Eating disorders in children and young people

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What I will cover

- Definitions and prevalence
- Consequences and co-morbidities
- CAMHS specialist eating disorder teams
- Assessment and management in primary care
  - When to refer urgently for admission
  - Junior Marsipan
- Treatments available
  - Nice Guidelines 2017
- Patient perspectives
What are they?

- **Anorexia nervosa**
  - Loss of weight of 15% or failure to gain
  - Attempts to lose weight
  - Fear of weight gain
  - Body image distortion/over concern with weight and shape
  - Hormonal dysfunction

  **NB DSM5 has broadened the diagnostic criteria**

- **Bulimia Nervosa**
  - Binge eating
  - Purging (vomiting, over-exercise, fasting, laxative abuse,)
  - Over-concern with weight and shape

- **Atypical/EDNOS/OSFED**
  - Serious problems with eating which do not meet the full criteria for AN or BN
Epidemiology of eating disorders in yp

- Life time prevalence of ED (Swanson et al 2011)
  - Cross sectional survey of adolescents (10,123)
  - AN (0.3%) BN (0.9%)
  - Minority receive treatment
  - Strong correlations with other psychiatric disorders
- Incidence of ED increased in 15-19 age group (Sminck et al 2012) over previous decade
  - All ED show increased mortality
- Lifetime prevalence among 19 year olds 5.7% (Dutch study)
- DSM 5 Criteria
  - Disordered eating behaviours and attitudes 13% Jones et al 2001
- Half of cases of adult ED have onset under 18
- Dieting increases the risk of ED X 8 (Patton et al 1990)
Mortality

- Standardised mortality rate: 5.86 AN, 1.92 EDNOS, 1.93 BN Arcelus et al 2011
  - 20% of deaths were due to suicide
- Swedish registry: 6 fold increased mortality compared to general population.
- Eating disorder has highest mortality of any psychiatric disorder
Other causes of eating disturbance/low weight

- Organic causes
  - E.g. diabetes, thyroid disease, coeliac disease, malignancies
- Restrictive/selective eating e.g. in ASD
- Food avoidance secondary to emotional stress/conflict
- Appetite loss secondary to depression or anxiety

Comorbidities

- Depression/self-harm
- Alcohol/drug abuse
- Anxiety
- OCD
- ASD
Anorexia affects your whole body

### Hair
- Hair thins and gets brittle

### Blood
- Anemia and other blood problems

### Muscles and Joints
- Weak muscles, swollen joints, fractures, osteoporosis

### Kidneys
- Kidney stones, kidney failure

### Body Fluids
- Low potassium, magnesium, and sodium

### Intestines
- Reduced gastric emptying, parotid node enlargement, constipation, oesophageal tears, abnormal liver function

### Skin
- Bruise easily, dry skin, growth of fine hair all over body, get cold easily, yellow skin, nails get brittle

### Abnormal temp and sleep regulation

### Reduced brain size, MRI changes

### Low blood pressure/pulse, arrhythmias, ECG changes, loss of heart muscle
Psychological consequences

- Cognitive changes (rigidity, poor concentration)
- Over-sensitivity to criticism
- Mood changes (low mood, anxiety, irritability)
- Increased pre-occupation with food/eating
- Poverty of speech and expression of feelings
- Low self esteem and loss of identity
- Denial of serious consequences and risk taking

Social and Educational consequences

- Withdrawal from family and friends
- Inability to cope with education
- Loss of interests
- Disturbed family relationships
Maintenance of anorexia nervosa

- Low self esteem
- Over-concern about weight and shape
- Excessive dietary restriction
- Psychological factors: Increased sense of control and mastery
- Behavioural factors: Checking, Weighing
- Starvation state: Narrowing of interests, Rigidity, Stomach fullness, Loss of hunger cues, Low mood, Poor concentration
- Avoidance: Uncertainty, Complexity, Feelings, Problems
- Family factors: Attention, Control, Dependence
CAMHS ED services

- Considerable change nationally
- 2015 New funding available
  - Evidence that specialist services are more cost effective
  - Early intervention prevents long term morbidity
- 71 services set up in England
- Locally there is a specialist service across Oxon/Bucks, with similar services in Wiltshire and Berkshire

- Waiting time targets
  - 4 weeks for routine
  - 1 week for urgent
  - 24 hours for emergency
Clarification of referral criteria

- Young person with AN, BN or atypical eating disorders (at any weight) seen by ED service
- yp with eating difficulties in context of ASD, LD, depression, anxiety, where core ED cognitions are not present, seen by CAMHS

REFER TO SINGLE POINT OF ACCESS (SPA).
Assessment in general practice

- Importance of therapeutic relationship
  - Non-judgemental, respectful
  - Confidentiality limits
  - Involve parents wherever possible
- Differential diagnosis
  - Exclude other causes
- Assessment of current physical consequences
- Assessment of comorbidities
Assessment

- Take history
  - Changes in eating, vomiting, exercise, repeated weighing/body checking, trying to lose weight, preoccupation with weight and shape, use of diet pills/laxative, suppressing hunger, stopping prescribed medications,

- Assess mental health and social functioning
  - Anxiety/depression/suicidal ideation/current stressors (school/family/peers/abuse)?

- Examine for physiological consequences
  - General appearance (signs of malnourishment, check hair and teeth, dehydration)
  - Height and weight (may be less than minimally expected)
  - Skin (pressures sores/Russell’s sign)
  - CV – slow pulse, low BP, postural hypotension, delayed capillary refill, postural tachycardia
  - Muscle weakness (squat or sit up test)
  - GI tenderness, constipation, gastric dilatation
Assessment (continued)

- Consider further investigations
  - FBC (? Anaemic/low platelets/WCC),
  - Bone profile (Low Ca, Mg or P)
  - Glucose (Hyopglycaemia/hyperglycaemia)
  - U & E (hyponatraemia, hypokalaemia, dehydration)
  - ESR (possible organic cause, bacterial infection)
  - TFT (hyper/hypothyroidism)
  - ECG (cardiac arrhythmia, prolonged QTc sinus bradycardia, signs of electrolyte disturbance)
  - Coeliac screen
Management and referral

- Refer early to specialist ED service
- **Consider urgency**
  - Refer for urgent, routine or emergency
- Initial management
  - Advice regarding risks
  - Advice regarding regular meals
- Continued management
  - Further investigations
  - Monitoring of weight and physical state until seen
  - Invitation to discharge CPA review
Criteria for Paed admission (Junior Marsipan)

- WFH < 70%
- Electrolyte abnormality (K<3.0, Na< 130, P < 0.5)
- Dehydration
- Low glucose
- Low BP, postural drop (>20), Increase HR 30
- ECG abnormalities/irregular HR
- Pulse below 40 (40-50 concern)
- Rapid weight loss (>1kg loss over a week for 2 weeks)
- Cold peripheries or hypothermia (<35.5)
- Risk of re-feeding syndrome
- Unable to get up without using arm leverage
<table>
<thead>
<tr>
<th>Junior marsipan</th>
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<tbody>
<tr>
<td>Appendix 4: Junior MARSIPAN Risk Assessment</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Red (high risk)</th>
<th>Amber (high concern)</th>
<th>Green (moderate risk)</th>
<th>Blue (low risk)</th>
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</thead>
<tbody>
<tr>
<td><strong>BMI and weight</strong></td>
<td>%BMI &lt;70% (→ 0.4th BMI centile) Recent weight loss of ≥1kg per week for 2 consecutive weeks</td>
<td>%BMI 70-80% (→ 2-3rd BMI centile) Recent weight loss of 500-999g/week for 2 consecutive weeks</td>
<td>%BMI 80-85% (→ 9th 2nd BMI centile) Recent weight loss of &gt;500g/week for 2 consecutive weeks</td>
</tr>
<tr>
<td><strong>Heart Rate / BP</strong></td>
<td>Heart rate (awake) &lt;40 bpm</td>
<td>Heart rate (awake) 40-50 bpm</td>
<td>Heart rate (awake) 50-60 bpm</td>
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<tr>
<td><strong>Syncope/orthostatic changes</strong></td>
<td>History recurrent syncope Marked orthostatic changes; - BP Drop of ≥20 mmHg (systolic) OR - Increase in heart rate of ≥30 bpm</td>
<td>Occasional syncope; Moderate orthostatic cardiovascular changes - BP Drop of ≥15 mmHg (Systolic) / ≥10 mmHg (diastolic) OR - Increase in heart rate of ≥20 bpm</td>
<td>Pre-synopal symptoms but normal orthostatic cardiovascular changes Cool peripheries; prolonged peripheral capillary refill time (normal cental capillary refill time)</td>
</tr>
<tr>
<td><strong>Heart Rhythm</strong></td>
<td>Irregular heart rhythm (does not include sinus arrhythmia)</td>
<td></td>
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<td><strong>ECG abnormalities</strong></td>
<td>All &lt;15 yrs: QTC&gt;460ms OR &gt;15 yrs: QTC&gt;450ms (girls) or 450ms (boys) with evidence of bradycardia or tachycardia (excludes sinus bradycardia and sinus arrhythmia); ECG evidence of biochemical abnormality</td>
<td>QTC&gt;460 ms (girls) or 450 ms (boys) and taking medication known to prolong QTC interval, P-Rx of prolonged QTC or sensorineural deafness</td>
<td></td>
</tr>
<tr>
<td><strong>Hydration status</strong></td>
<td>Total fluid refusal Severe dehydration (10%); reduced urine output, dry mouth, decreased skin turgor, sunken eyes, tachycardia, tachycardia</td>
<td>Severe fluid restriction Moderate dehydration (5-10%): reduced urine cut-put, dry mouth, normal skin turgor, some tachycardia, some tachycardia, peripheral oedema</td>
<td>Fluid restriction Mild dehydration (&lt;5%): may have dry mouth or not clinically dehydrated but with concerns about risk of dehydration with negative fluid balance</td>
</tr>
<tr>
<td><strong>Temperature</strong></td>
<td>&lt;35.5°C tympanic or 35°C axillary</td>
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<tr>
<td><strong>Biochemical abnormalities</strong></td>
<td>Phosph -0.5 (Admit to HDP if with signs of refusing syndrome) K+ &lt;3, Na+ &lt;130, Calcium &lt;1.8, Mg2+ &lt;0.6, AB &lt;160g</td>
<td>Phosphate 0.5-0.7, K+ 3-3.5, Glucose &lt;2.6, Na+ &lt;135, Calcium 1.8-2.05, Mg2+ 0.6-0.8.</td>
<td></td>
</tr>
<tr>
<td><strong>Disordered eating behaviours</strong></td>
<td>Acute Food refusal or estimated calorie intake 400-600 kcal per day &gt;5 days</td>
<td>Intake 400-600 kcal per day 3-5 days. Severe restriction (less than 50% of required intake), vomiting, purging with laxatives</td>
<td>Moderate restriction, binging</td>
</tr>
<tr>
<td><strong>Engagement with management plan</strong></td>
<td>Violent when parents try to limit behaviour or encourage food/fluid intake, parental violence in relation to feeding (hitting, force feeding)</td>
<td>Poor insight into eating problems, lacks motivation to tackle eating problems, resistance to changes required to gain weight, parents unable to implement meal plan advice given by healthcare providers</td>
<td>Some insight into eating problems, some motivation to tackle eating problems, ambivalence towards changes required to gain weight but not actively resisting</td>
</tr>
<tr>
<td><strong>Activity and exercise</strong></td>
<td>High levels of uncontrolled exercise in the context of malnutrition (&gt;2 h/day)</td>
<td>Moderate levels of uncontrolled exercise in the context of malnutrition (&gt;1 h/day)</td>
<td>Mild levels of uncontrolled exercise in the context of malnutrition (&lt;1 h/day)</td>
</tr>
<tr>
<td><strong>Self-harm and suicide</strong></td>
<td>Self-poisoning, suicidal ideas with moderate to high risk of completed suicide - Overdose at presentation</td>
<td>Cutting or similar behaviours, suicidal ideas with low risk of completed suicide</td>
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<tr>
<td><strong>Other mental health diagnoses</strong></td>
<td>Other major psychiatric co-diagnosis, e.g. OCD, psychosis, depression</td>
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<tr>
<td><strong>Sit up from lying flat</strong></td>
<td>Unable to sit up at all from lying flat (score 0)</td>
<td>Unable to sit up without using upper limbs (score 1)</td>
<td>Unable to sit up without noticeable difficulty (score 2)</td>
</tr>
<tr>
<td><strong>Stand up from squat</strong></td>
<td>Unable to get up at all from squatting (score 0)</td>
<td>Unable to get up without using upper limbs (score 1)</td>
<td>Unable to get up without noticeable difficulty (score 2)</td>
</tr>
<tr>
<td><strong>Other-Medical complications</strong></td>
<td>Confusion and delirium, acute pancreatitis, gastric or oesophageal ulcer, sepsis, cardiac failure</td>
<td>Mallory-Weiss tear, gastric-oesophageal reflux or gastritis, pressure sores</td>
<td>Poor attention and concentration</td>
</tr>
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BMI: body mass index, bpm, beats per minute, ECG: electrocardiogram, OCD: obsessive-compulsive disorder; SBS: sit, squat; Stand.
What do we do in CAMHS?

Nice Guidelines 2017

- Family should be central (family interventions that directly address the eating disorder) AN and BN
- Education and advice crucial
- Monitoring of growth and development
- Attention to medical aspects
- Individual work to be offered
- 2nd line individual treatments
  - CBT-E/AFT AN
  - CBT-E BN
- Confidentiality should be respected where possible
Treatments offered - in line with NICE 2017 (started on day of assessment)

- Family Based Approach (core treatment)
- Medical review and monitoring
- Intensive home based treatment
- Nutritional support
- CBT-E
- Multi Family Treatment
- Adolescent focussed treatment
- Parents groups
- Carers workshop
- Inpatient admission if indicated – serous physical/psychiatric risk, unable to be managed safely at home
Who does well (predictors)?

- Early symptom change predicts good outcome across ED treatments (Vall, 2016)

- Good outcome in FBT predicted by:
  - Younger age
  - Shorter duration
  - Less severe weight deficit
  - Motivation to change (Gowers 2004; McHugh, 2007)
  - No comorbidity
Outcome on discharge

Discharge to

- PCAMHS 5%
- Adult ED 3%
- Third Sector 2%
- AMHT 1%
- CAMHS 17%
- GP 72%
Patient perspective (What your patient is thinking)

- You don’t have to be low in weight to have an eating disorder
- Young people struggle to accept they have an ED
- Difficult to trust doctors
- Social media can have marked influence
Catherine’s story

“This made me feel confused, since my weight was obviously not seen as low enough”

“An eating disorder makes you oblivious to the warning signs”

“I was very reluctant to go...in fear of the unknown”

“Eating disorders are mental illnesses; not always about the physical signs of weight loss”

“GP’s need more understanding about the early warning signs of eating disorders in teenagers”

“Acknowledge that it takes a lot of courage for young people to talk”
References

- NICE Guidelines 2017
- Junior Marsipan