education on what constitutes a healthy diet so that they can offer this to service users alongside a range of other care options.

**TABLE 1**

<table>
<thead>
<tr>
<th>Significant nutrients for mental health</th>
<th>Food sources</th>
</tr>
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<tbody>
<tr>
<td>Folate</td>
<td>Inadequate intake of the vitamin folate can increase the chances of feeling low in mood (British Dietetic Association (BDA) 2006). Green vegetables, oranges, liver, beans, fortified breakfast cereals, yeast extract and it can be taken as folic acid tablets.</td>
</tr>
<tr>
<td>Complex carbohydrates</td>
<td>Complex carbohydrates may be important in improving the uptake of the amino acid tryptophan which is important for the production of the chemical serotonin in the brain. This is important for improving mood (BDA 2006, Mental Health Foundation (MHF) 2006). Brown rice, potatoes, wholewheat and grains.</td>
</tr>
<tr>
<td>Omega-3 essential fatty acid</td>
<td>Omega-3 is an essential fatty acid and is thought to be important for mood (MHF 2006). Interest in the effect of omega-3 on mood emerged initially from research correlating low intakes of fish by populations with high levels of depression and the converse. Oily fish such as salmon, trout, fresh tuna and other foods including flax oil, rapeseed oil, pumpkin seeds, soya beans and almonds.</td>
</tr>
<tr>
<td>Tryptophan</td>
<td>The MHF (2006) and Food and Mood Project recommend increasing protein intake, as tryptophan is found in foods containing protein. The evidence remains unclear, and there is some doubt whether tryptophan can be adequately absorbed from such foods to make a difference (Benton and Donohoe 1999). Poultry, meat, fish, eggs, soya, pulses, nuts and seeds.</td>
</tr>
</tbody>
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**TIME OUT 1**

Take a few minutes to think of foods that affect your feelings and behaviour, for example does anything you eat seem to enhance your feeling of wellbeing? Do any particular foods seem to have an excitatory effect? It can help to keep a food diary to record what you have eaten and note your feelings on a daily basis for perhaps a week.
with an emphasis on the role of the nurse in identifying service users at risk and intervening. Undernutrition is a well-documented consequence of entering a care setting and numerous reports, especially about older people, have attempted to redress the problem (Age Concern 2006). There is little evidence of the situation in mental health care, however, Abayomi and Hackett (2004) suggest the situation in mental health settings can only be worse as mental health staff are less familiar with aspects of physical care. Their study compared mental health nurses’ judgement of nutritional risk against the risk identified by using a screening tool. It found that nurses failed to identify a significant group of people who were at risk of malnutrition, and falsely identified others as being at risk when they were not (Abayomi and Hackett 2004). Risk of malnutrition was more commonly associated with people with psychosis and underestimated in those with depression. Nurses also underestimated the risk of malnutrition in middle-aged people.

People with mental health needs can be more likely than the general population to become obese for a number of reasons (Osborn 2001):

- Apathy and reduced motivation to address weight gain.
- Impaired access to primary care and health promotion initiatives.
- Psychotropic medications.
- A diet that is higher in fat and lower in fibre than that of the general population.
- Reliance on snacks and convenience foods.
- A lack of regular exercise.

Weight gain is one of the more common side effects of some forms of psychotropic medication, and is commonly a factor in non-adherence to medication regimens. The atypical antipsychotics, in particular, often result in weight gain. This can be quite rapid in the acute phase of treatment but is thought to plateau within one to two years of treatment.

Of the atypicals, clozapine and olanzapine are most closely associated with weight gain, while aripiprazole appears to have the least effect on weight (Taylor et al 2005). The amount of weight gained is impossible to predict and switching to another antipsychotic will not necessarily result in weight loss. Some of the most frequently prescribed mood stabilisers are associated with weight gain. Lithium, in particular, is estimated to result in weight increase of at least 5% in one-third to two-thirds of service users taking it (Ackerman and Nolan 1998). This effect might be dose-related.

**TABLE 2**

<table>
<thead>
<tr>
<th>Mental health factors that may affect nutritional intake</th>
<th>Effect on nutritional intake</th>
</tr>
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<tbody>
<tr>
<td>Positive psychotic symptoms</td>
<td>Delusions about food and visual hallucinations</td>
</tr>
<tr>
<td>Social withdrawal</td>
<td>Avoiding mealtimes, embarrassed to eat in front of others and not wanting to go out shopping</td>
</tr>
<tr>
<td>Overactivity in mania, anxiety and dementia</td>
<td>Unable to sit long enough to eat, eating ‘on the go’ and increased energy output</td>
</tr>
<tr>
<td>Memory impairment</td>
<td>Forgetting to eat – or forgetting that meal has been taken – and overeating</td>
</tr>
<tr>
<td>Lack of motivation or poor energy levels</td>
<td>Not going shopping or feeling like preparing food or cooking and poor food hygiene</td>
</tr>
<tr>
<td>Low income</td>
<td>Not having enough money to spend on nourishing food</td>
</tr>
<tr>
<td>Hospital admission</td>
<td>Usual preferences or cultural diets may not be adequately catered for. Mealtimes may not be a pleasant experience. Alternatively this may be an opportunity to eat healthily, and have a social mealtime so that diet improves</td>
</tr>
<tr>
<td>Physical changes</td>
<td>Possible swallowing difficulties, problems feeding self and conditions requiring specialist diets</td>
</tr>
<tr>
<td>Medication</td>
<td>Increased appetite and weight gain are side effects of some antipsychotic medication. Some drugs can cause diarrhoea and vomiting early in treatment, while others may contribute to constipation. Dry mouth is often present</td>
</tr>
<tr>
<td>Depression</td>
<td>Poor appetite and poor motivation to cook, eat and drink. Comfort eating</td>
</tr>
<tr>
<td>Social exclusion</td>
<td>Lack of access to health promotion messages and/or support. Poor access to specialist assessments, for example dietician or speech and language therapist. Poor access to other services such as a dentist</td>
</tr>
</tbody>
</table>
Antidepressants have varying effects on appetite, weight gain and weight loss, and these can differ from one service user to another. Some studies show unexpectedly high rates of depression and anxiety disorders in groups of clinically obese people (Dong et al 2004, Tuthill et al 2006, Petry et al 2008). An assessment of anyone with recognised mental health needs should involve assessment of any shame associated with obesity. Does it interfere with social functioning possibly leading to exacerbation of depressive and/or anxiety symptoms? For example, people who are overweight may avoid physical examinations or visits to the GP because of fear of being judged. In particular, women may avoid gynaecological screening through embarrassment (Devlin et al 2000).

Screening

Screening is a simple process that aims to identify service users who are already malnourished or at risk of becoming so (Department of Health (DH) 2003, Green and Watson 2005). Those identified as being at risk should then undergo a more comprehensive assessment (DH 2003). A review of screening tools for malnutrition commonly used by nurses did not identify any tools used specifically with people with mental health needs (Green and Watson 2005), and most tools focus on physical illness (Abayomi and Hackett 2004).

The trigger questions consistently shown in the literature to be most likely to identify malnutrition (Lennard-Jones et al 1995, National Institute for Clinical Excellence (NICE) 2006a, British Association for Parenteral and Enteral Nutrition (BAPEN) 2008) are:

- Does the person have a body mass index (BMI) of less than 18.5 or, if unable to calculate BMI, does he or she appear underweight?
- Has unintentional weight loss occurred over recent weeks or months?
- Have there been problems with nutritional intake for more than five days?
- Does the person have an acute physical or mental illness that can affect nutrition?
- Does the person appear overweight or have a BMI greater than 25?

These questions need to be asked of service users when they first come into contact with health professionals, ideally through a validated screening tool or, at least, as part of an overall physical assessment. BMI is not always easy to obtain, or indeed reliable, particularly in frail older people. The Malnutrition Universal Screening Tool (MUST) (BAPEN 2008) provides a range of alternatives to BMI that can be considered. Additionally, to meet a person’s nutritional needs it is important to enquire if he or she has any particular cultural or religious dietary needs, strong food dislikes or food allergies.

If answers to any of the trigger questions are yes, or if a trigger score is reached on a screening tool, then a more in-depth assessment is required. If a person appears overweight then it is important to address this. The following section explores these issues separately.

Assessment of undernutrition

For a tool to be useful for mental health professionals, it should address specific mental health issues and inform care planning. Mental health nurses may need guidance in completing a care plan and identifying when to refer for more specialist assessment. A suggested range of issues to elicit nutritional need developed within Sheffield Health and Social Care NHS Foundation Trust is shown in Box 1.

Interventions in undernutrition

Depending on the cause of the undernutrition a problem-solving approach should be employed to address specific issues identified in the assessment. In Sheffield Health and Social Care NHS Foundation Trust guidance has been developed to assist mental health nurses in developing care plans and intervening where appropriate. For problems likely to last for more than a few days referral for specialist assessment is recommended and the range of specialists to consider referring to is outlined in this article. However, in the interim nurses may wish to consider the following interventions to increase calorific intake:
and check the facilities are clean and conducive to good appetite. Staff working on hospital wards may want to consider implementing protected mealtimes. Advice on introducing protected mealtimes is shown in Box 2.

> Monitor intake on food and fluid charts.
> Add butter, full-fat milk or milk powder to foods, such as mashed potato, soups and custard to increase calories.
> Offer regular snacks and/or drinks.
> Ask a doctor to prescribe supplements for short-term use.

**Assessment of overnutrition**

Nutrition, exercise and lifestyle issues are crucial in any holistic approach to the care and treatment of adults with long-standing mental health needs. As discussed, the link between antipsychotic medication and obesity places this group of mental health service users at particular risk.

**Time out 5**

Consider the service users you currently work with. Are there any examples of weight gain directly produced by prescribed medication? If so, how does the person concerned tend to react to this?

The DH’s (2006) care pathway for the management of individuals who are overweight and obese is recommended in primary care and can be useful for people with serious and enduring mental health needs. Sheffield Health and Social Care NHS Foundation Trust is currently carrying out a small-scale evaluation of the pathway using audit and semi-structured interviews with care staff and service users.

**Time out 6**

Find out and list as many methods as you can of calculating whether a person is overweight or obese. Consider sources of information such as the internet, DH guidelines and patient information leaflets. What are the strengths and drawbacks of each?

There are several ways to assess if a person is overweight or obese. The DH recommends using the BMI, originally developed by the International Obesity Taskforce (DH 2006). This figure is obtained by dividing the person’s weight in kilograms by the square of their height in metres. Desirable weight is classified as being in

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**BOX 1**

Assessing possible factors in undernutrition

- **Social factors**
  - Is the person able to shop for food? Does he or she rely on a carer for shopping and cooking? Is he or she able to cook safely? Is the person able to eat in front of others if in hospital? Does he or she have information on healthy food choices?

- **Handling food**
  - Does the person need assistance to eat? Does body posture hinder swallowing? Does he or she require specialised eating or drinking equipment?

- **Swallowing and choking**
  - Does the person hold food in the mouth, or spill food or drink from the mouth? Can he or she chew? Are there any difficulties with swallowing, for example does he or she cough and splutter at mealtimes? Does he or she leave the table breathless or have a wet ‘gurgly’ voice? Have there been any choking incidents?

- **Mouth care and teeth**
  - Does the person have bad teeth or poorly fitting dentures? Does he or she have a dry or sore mouth? Does medication affect mouth hygiene?

- **Mental health/behavioural**
  - Is the person experiencing delusions or hallucinations about food or the ability to eat? Is he or she too restless to sit and eat? Does he or she refuse food or spit it out? Does the person avoid eating with others? Does his or her medication affect his or her appetite?

- **Appetite**
  - Does the person have a poor appetite; does he or she derive no pleasure from food? Is he or she drinking adequate fluids?

- **Physical/medical**
  - Does the person have repeated infections? Does he or she have problems with tissue viability? Does he or she have a diet-related illness that is not under control? Is the person constipated? Does he or she have an illness that uses more energy than usual?

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**BOX 2**

Advice on introducing protected mealtimes

- Identify a champion to lead and promote protected mealtimes.
- Use the Essence of Care: Food and Nutrition to benchmark your trust.
- Communicate results.
- Engage with all healthcare professionals.
- Involve your trust board.
- Consider what needs to change – for example visiting times, ward rounds, diagnostic investigation times.
- Promote before the launch – let everyone, including patients and visitors, know what, when and how.
- Provide education.

*(National Patient Safety Agency 2004)*
the range of 18.5-24.9 on this index, with obesity described by a BMI greater than 30.0. Table 3, taken from the obesity care pathway (DH 2006), summarises the range of BMI indicators.

As the BMI takes no account of the distribution of fat around the body, it is by no means a ‘fail-safe’ assessment of health risks if taken in isolation. For example, central adiposity (‘apple-shaped’ body) is associated with higher cardiovascular risk than peripheral fat distribution (‘pear-shaped’ body) (Lean et al 1995). So, a simple waist measurement using a tape measure positioned midway between the lowest ribs and the hip bones can be a useful measure of this aspect of risk.

**TABLE 3**

<table>
<thead>
<tr>
<th>Body mass index (BMI) ranges</th>
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</thead>
<tbody>
<tr>
<td><strong>Classification</strong></td>
</tr>
<tr>
<td>Underweight</td>
</tr>
<tr>
<td>Desirable weight</td>
</tr>
<tr>
<td>Overweight</td>
</tr>
<tr>
<td>Obesity I</td>
</tr>
<tr>
<td>Obesity II</td>
</tr>
<tr>
<td>Obesity III</td>
</tr>
</tbody>
</table>

(Department of Health 2006)

It can be difficult to decide when to refer an individual who is overweight or obese to specialist services, such as dieticians, psychologists or weight management clinics. The advice from the DH, based on NICE guidance, is to do so only if the person has not responded to first-line management, or where the case is particularly complex (DH 2006, NICE 2006b). Drug treatment or surgery may be considered in these cases. The principles of first-line management in primary and secondary care are outlined below.

**Interventions in overnutrition**

Increasing physical activity is important in maintaining weight loss, and has benefits in terms of mood and overall mental health (DH 2006). Increasing activity during a period of weight reduction helps to maintain a leaner body mass in the long term, as well as increasing motivation. Initial advice should focus on diet to bring about weight loss. Basic nutritional advice should include:

- Eat at least five portions of fruit or vegetables per day.
- Reduce intake of high-fat and high-sugar foods, for example sweets, crisps and soft drinks.
- Base meals on starchy foods, such as bread, pasta, rice and cereals.
- Bake, grill or steam food rather than frying.
- Snack on fruits, nuts and vegetables rather than crisps and chocolate.
- Reduce alcohol intake as alcohol is high in calories.

The aim should be to achieve weight loss of as little as 0.5-1.0kg per week, which is generally held to be sustainable in the long term (Drummond 2002). This is likely to prove more
achievable and sustainable than rapid, dramatic weight reduction. Nurse participation can be vital here, for example an activity with a service user could involve planning a healthy meal for two, shopping for the ingredients, then preparing and sharing the meal together.

In terms of activity, it is also important to encourage small changes that result in long-term improvement (Drummond 2002). For example, walking briskly for ten minutes each day is likely to be as effective, and more sustainable and affordable, than attending a health club with a gym. It is important to remember that words like ‘sport’ and ‘exercise’ might have negative associations for some people and lead to avoidance. It is better to use words like ‘activity’, and, as with the healthier eating plan described earlier, nurse participation can help greatly in maintaining interest and motivation, as well as providing an opportunity to form and develop relationships.

The full complexities of the relationship between physical and mental wellbeing are beyond the scope of this article. However, it is important to remember that aiming for weight reduction can pose special difficulties for people with active mental health needs. Some of these difficulties may be socioeconomic, such as poverty, unemployment and poor housing (Phelan et al 2001). Others might arise as a direct consequence of psychiatric symptoms. For example, apathy, reduced motivation and self-neglect are likely to affect those people who experience psychosis, at some time and to some degree. Similarly, low self-esteem and appetite disturbances are common in clinical depression.

It is well documented that people who present with mental health needs are, paradoxically, less likely than the general population to have their physical health needs addressed overall (Greening 2005), and this includes attention to diet and levels of activity.

For all the reasons outlined in this article, working collaboratively with the service user becomes crucial if weight reduction and increased activity are to be realistic targets for change. This calls for nurses and other healthcare workers to examine honestly their own beliefs about the benefits of improved diet and increased activity. This is because negative or defeatist attitudes can prove to be an ‘invisible’ barrier to achieving the service user’s goals.

‘Enhancing self acceptance may not only provide a more compassionate approach … but might also lead to more lasting reductions in weight by virtue of helping patients to accept only modest weight loss and improve compliance with health-relevant eating and exercise behaviours’ (Devlin et al 2000).

### Table 4

<table>
<thead>
<tr>
<th>Range of specialists offering nutritional assessment</th>
<th>Seek advice if the person:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dietician</strong></td>
<td>Is nutritionally compromised; at risk of undernutrition or has low body mass index. Has a neurological problem with associated eating difficulties, such as stroke, multiple sclerosis, motor neurone disease and Parkinson’s disease. Has high grade pressure ulcers. Is newly diagnosed with a clinical condition where diet is the main form of treatment. For example, coeliac disease or diabetes. Is obese.</td>
</tr>
<tr>
<td><strong>Speech and language therapist</strong></td>
<td>Has unassessed chewing and swallowing problems or acute swallowing problems causing distress and potential choking. Has persistent difficulties chewing and/or holding food in the mouth, particularly if intake is significantly reduced.</td>
</tr>
<tr>
<td><strong>Physiotherapist</strong></td>
<td>Has postural problems affecting nutritional intake.</td>
</tr>
<tr>
<td><strong>Occupational therapist</strong></td>
<td>Has difficulties with eating equipment or assessment is required for skills or motivation related to eating.</td>
</tr>
<tr>
<td><strong>GP</strong></td>
<td>Has a possible underlying medical cause or consequence or requires prescription of supplements.</td>
</tr>
</tbody>
</table>

### Seeking specialist assessment

All nurses need to consider their responsibilities in screening, assessing and intervening in the nutritional care of people with mental health needs. It is also important that nurses are aware of their limitations and understand when specialist assessment is indicated. Table 4 highlights the range of other professionals on whom nurses might call and gives some possible scenarios where this might be necessary. It is not a definitive list and it is advisable to contact specialists locally to request referral criteria. It is always important to ensure any referral is accompanied by information that identifies: the exact nature of the difficulty; the times and frequency of the difficulty, if appropriate; any foods that are particularly relevant to the problem; and anything that either helps or hinders the problem.

### Conclusion

This article has summarised some of the important factors to consider about the relationship between nutrition and mental health. There is an emergent evidence base on the relationship between the food...
we eat and the impact it can have on mental health. There is a need for more high quality research to improve the evidence base about the links between nutrition and mental health.

Obesity and undernutrition are documented as issues for people with mental health needs, and nurses therefore need to appreciate their responsibilities in the screening and assessment process. Nutrition is an important aspect of improving the physical health of mental health service users. As nurses, we should be making the best use of our contact time and relationships with people with mental health needs to improve their nutritional status and physical wellbeing NS

References


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