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Eating Disorders in Children and Youth: Information for Primary Care

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Sommaire : Primary care providers play a key role in early identification of eating disorders. Early identification and prompt effective response is essential in mitigating the risk of chronicity, biopsychosocial morbidity and mortality. Primary care providers can refer patients to resources for their eating disorders, and play an ongoing role with monitoring, support and case management.

Case of Anorexia Nervosa

- Anne is a 14-yo who lives with her two professional parents, and who enjoys doing ballet
- She is brought to see you due to their concerns about weight loss.
- She has always been a perfectionist, and teachers have always praised her for getting good marks as well as her perfectionism.
- Stressors this year include academics, conflicts with parents and peer issues
- Due to teasing by peers about being fat, she started skipping meals, and began losing weight
- Now parents are concerned about her weight loss, but she can’t seem to stop losing weight…

Case of Bulimia Nervosa

- Brianna is a 14-yo teenager who lives with her single mother
- She is brought to see you for a yearly physical exam.
- However, you notice that her breath is extremely bad, and that her teeth appear to be eroded
- Stressors include ongoing conflict between parents (despite their being separated) as well as peer and school stresses
- She finds that binging helps her cope with her moods, and thus she binges on chips, ice cream and other junk foods. She learned from a classmate that by making herself vomit, she can avoid gaining weight

Epidemiology

Anorexia Nervosa	Bulimia Nervosa

Prevalence (lifetime)	0.9% female 0.3% males (Hudson, 2007)	1.5% females 0.5% males (Hudson, 2007)
Mortality rate	4% for anorexia nervosa (Crow, 2009)	3.9% for bulimia nervosa (Crow, 2009)

Etiology / Predisposing factors

- Up to 90% of teenage girls and many teenage boys will try to diet, however, only a small number develop an eating disorder
- Predisposing factors include:
    - Biological
        - Family history of an eating disorder or mood disorder
    - Psychological
        - Underlying comorbidity such as anxiety or depression
        - Fears of maturity
        - Personality traits such as perfectionism and low self-esteem,
    - Social
        - Reduced emotional expression within family - absence of family meals
        - Being sensitive to peer pressure to look and act a certain way,
        - Being sensitive to cultural influences and societal pressure focused on having a thin body ideal.
        - Participation in sports or activities that put a preference on certain body weight and shape (e.g. models, gymnasts, ballet dancers, etc.)

Screening Tools

Eating Disorder Screen for Primary Care (ESP)

1. Are you satisfied with your eating patterns?
2. Do you ever eat in secret?
3. Does your weight affect the way you feel about yourself?
4. Have any members of your family suffered with an eating disorder?
5. Do you currently suffer with, or have you ever suffered in the past, with an eating disorder

A 'No' to Q1 is an abnormal response.
A 'Yes' to Q2-5 is an abnormal response.
Is there an abnormal response? If so, then explore further.

History

Take parental concerns seriously. Children/youth tend to underreport their issues, so be respectful of parent intuition or concern regarding their child's nutrition.

Possible screening questions include…

Questions for the child	Questions for the parent
Do you have any concerns about your eating or exercising? How do you feel about your weight? Has your eating pattern changed in the recent past? Are your parents worried about your eating or exercising? Have you done anything to control your weight? Has your weight changed?	Any concerns about your child's eating or exercising? How does your child feel about his/her weight? Any recent changes in your child's eating patterns? Have there been changes in your child's weight?

If these questions screen positive, then consider further assessment:

Questions for the child	Questions for the parent
Have you lost or skipped having any periods? How much weight are you hoping to lose? What things have you tried in order to lose weight? How much exercise?	Any idea if your child has missed any periods? Any idea of much weight your child is trying to lose? What does your child do to control his/her weight? How much does s/he exercise?

Questions for comorbid mood/anxiety problems

- How is your mood? Any problems with your mood? Any problems with anxiety?
- Any problems with sleep? Energy? Concentration? Appetite? Loss of interests?

Symptoms

Anorexia nervosa

- Preoccupation with food or weight
    - Change of eating pattern to “healthy eating” e.g. Vegetarian, vegan, cutting out “fast food”, etc.
    - Focus on food labeling
    - Increased interest in food items/cooking
    - Frequent weighing / mirror gazing / body checking (suggesting increased preoccupation with weight)
- Restrictive behaviours
    - Patient not having meals with the family
    - In the morning, patient may say: “I ate before you got up”, when in reality, the patient did not eat at all
    - Baggy clothes (to hide loss of weight)
- Thoughts
    - Body image distortion
    - Dissatisfaction with body
    - Obsessive-compulsive thoughts around food
- Behaviours
    - Food rituals – moving food round on plate, cutting into small pieces, small bites, excessive chewing, spitting
    - Problems eating in public

Note: Symptoms of binging/purging can also be seen in anorexia nervosa

Bulimia nervosa

- Binging and purging behaviours
    - Family’s food disappearing more quickly than usual
    - Food wrappers, plates and other food items in room
    - Using bathroom immediately after eating (in order to induce vomiting
    - Toilet bowl stained with emesis (i.e. vomit)
    - Compulsive exercising (in order to burn off calories)
    - Self-induced vomiting
        - Dental erosion
        - Parotid hypertrophy
- Impulsivity symptoms seen in patients with BN such as:
    - Legal problems
    - Drug/alcohol abuse

- Mood disturbances
- Sexual hyperactivity
- Higher rate of suicide attempts (risk augmented by impulsivity and substance use)

Diagnostic Criteria

DSM-5 Criteria for Anorexia nervosa

- Persistent restriction of energy intake leading to significantly low body weight (in context of what is minimally expected for age, sex, developmental trajectory, and physical health
- Intense fear of gaining weight / becoming fat, or persistent behaviour that interferes with weight gain (even though significantly low weight).
- Disturbance in the way one's body weight or shape is experienced, undue influence of body shape and weight on self-evaluation, or persistent lack of recognition of the seriousness of the current low body weight
- Subtypes:
  - Restricting type
  - Binge-eating/purging type

DSM-5 Criteria for Bulimia nervosa

- Recurrent episodes of binge eating. An episode of binge eating is characterized by both of the following:
- Eating, in a discrete period of time (e.g. within any 2-hour period), an amount of food that is definitely larger than most people would eat during a similar period of time and under similar circumstances.
- A sense of lack of control over eating during the episode (e.g. a feeling that one cannot stop eating or control what or how much one is eating).
- Recurrent inappropriate compensatory behaviour in order to prevent weight gain, such as self-induced vomiting, misuse of laxatives, diuretics, or other medications, fasting, or excessive exercise.
- The binge eating and inappropriate compensatory behaviours both occur, on average, at least once a week for three months.
- Self-evaluation is unduly influenced by body shape and weight.
- The disturbance does not occur exclusively during episodes of Anorexia Nervosa.

Diagnostic Summary of Eating Disorders

Anorexia nervosa	Is the patient underweight?
Bulimia nervosa	Are there symptoms of binging and purging?
Binge eating disorder	Are there symptoms of binging, but without purging?
Other specified feeding or eating disorder (OSFED)	Are there problems with eating, but full criteria for not met for other conditions such as anorexia nervosa, bulimia nervosa, binge eating disorder?

Differential Diagnoses (DDx) of Eating Disorders

- Eating disorders are not diagnoses of exclusion.
- Symptoms and cognitions are not always apparent in the beginning, but may become more overt over time.
- If the patient does not fulfill DSM-5 criteria, be aware of potential alternative diagnoses such as the following (non-exhaustive) differential diagnoses

Malabsorption syndromes

• Inflammatory bowel disease such as Crohn's and ulcerative colitis	Are there symptoms such as abdominal pain, diarrhea, associated with weight loss, iron deficiency and inflammatory markers?
• Celiac disease	Are there symptoms such as growth problems, low appetite, diarrhea, abdominal bloating? Do symptoms appear worse with gluten?
Endocrine	
• Diabetes mellitus	Are there symptoms such as frequent urination, excessive thirst, unexplained weight loss, hunger, fatigue?
• Hyperthyroidism	Are there symptoms such as nervousness, anxiety, fast heart rate, tremors, sweating, weight loss and sleep problems?
Neoplastic	
• CNS tumours	Headaches, nausea/vomiting, focal symptoms?
• Lymphoma, leukaemia	Night sweats, fever, weight loss, swollen lymph nodes?
Psychiatric	
• Depression	Problems with mood?
• Obsessive compulsive disorder	Problems with obsession or compulsions?
• Anxiety disorder	Problems with anxiety?
Others	
• Substance Use	Any problems caused by using alcohol or recreational drugs?
• Reduced access to food due to poverty	Problems affording food?
• Unstable living situation	Abusive relationships, frequent changes in housing?

Physical Exam

Findings on physical exam may include, but are not limited to the following:

	Restriction	Binging/Purging
General	Looks underweight	Looks normal or slightly overweight May have signs of hypovolemic
Vitals	Dehydration, low blood pressure, heart rate, respiratory weight Orthostatic changes Low temperature (hypothermia)	
Head/Neck	Thinning of hair	Parotid hypertrophy Periocular petechiae (from vomiting) Decayed teeth Bad breath
Cardiac	Arrhythmias Congestive heart failure	

Respiratory		Aspiration pneumonia
GI	Decreased bowel sounds, bloating, abdominal pain	Reflux symptoms
MSK	Lanugo hair Acrocyanosis	Russell sign (callous on back of hands from self-induced vomiting)
Neurologic	Abnormal taste, weakness, neuropathies, cognitive dysfunction	Losses of gag reflux Weakness, neuropathies
	Decreased level of consciousness may indicate physical effects or drug ingestion/overdose	

Investigations

- Most patients with an eating disorder in primary care will have normal laboratory results (i.e. lab results may not accurately indicate how severe the illness is), and this is especially true for anorexia nervosa
- Normal lab results should not be interpreted as reassuring in the context of severe ED symptoms and weight loss
- Rather, normal lab results are assessed primarily to determine the need for hospitalization.
- In summary, do not be less vigilant in the face of normal vital signs and lab investigations!

Baseline laboratory may include:

Investigations	Possible findings
• CBC	Anemia, leukopenia, thrombocytopenia from malnutrition or GI losses
• Electrolytes	May be low (suggests water loading and/or purging)
• Random blood glucose	May be low
• Calcium • Magnesium • Phosphate	May be low though this is not common Hypophosphatemia may occur during refeeding process
• Liver function tests (LFTS)	May be slightly elevated from malnutrition or refeeding Albumin normal unless very chronic eating disorder
• Vitamin D	May be low from malnutrition
• Thyroid, e.g. T3, T4, TSH	Low to normal T4 Low T3 Low, normal or mildly elevated TSH Low estrogen/testosterone Abnormal LH Hyperadrenocorticism
• FSH, LH, estradiol	Reduced in starvation
• Ferritin	May be high as acute phase reactant
• Electrocardiogram (ECG)	Sinus bradycardia Arrhythmias Rule out QTC prolongation

Investigations to help rule out other conditions include:
• ESR
• Celiac screening
• TSH
• Bone age from X-rays can help with assessing delayed growth

Management

- Referral to your local eating disorder program if criteria are met.
    - Eating Disorders Programs generally consist of a team approach with:
    - Physician(s) (such as family doctors, paediatricians or psychiatrists)
    - Therapist(s) (such as psychologists, or social workers)
    - Dietitian(s)
    - The family, which is the primary resource in the child's recovery process
- Typical treatments for eating disorders include:
    - Family based treatment (FBT)
        - Empirically validated treatment with manualized approach performed by an FBT trained therapist.
        - Focus is on weight restoration.
        - It is less studied in bulimia nervosa wherein DBT (dialectic based therapy) is thought to be effective
    - Emotion focused family therapy (EFFT)
        - Also has been used with success
    - Individual counseling/therapy
        - Helps a person to learn more about eating disorders, and examine some of the difficult feelings that lie underneath
        - Useful with comorbid mood/anxiety issues as well
        - They will work on improving their self-esteem and developing new coping strategies.
    - Motivational enhancement approaches also help the patient to become motivated to recover from an eating disorder.
    - Family therapy:
        - Education about eating disorders, and helping parents develop the tools and strategies needed to support their child's recovery. Once the eating disorder behaviours have improved, family work may also focus on reducing any other stress in the family, and on adolescent issues in general.
- Referrals to other specialists may be subsequently indicated for treatment of comorbid psychiatric disorders.

Medication

Anorexia nervosa

- There are no medications proven to treat anorexia nervosa per se
- Atypical antipsychotics may be useful for symptoms such as overwhelming anxiety that can cause patients to become 'stuck' and 'rigid' in their disease process.
- Examples
    - Olanzapine
- Once weight has been restored, if there are comorbid mood/anxiety disorders, then SSRI's may be helpful
- Until weight is restored "food is the best medication".

Bulimia nervosa

- SSRI's, at relatively higher doses, have shown some efficacy in binge reduction

Hospitalization

Acceptable indications for a patient's admission include:

- Medical indications (Khalifa, 2019)
  - Weight is less than 75% of ideal body weight,
  - Temperature is lower than 35.5°C (95.9°F),
  - Heart rate is less than 45 beats/min,
  - Systolic blood pressure level is lower than 80 mm Hg,
  - Orthostatic change in pulse is higher than 20 beats/min, or orthostatic change in blood pressure is greater than 10 mm Hg.
- Patient is not getting better outside of the hospital despite support from their family and professionals
- Patient has severe psychiatric comorbidity, and/or inadequate family support.
- Criteria will be tightened in the face of:
  - Younger children (<12)
  - Families unable to provide strong containment
  - Youth who are 'unmotivated' or psychiatrically unstable
  - Youth who experience severe dysfunction in other domains

Note that these criteria are guidelines only and must be considered within the overall context.

When to Refer

- When to refer to a specialized treatment program:
  - Lack of progress despite attempted intervention
  - Chronicity of > 6-12 months
  - Significant comorbidity
  - Medical instability (may need to send patient to the ER)
- With many programs, it may be possible to ask for a telephone consultation if the provider is uncertain how to proceed

Patient Education

- CanPed.ca is a website that supports caregivers of children/youth with an eating disorder. http://canped.ca

Summary

- Primary care providers play a key role in early identification of eating disorders
- Early identification and prompt effective response is essential in mitigating the risk of chronicity, biopsychosocial morbidity and mortality
- Primary care providers can refer patients to resources for their eating disorders, and play an ongoing role with monitoring, support and case management

References

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