Recognition and management of eating disorders in children and young people


Abstract
Eating disorders form a group of mental health conditions characterised by abnormal eating habits and are associated with high mortality rates. This article provides nurses working in various settings with evidence-based strategies to identify, manage and refer children and young people with eating disorders. It explores what eating disorders are, and their association with physical and psychiatric co-morbidities. Eating disorders have a significant effect on children and young people’s health and development, and nurses have a vital role in managing them. This article presents a case study that illustrates some of the challenges nurses may experience when managing children and young people with eating disorders.

Keywords
anorexia nervosa, binge-eating disorder, bulimia nervosa, child health, children, eating disorders, mental health, young people

Aims and intended learning outcomes
This article aims to provide an overview of eating disorders in children and young people and how nurses can recognise and manage the unique challenges associated with them. After reading this article and completing the time out activities you should be able to:

» Describe what an eating disorder is and the differences between anorexia nervosa, bulimia nervosa and binge-eating disorder.

» Discuss how eating disorders can affect children and young people in different ways and how many individuals have other mental health issues alongside an eating disorder.

» Discuss how eating disorders are challenging to diagnose and treat.

» Explain the focus of, and methods used in, treating patients with eating disorders.

Relevance to The Code
Nurses are encouraged to apply the four themes of The Code: Professional Standards of Practice and Behaviour for Nurses and Midwives to their professional practice (Nursing and Midwifery Council (NMC) 2015). The themes are: Prioritise people, Practise effectively, Preserve safety, and Promote professionalism and trust. This article relates to The Code in the following ways:

» The importance of trust between nurses and patients is emphasised in the article. The Code states that nurses should display a personal commitment to its standards of practice and behaviour, which should lead to trust and confidence in the profession from patients.

» The Code theme of practising effectively states that nurses must communicate clearly. This article states that when communicating with patients who may have eating disorders, nurses should seek to maintain a balance between being sensitive and being unafraid to ask direct and relevant questions.

» School and community nurses, and practice nurses, have a central role in...
recognising and supporting those at risk of, or who have, an undiagnosed eating disorder. The Code states that nurses must raise concerns immediately if they believe a person is vulnerable or at risk and requires additional support and protection.

» The Code states that nurses must respect a person’s right to privacy in all aspects of their care. This article states that the involvement of families in the recognition and management of eating disorders should be encouraged. However, if patients are over 16 years of age, are assessed to have capacity and do not wish to involve their family, this decision should be respected.

Introduction
The American Psychiatric Association (APA) (2013) described eating disorders as ‘a persistent disturbance of eating or eating-related behavior that results in the altered consumption or absorption of food and that significantly impairs physical health or psychosocial functioning’. An eating disorder is defined by the National Institute for Health and Care Excellence (NICE) (2017a) as ‘when you have an unhealthy relationship with food which can take over your life and make you ill. It might involve eating too much or too little, or becoming obsessed with controlling your weight’.

Approximately 725,000 people in the UK are living with eating disorders (Beat 2015). Lifetime rates of eating disorders among women range between 1% and 4% depending on type and are substantially lower among men (Smink et al 2012). Prevalence and correlates of eating disorders from the National Comorbidity Replication, a nationally representative face-to-face household survey of 9,282 individuals, conducted in 2001-2003, were assessed using the World Health Organization Composite International Diagnostic Interview. Lifetime prevalence estimates of anorexia nervosa, bulimia nervosa and binge-eating disorder were 0.9%, 1.5% and 3.5% respectively among women, and 0.3%, 0.5% and 2.0% respectively among men (Hudson et al 2007).

Women are most likely to be diagnosed with an eating disorder between the ages of 15 years and 19 years; at this age two girls per 1,000 are diagnosed with an eating disorder in the UK each year (Micali et al 2013). Eating disorders are the second most commonly diagnosed mental health disorder in this age group after depression: 12 girls per 1,000 receive a new diagnosis of depression each year (Micali et al 2013). New cases in women aged 15-19 years account for approximately 40% of all cases of eating disorders (Smink et al 2012). Eating disorders are associated with high mortality rates, with anorexia nervosa being the highest for any psychiatric disorder (Arcelus et al 2011).

Suboptimal mental health in young people can have a significant and negative effect on education, employment, and sexual and reproductive health, and can contribute to substance misuse (Patel et al 2007). Patients with eating disorders can present unique challenges for nurses, since they usually have other psychological issues with concurrent medical implications (APA 2006).

TIME OUT 1
List the types of eating disorder that you have encountered in your clinical practice. From your previous experience, reflect on how these were different from each other and the thoughts and feelings expressed by young people with eating disorders.

Types of eating disorder
The main recognised forms of eating disorder are anorexia nervosa, bulimia nervosa and binge-eating disorder. However, the most common forms of eating disorder are ‘atypical’, that is, they do not meet diagnostic criteria (Smink et al 2012). Atypical forms, also known as ‘unspecified feeding or eating disorders’, can vary greatly. Diagnosis of an atypical eating disorder does not indicate that the disease is less severe, with morbidity comparable to anorexia nervosa and bulimia nervosa (Smink et al 2012).

Differentiating common eating disorders
The diagnostic criteria for eating disorders were reclassified in the fifth edition of
the Diagnostic and Statistical Manual of Mental Disorders (APA 2013), known as DSM-5, and made broader (Mairs and Nicholls 2016). Although the criteria are broader, diagnosis may remain challenging since many of the behavioural aspects of eating disorders are well hidden.

Anorexia nervosa
Anorexia nervosa is characterised by three main features: often individuals have a ‘distorted body image’, an intense fear of becoming fat and persistent restriction of energy intake (APA 2013). This restriction can be through methods including dieting, over-exercising, misusing laxatives or vomiting. Individuals often feel like they lack control over other areas in their life, and controlling their weight and diet gives them a sense of achievement. People with anorexia nervosa can be of normal weight, especially if they were overweight before onset of the eating disorder.

Body mass index (BMI) can be used to calculate the severity of anorexia nervosa. BMI is calculated by dividing weight in kilograms by the square of height in metres. In adults, anorexia nervosa can be defined as mild (BMI ≥17), moderate (BMI 16-16.99), severe (BMI 15-15.99) and extreme (BMI <15). However, in children and young people, a growth chart should be used to calculate the corresponding BMI centile for age (APA 2013).

Bulimia nervosa
Bulimia nervosa is characterised by cycles of ‘bingeing’, where people overeat without control, followed by ‘purges’ to compensate and prevent weight gain. Individuals will judge themselves excessively based on their weight and body shape (APA 2013).

People with bulimia nervosa can be of normal weight, which means it is challenging to recognise the condition. As with anorexia nervosa, they may have low self-esteem, but they sometimes respond to this by binging on food. Afterwards they can feel ashamed or guilty and will purge, commonly by making themselves vomit, misusing laxatives, fasting or undertaking excessive exercise (APA 2013).

Binge-eating disorder
Binge-eating disorder is characterised by uncontrolled overeating of amounts of food that are ‘larger than most people would eat in a similar amount of time’. However, there is no purging or compensatory behaviour (APA 2013). People with binge-eating disorder might be overweight.

Other eating disorders
Other types of feeding and eating disorders include pica (eating non-food substances), rumination (regurgitating food) and avoidant or restrictive food intake (avoiding food based on the sensory characteristics of food or eating).

Aetiology and pathogenesis
In women, genetic risk factors for eating disorders are thought to be linked to ovarian hormones and may be activated in girls through epigenetic changes that occur during puberty, alongside environmental factors including increased body dissatisfaction (Box 1) (Fairburn and Harrison 2003, Klump 2013). This may assist in explaining why eating disorders are much less common in children aged under 13 years, with diagnosis rates of anorexia nervosa at approximately 1.1 per 100,000 each year in children under 13 years, compared with 490 per 100,000 each year in women aged 15-19 years (Smink et al 2012).

Eating behaviours are thought to relate to ‘food cue reactivity’ and ‘inhibition skills’. Those who overeat are increasingly likely to have a strong response to food cues, for example the smell of food and ‘poor’ inhibition. Those who restrict their eating are increasingly likely to have ‘poor’ food cue reactivity and high levels of inhibition (Jansen 2016).

Treasure et al (2010) described how part of the pathology in eating disorders is biological. In anorexia nervosa, it is thought that when the body enters a starvation state, brain function is affected because of the decreased availability of glucose, a vital energy source. This can cause behavioural and psychological issues, while also affecting the systems
that regulate appetite, meaning that low body weight itself can suppress appetite. Conversely, in binge-eating disorder, Treasure et al (2010) described how food can stimulate addictive pathways in the same way as drugs such as alcohol and cocaine. Therefore, although eating disorders are considered ‘mental illnesses’, there are physiological aspects to these behaviours.

**Clinical features**

**Behavioural**

Many symptoms of eating disorders are behavioural and are well hidden because of the associated social stigma. To uncover symptoms, patients will usually have to offer information voluntarily, which relies on trust between patients and clinicians (Box 2). Nursing input is invaluable and the nature of interactions between nurses and patients can be less formal than with other clinicians, and patients may disclose information to nurses that they would not to other clinicians.

Restrictive behaviours involve limiting the amount and type of food eaten. Individuals may avoid certain types of food or have rituals associated with preparing and consuming food. They may avoid eating in social situations and either restrict the quantity of fluid they drink or drink excessive fluid to suppress their appetite (Treasure et al 2010).

Binge-eating behaviours may involve eating amounts of food that would be considered excessive compared with what most people eat; they can also include eating amounts of food that would be considered normal. What is important is that the individual generally has a feeling of ‘loss of control’ (Telch et al 1998, Treasure et al 2010).

Compensatory behaviours involve purging by inducing vomiting, misusing laxatives or other medicines such as diuretics or diet pills. Excessive exercising is another compensatory behaviour, which is often compulsive in nature (Treasure et al 2010).

Body-checking behaviours may involve individuals frequently looking at themselves in mirrors, weighing themselves, and admiring their bodies.

**BOX 1. Risk factors for anorexia nervosa and bulimia nervosa**

<table>
<thead>
<tr>
<th>General factors</th>
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<tbody>
<tr>
<td>Female</td>
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<tr>
<td>Adolescence and early adulthood</td>
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<tr>
<td>Living in a Western society</td>
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<tr>
<th>Individual-specific factors</th>
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<tbody>
<tr>
<td>Family history</td>
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<tr>
<td>» Eating disorder of any type</td>
</tr>
<tr>
<td>» Depression</td>
</tr>
<tr>
<td>» Substance misuse, especially alcoholism (bulimia nervosa)</td>
</tr>
<tr>
<td>» Obesity (bulimia nervosa)</td>
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<table>
<thead>
<tr>
<th>Premorbid experiences</th>
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<tbody>
<tr>
<td>» Adverse parenting, especially low contact, high expectations and parental discord</td>
</tr>
<tr>
<td>» Sexual abuse</td>
</tr>
<tr>
<td>» Family dieting</td>
</tr>
<tr>
<td>» Critical comments about eating, shape or weight from family and others</td>
</tr>
<tr>
<td>» Occupational and recreational pressure to be slim</td>
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</table>

<table>
<thead>
<tr>
<th>Premorbid characteristics</th>
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</thead>
<tbody>
<tr>
<td>» Low self-esteem</td>
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<tr>
<td>» Perfectionism (anorexia nervosa and to a lesser extent bulimia nervosa)</td>
</tr>
<tr>
<td>» Anxiety and anxiety disorders</td>
</tr>
<tr>
<td>» Obesity (bulimia nervosa)</td>
</tr>
<tr>
<td>» Early menarche (bulimia nervosa)</td>
</tr>
</tbody>
</table>

(Fairburn and Harrison 2003)

**KEY POINT**

Treasure et al (2010) described how food can stimulate addictive pathways in the same way as drugs such as alcohol and cocaine. Therefore, although eating disorders are considered ‘mental illnesses’, there are physiological aspects to these behaviours.

**BOX 2. Case study example**

You are a school nurse. Lucy, a 16-year-old female, presents to you with abdominal pain. Lucy comments that she has been vomiting recently and has a sore throat.

She says she is trying to be ‘healthier’, goes to the gym every day to lose weight and feels guilty if she is unable to go. Lucy complains that other children at school tease her and she hates eating lunch when other people are around. Lucy remarks that she does not feel in control of her life, and that eating is the only thing she has control over.

Lucy worries a lot about her weight, thinks she is fat and wants to be able to fit into her favourite jeans. When Lucy stands to be examined she says she feels dizzy, and you notice stretch marks on her abdomen, while her knuckles are grazed (Russell’s sign: a sign of self-induced vomiting). When Lucy is weighed, she says she is happy because she has lost 12kg in the past six months. Lucy weighs 58kg (50th-75th centile) and is 163cm tall (50th centile), which gives Lucy a body mass index (BMI) of 21.8 (normal BMI is 18.50-24.99).
comparing themselves with other people or making sure certain clothes fit to gauge weight. Body avoidance is the opposite of these traits, where individuals dissatisfied with their body may avoid looking in the mirror or wear baggy clothes to cover their body (Treasure et al 2010).

TIME OUT 2
Read the case study example in Box 2. What symptoms of an eating disorder does Lucy display? Categorise the various types of behaviour and identify which physical symptoms are present.

Co-morbid psychiatric features
Children and young people with eating disorders often have co-morbid mental health issues. These can commonly include anxiety and depression, but may include other conditions such as obsessive compulsive disorder (OCD) or bipolar disorder (Box 3). Healthcare professionals must be alert to the possibility of bullying and abuse of all types in children and young people, since an eating disorder may reflect wider social issues.

Anorexia nervosa has been compared with other psychiatric conditions such as OCD because of the presence of compulsive behaviours and obsessive thoughts about weight (Godier and Park 2014). It has also been compared with autistic spectrum disorder because of the way that individuals with anorexia nervosa emotionally regulate and express themselves (Harrison et al 2009). Harrison et al (2009) hypothesised it is possible that since starvation affects thought processes, it causes the appearance of these traits as a transient state. When encountering multiple psychiatric co-morbidities, it is appropriate to promote mental health in multiple domains.

Physical features
The effects of eating disorders on the body, such as suboptimal growth, anaemia and electrolyte imbalances, are mainly related to the consequences of malnutrition because organs are unable to grow and function effectively without sufficient nutrients. Since the incidence of eating disorders is highest during adolescence when the body is developing, this can disrupt growth. If patients receive appropriate treatment promptly, most of these effects are reversible. However, there may be long-term issues such as osteoporosis and reduced fertility (Treasure et al 2010).

Diagnosis
Features that may present in patients with eating disorders are listed in Table 1. However, diagnosis in children and young people may be challenging because if they are pre-pubescent, they may present without features such as low BMI, menstrual periods will be absent, and many of the behaviours are secretive. If physical symptoms are present they are often vague, therefore non-specialists, such as school, community and practice nurses, are essential in identifying those at risk of eating disorders. When assessing patients for a possible eating disorder, healthcare professionals should consider whether the person participates in activities such as professional sport, fashion, dance or modelling, or if they have issues managing a chronic illness that affects diet, such as diabetes or coeliac disease (NICE 2017b).

In those at risk of an eating disorder, or where one is suspected, screening is appropriate. The ‘SCOFF’ questionnaire is a common tool used in screening for eating disorders (Box 4) (Hill et al 2010). It consists of five questions, which can all be answered with either a ‘Yes’ or a ‘No’. A screening result is considered positive if someone answers ‘Yes’ to two or more questions, and an eating disorder should be suspected and investigated. The SCOFF questionnaire

**KEY POINT**
The effects of eating disorders on the body, such as suboptimal growth, anaemia and electrolyte imbalances, are mainly related to the consequences of malnutrition because organs are unable to grow and function effectively without sufficient nutrients.
### TABLE I. Features that may present in patients with eating disorders

| History and behaviours | » Dieting or restrictive eating practices, such as dieting when underweight, which are worrying patients, their family members or carers, or professionals  
| » Compensatory behaviours, including laxative or diet pill misuse, vomiting or excessive exercise  
| » Family members or carers report a change in eating behaviour  
| » Disproportionate concern about weight or shape, for example concerns about weight gain as a side effect of contraceptive medicine use  
| » Social withdrawal, particularly from situations that involve food  
| » Presence of other mental health issues  
| » Participation in activities associated with a high risk of eating disorders, for example professional sport, fashion, dance or modelling  
| » Issues managing a chronic illness that affects diet, such as diabetes or coeliac disease |

| Physical signs | General examination  
| » Unusually low or high body mass index or weight for age, but this may be normal  
| » Faltering growth, for example a low weight or height for age, or delayed puberty  
| » Abnormal vital signs, for example bradycardia, hypotension or hypothermia  
| Hands and arms  
| » Brittle nails  
| » Signs of self-harm, for example scars or burns  
| » Calluses or lacerations of knuckles (Russell's sign – a sign of self-induced vomiting)  
| » Lanugo hair (fine, fuzzy hair on the arms and chest)  
| Head and neck  
| » Erosion of tooth enamel (sign of chronic vomiting)  
| » Conjunctival haemorrhages (sign of chronic vomiting)  
| » Conjunctival pallor (sign of anaemia and malnutrition)  
| » Sunken eyes (sign of dehydration)  
| » Sore throat (sign of vomiting)  
| » Hair loss  
| Cardiovascular  
| » Palpitations, dizziness and fainting  
| » Abnormal electrocardiogram (low voltage, prolonged QT interval)  
| » Sacral or peripheral oedema  
| Abdominal  
| » Striae distensae (stretch marks – sign of rapid weight loss)  
| » Abdominal pain associated with vomiting or restrictions in diet, which cannot be fully explained by a medical condition  
| » Constipation  
| Endocrine and metabolic  
| » Incomplete development of secondary sexual characteristics  
| » Absence of menstrual periods or other endocrine disturbances, or unexplained gastrointestinal symptoms  
| Renal  
| » Kidney stones  
| Musculoskeletal  
| » Stress or other unlikely fractures  
| » Proximal myopathy (muscle weakness – patients may be unable to rise from a squatting position without supporting themselves)  

| Findings on investigation | » Unexplained electrolyte imbalance  
| » Hypoglycaemia  
| » Abnormal thyroid function tests  
| » Deranged liver function tests  
| » Low white blood cell count, particularly neutrophils  
| » Anaemia (rarely) |

(Pritts and Susman 2003, National Institute for Health and Care Excellence 2014, 2017b)
has been used with the public and the number of people screening positive for an eating disorder was found to decrease with age (NHS Information Centre for Health and Social Care 2009). This pattern was particularly pronounced for women: 20% of women aged 16-24 years screened positive, compared with 1% of women aged 75 years and over (NHS Information Centre for Health and Social Care 2009).

Regardless of any screening questionnaire, if there is a clinical suspicion that a person may be affected by an eating disorder, it is prudent to ask about relevant behaviours and physical features and to raise concerns with others, depending on the nursing role. Ideally, the person should be encouraged to see their GP for support and advice.

NICE (2014) outlined the path most people will take before being diagnosed with an eating disorder. Usually, people are diagnosed based on their clinical history and any signs and symptoms. GPs are expected to perform routine blood tests and assess the person to decide if they are at risk of further physical or psychological deterioration and require admission to hospital. People who are considered ‘safe’ in the community, will be referred to a specialist team who will conduct a thorough assessment and make a relevant diagnosis.

TIME OUT 3
Refer to Box 4 and review the five questions in the SCOFF questionnaire. What may be the practical challenges in using a tool like this? Can you think of any alternative tools, or ways you might identify people with an eating disorder in your practice?

**BOX 4. The ‘SCOFF’ questionnaire**

S - Do you make yourself SICK (vomit) because you feel uncomfortably full?
C - Do you worry that you have lost CONTROL over how much you eat?
O - Have you recently lost more than ONE stone (15 pounds) in a three-month period?
F - Do you believe yourself to be FAT when others say you are thin?
F - Would you say that FOOD dominates your life?

(Hill et al 2010)

**Challenges of treating patients with eating disorders**

A multidisciplinary team (MDT) approach is generally advocated to treat patients with eating disorders (Mairs and Nicholls 2016). MDT members may include psychiatrists, paediatricians, nurses, dietitians, occupational therapists, social workers and other professionals. Treatment centres on the underlying mental health issues, but many patients may require more immediate medical management because of their physical condition. The aim of treatment is to assist patients to reach and maintain a healthy weight for their age and to promote healthy eating habits and a healthy relationship with food.

Dietitians assess premorbid and current diet history and lead on developing several individually tailored weight restoration meal plans after accounting for the social situation and the patient’s nutritional requirements. General advice can be given to those with eating disorders, for example NICE (2017b) suggested those who purge by vomiting should avoid cleaning their teeth for one hour afterwards, and instead rinse their mouth with a non-acidic mouthwash and avoid acidic foods. Those who misuse laxatives should gradually reduce their use. People with osteoporosis should also avoid high-impact activities such as jumping, running and skipping, which might lead to an increased risk of falls and fractures.

The families of children and young people with eating disorders will often be closely involved in recognition and management, which should be encouraged. However, if patients are over 16 years of age and are assessed to have capacity under the Mental Capacity Act 2005 in England and Wales, Adults with Incapacity (Scotland) Act 2000 or Mental Capacity Act (Northern Ireland) 2016, the principles of Gillick competence should be respected if they do not wish to involve their family (NICE 2017b).

**Hospital management**

If possible, patients should be managed as outpatients (National Collaborating Centre...
for Mental Health 2004). Sometimes, however, hospital admission is required and NICE (2014) offers guidance on this. If a patient’s main issue is risk of self-harm or suicide, admission to a child and adolescent mental health services inpatient unit would be most appropriate. Conversely, someone with the following acute medical issues would be best treated on a paediatric ward (Royal College of Psychiatrists (RCP) 2015):

- Cardiovascular instability – resting tachycardia or bradycardia.
- Cardiovascular changes – fall in systolic blood pressure of 15mmHg or more, or fall in diastolic blood pressure of 10mmHg or more within three minutes of standing, or increase in heart rate of up to 30 beats per minute.
- Oedema.
- Deranged electrolytes.
- Hypoglycaemia.
- Infection.

Acute medical admissions are most common in those with anorexia nervosa (Health and Social Care Information Centre 2016), probably because of the effects of very low body weight.

If the patient’s weight cannot be managed safely in a day service where patients attend a specialist hospital during the day and go home in the evening, or there is a high rate of weight loss, for example more than 1 kg per week, the patient may require inpatient care (NICE 2017b). NICE (2017b) states that an absolute weight or BMI threshold should not be used when deciding if inpatient or outpatient care is most appropriate. This advice is summarised in the algorithm developed by the authors in Figure 1.

Since eating disorders are included in the spectrum of mental disorder, people may at times have to be sectioned. This allows compulsory admission to assess and, if appropriate, administer treatment. Those under the age of 16 years can be treated against their will if one parent consents. However, if a young person aged 16-18 years has mental capacity and refuses treatment, involuntary treatment may occur under the Mental Health Act 1983 in England and Wales, the Mental Health (Care and Treatment) (Scotland) Act 2003 or the Mental Health (Northern Ireland) Order 1986 (NICE 2017b).

**TIME OUT 4**

Return to the case study example in Box 2. You ask Lucy to complete the SCOFF questionnaire and she answers “Yes” to four of the five questions. Reflect on what you would say to Lucy and what you might suggest so that she can obtain or seek appropriate support in a timely manner.

**Medical management**

Close care and monitoring are required when stabilising any weight deficits. This involves regular monitoring of the individual’s physical parameters including weight, heart rate, and lying and standing blood pressure to detect any of the acute

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**Figure 1. Algorithm to decide if inpatient hospital admission is appropriate for patients with eating disorders**

Child or young person with an eating disorder

Does the patient require acute medical stabilisation?

Yes

Admission to a paediatric ward in an acute hospital

No

Can the patient be safely managed in the community?

Yes

Manage patient under community services

No

Is the main issue their eating behaviours, or risk from self-harm/suicide?

Eating behaviours

Admission to a specialist CAMHS eating disorder inpatient unit

Self-harm/suicide

Admission to a general CAMHS inpatient unit

CAMHS = child and adolescent mental health services
medical issues that may accompany an eating disorder.

Metabolism changes occur after prolonged starvation (around 4-5 days) and depletion of minerals including magnesium, calcium, thiamine (vitamin B1) and phosphate (Mehanna et al 2008). Sudden reintroduction of nutrition leads to a sudden imbalance of these minerals, known as ‘refeeding syndrome’. Phosphate levels can fall significantly, which can be fatal or may cause seizures, severe weakness, muscle cramps and arrhythmias. Individuals with very low BMI, minimal or no nutritional intake for more than several days, rapid weight loss and pre-existing electrolyte abnormalities are most at risk (RCP 2015).

While refeeding syndrome is a risk, ‘underfeeding syndrome’, where caloric intake is not sufficient to meet metabolic need, is more likely to cause harm as a result of further weight loss. For this reason, patients are usually started on a rapid feeding regimen under the direction of a dietitian, reaching their full nutritional requirement within 5-7 days with supplementary vitamins and minerals (RCP 2015). If a patient is at risk, they will require regular physical monitoring including daily blood investigations during the first 2-5 days until they reach their full nutritional requirement (RCP 2015). Special management is required for patients who have diabetes and have been misusing insulin (NICE 2017b).

**Psychotherapy**

Psychotherapy for children and young people with eating disorders should be considered after a thorough assessment of physical risk and well-being.

Guidance from NHS England (2016) suggests that children and young people up to the age of 19 years referred for assessment or treatment for an eating disorder should receive NICE-approved treatment with a designated healthcare professional within one week for urgent cases and four weeks for other cases.

Family-based therapy has the best evidence base for the treatment of anorexia nervosa in children and young people (Mairs and Nicholls 2016) and is recommended in the first instance by NICE (2017b). There are varying models of family-based therapy, but it involves sessions with parents and other family members.

Adapted forms of cognitive behavioural therapy have a strong evidence base for the treatment of bulimia nervosa and binge-eating disorder (Mairs and Nicholls 2016) and are also the form of psychotherapy recommended by NICE (2017b). Although psychotherapies can be effective, this relies on appropriate engagement by patients, which means there are few options for those who do not engage in therapy, which may lead to increased morbidity and further entrenched behaviours.

**Medicines**

Psychiatric medicines are usually not appropriate for the primary treatment of patients with eating disorders, but they may be useful as an adjunct to other therapies (NICE 2017b). Pharmacological treatment of anorexia nervosa can also be complicated, because of patients’ low weight. Antidepressants have shown little benefit for adolescents with anorexia nervosa, but antipsychotics are sometimes used with a view to reducing anxiety and improving thought processes and weight gain, but evidence of their benefit is inconclusive (Mairs and Nicholls 2016).

Antidepressants, particularly selective serotonin reuptake inhibitors such as fluoxetine, can assist in reducing symptoms in bulimia nervosa and binge-eating disorder for adults, but there has been little investigation of their benefits for adolescents with these eating disorders (Mairs and Nicholls 2016).

**TIME OUT 5**

Based on what you have learned, what treatments are available for children and young people with eating disorders? State what the most effective form of treatment is, and detail the underlying way in which this type of therapy works.

**Nursing role**

Nursing is important in the inpatient setting, and a qualitative study found that a crucial aspect of nursing is ‘connecting’ and developing a therapeutic relationship with patients (Snell et al 2010). This can
be challenging, especially in acute medical units or paediatric settings where there may be a lack of knowledge; nurses in these settings were found to use derogatory terms towards patients with eating disorders (Snell et al 2010). For this reason, it is important for all nurses to have an awareness and understanding of eating disorders (Table 2).

When communicating with patients who may have eating disorders, a balance should be sought between being sensitive and being unafraid to ask direct and relevant questions. With children and young people, it is often useful to remember that families are more closely involved and may feel ashamed or responsible for the eating disorder.

**Prognosis**

There can be long delays from the onset of a patient’s symptoms to them seeking support, and equally long periods before they start treatment. Beat (2015) estimated that it takes nine months for each of these stages to occur, signifying that it is more than one year before many receive treatment. Longer durations of illness and longer waiting times are associated with an early exit from treatment (Leavey et al 2011, Watson et al 2013). Patients often go through many cycles of waiting, treatment and relapse, which for most last more than six years (Beat 2015).

Eating disorders can disrupt education and careers. A study by Hjern et al (2006) followed up 748 Swedish women with anorexia nervosa 9-14 years after they were admitted for hospital treatment. It found that 21% were dependent on benefits for their main source of income, which was 5.8 times higher than levels in the general population.

Many of the short-term medical effects of eating disorders are reversed with treatment, but patients may have long-term issues such as osteoporosis and reduced fertility (Treasure et al 2010) and may not grow to their predicted height, based on estimation of their mid-parental height. A meta-analysis of 36 studies (Arcelus et al 2011) found that after an average of 15 years follow-up there was an elevated mortality rate in those who had eating disorders. The standardised mortality ratios (ratio of the number of deaths compared with those expected in a similar population without eating disorders) were 5.86 for anorexia nervosa, 1.93 for bulimia nervosa and 1.92 for atypical eating disorders. Suicide accounts for one in five deaths in those with anorexia nervosa.

**TABLE 2. Nursing roles in various clinical settings**

<table>
<thead>
<tr>
<th>Clinical setting</th>
<th>Nursing role</th>
</tr>
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<tbody>
<tr>
<td>School and community nurses</td>
<td>» Promoting healthy eating behaviours in schools</td>
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<tr>
<td></td>
<td>» Recognising and supporting those at risk of, or who have, an undiagnosed eating disorder</td>
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<tr>
<td></td>
<td>» Assessing the effect of home and education on a person's eating</td>
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<tr>
<td>Practice nurses</td>
<td>» Recognising and supporting those at risk of, or who have, an undiagnosed eating disorder</td>
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<tr>
<td></td>
<td>» Monitoring weight in patients who are managed in the community</td>
</tr>
<tr>
<td></td>
<td>» Providing support to patients and their families to enable children and young people to manage their weight in the community</td>
</tr>
<tr>
<td>Emergency department nurses</td>
<td>» Managing the complications associated with psychiatric co-morbidity, for example self-harm injuries</td>
</tr>
<tr>
<td></td>
<td>» Recognising and supporting those at risk of, or who have, an undiagnosed eating disorder</td>
</tr>
<tr>
<td>Children’s nurses</td>
<td>» Recognising and supporting those at risk of, or who have, an undiagnosed eating disorder</td>
</tr>
<tr>
<td></td>
<td>» Supporting children and young people and their families alongside enabling medical stabilisation of those with an eating disorder</td>
</tr>
<tr>
<td></td>
<td>» Providing education and emotional support to those affected by eating disorders, enabling families to understand that they are not to blame</td>
</tr>
<tr>
<td>Mental health nurses</td>
<td>» Developing a therapeutic relationship to assist patients to engage with treatment and guiding them through the various stages of treatment</td>
</tr>
<tr>
<td></td>
<td>» Working with other multidisciplinary team members to administer psychotherapy and other medical treatment</td>
</tr>
</tbody>
</table>
underlining the requirement for effective recognition and intervention (Arcelus et al 2011).

Conclusion
Eating disorders are serious conditions, which can have a significant effect on the individual’s mental and physical health. They can remain hidden because people may avoid seeking support, and can be challenging to treat. Eating disorders rarely exist in isolation and are usually accompanied by other psychiatric co-morbidities.

After initial treatment, people go through cycles of recovery and relapse. Nurses may be involved in recognising patients with eating disorders, as well as patients’ medical and long-term management. Clinicians, including nurses, should remain aware of patients with eating disorders and ensure they receive timely and appropriate support.

TIME OUT 6
Nurses are encouraged to relate the four themes of The Code (NMC 2015) to their professional practice. Consider how recognition and management of eating disorders in children and young people relates to The Code.

TIME OUT 7
Now that you have completed the article you might like to write a reflective account as part of your revalidation.

References


Eating disorders

TEST YOUR KNOWLEDGE BY COMPLETING THIS SELF-ASSESSMENT QUESTIONNAIRE 917

1. Bulimia nervosa is characterised by:
   a) Persistent restriction of energy intake
   b) Cycles of food-related bingeing and purging
   c) Healthy body image
   d) Lack of exercise

2. An eating disorder may be described as:
   a) A persistent disturbance of eating or eating-related behaviour
   b) An unhealthy relationship with food
   c) Eating too much or too little
   d) All of the above

3. Which of the following is a risk factor for anorexia nervosa and bulimia nervosa?
   a) Male gender
   b) High self-esteem
   c) Anxiety disorders
   d) Late menarche

4. Pica is defined as:
   a) Consuming non-food substances
   b) Regurgitating food
   c) Avoiding food based on its sensory characteristics
   d) A high-calorie diet

5. Calluses on the knuckles as a result of repeated self-induced vomiting is known as:
   a) Adson’s sign
   b) Russell’s sign
   c) Becker’s sign
   d) Osler’s sign

6. Which of the following is a type of eating disorder?
   a) Anorexia nervosa
   b) Bulimia nervosa
   c) Binge-eating disorder
   d) All of the above

7. What does ‘C’ in the SCOFF questionnaire stand for?
   a) Compensatory behaviours
   b) Content
   c) Calories
   d) Control

8. Normal body mass index range is:
   a) 12-14.99
   b) 15-15.99
   c) 18.50-24.99
   d) 30-34.99

9. Which statement is true?
   a) People with bulimia nervosa may be of normal weight
   b) People with anorexia nervosa do not have a distorted body image
   c) People with binge-eating disorder engage in controlled eating
   d) People with binge-eating disorder are always overweight

10. Which of the following is not a body-checking behaviour?
    a) Weighing oneself
    b) Wearing baggy clothing to cover oneself
    c) Comparing oneself to others
    d) Frequently looking in the mirror

How to complete this assessment

This self-assessment questionnaire will help you to test your knowledge. It comprises ten multiple choice questions that are broadly linked to the article starting on page 52. There is one correct answer to each question.

» You can test your subject knowledge by attempting the questions before reading the article, and then go back over them to see if you would answer any differently.

» You might like to read the article before trying the questions. The correct answers will be published in Nursing Standard on 8 November.

Subscribers making use of their RCNi Portfolio can complete this and other questionnaires online and save the result automatically. Alternatively, you can cut out this page and add it to your professional portfolio. Don’t forget to record the amount of time taken to complete it.

You may want to write a reflective account based on what you have learned. Visit journals.rcni.com/reflective-account

This self-assessment questionnaire was compiled by Tanya Fernandes

The answers to this questionnaire will be published on 8 November

Answers to SAQ 915 on Undertaking drug calculations for oral medicines and suppositories, which appeared in the 11 October issue, are:
1. d 2. c 3. a 4. b 5. d 6. b 7. d 8. a 9. c 10. b