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Anorexia Nervosa: Information for Primary Care

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Summary: Anorexia nervosa is a common eating disorder affecting mostly young adolescent girls and young women. It is characterized by persistent restriction of energy intake, an intense fear of gaining weight, and disturbed self-perceived shape or weight. Anorexia nervosa is commonly encountered by primary care physicians and can be managed through nutritional rehabilitation, education, family therapy, and CBT.

Case

Identifying data	32-yo female
Chief complaint	Stress, low energy and troubles sleeping.
HPI	Relationship stress, e.g. "My boyfriend and I broke up after many years. I see all my friends getting married and moving on with their lives. I feel like such a loser." Work stress, e.g. "Work has been incredibly stressful. We've had all these layoffs, and my boss is so critical and demanding." Family stress, e.g. critical parents. "They nag me on why I'm not yet married." She reports that she exercises frequently, and is careful about her diet.
Physical Exam	She appears visibly underweight, and her weight is <85% of her ideal weight.

Epidemiology

- Prevalence 0.4% in young females (age 15-24) in Western cultures
- 10:1 female-to-male ratio
- >50% adults with eating disorders had their disorder first diagnoses by their primary care physician (Sim LA et al., 2010)

Clinical Presentation

Patients may not necessarily present in primary care with the chief complaint that they have an eating disorder such as anorexia nervosa but rather usually present with other issues and symptoms such as:

- Physical symptoms of under nutrition, e.g. constipation, bloating, fluid retention
- Wanting advice for weight loss, despite being underweight

- Mood or anxiety problems
- Neurovegetative problems such as poor sleep, energy, concentration

Screening

Do you suspect your patient might have an eating disorder?
Consider this 2-question screener:

1. Do you worry excessively about your weight?
2. Do you think you have an eating problem?

Is the 2-question screener positive?
If so, then consider the SCOFF questionnaire (Morgan et al., 1999):

- Ask
    - Do you make yourself S)ick because you feel uncomfortably full?
    - Do you worry that you have lost C)ontrol over how much you eat?
    - Have you recently lost more than O)ne stone (14 lbs or 6.3kg) in a 3 month period?
    - Do you believe yourself to be F)at when others say you are too thin?
    - Would you say that F)ood dominates your life?
- Scoring guide:
    - Each “yes” = 1 point;
- Has the patient scored more than 2?
    - A score of 2 points indicates 100% sensitivity for a diagnosis of either anorexia or bulimia.
    - Consider further assessment.

Diagnosis

Anorexia nervosa is characterized by:

- Persistent energy intake restriction
- Intense fear of gaining weight or becoming fat or behaviour that interferes with weight gain
- May often also have:
- Excess exercising
- Standing, moving, restlessness
- Self-induced vomiting
- Laxatives, diet pills

DSM-5 Criteria for Anorexia Nervosa

1. Restriction of energy intake relative to requirements, leading to a significantly low body weight in the context of age, sex, developmental trajectory, and physical health. Significantly low weight is defined as a weight that is less than minimally normal or, for children and adolescents, less than that minimally expected
2. Intense fear of gaining weight or of becoming fat, or persistent behaviour that interferes with weight gain, even though at a significantly low weight
3. Disturbance in the way in which one’s body weight or shape is experienced, undue influence of body weight or shape on self-evaluation, or persistent lack of recognition of seriousness of current low body weight

Two types:

1. Restricting Type:	During the last 3 months, the individual has not engaged in recurrent episodes of binge eating or purging behaviour Weight loss achieved primarily through dieting, fasting, and/or excessive exercise

2. Binge-eating/purging type:	During the last 3 months, the individual has engaged in recurrent episodes of binge eating or purging behaviour (such as self-induced vomiting; laxative use; diuretic use; enemas).

Differential Diagnosis

- Consider other causes of low weight or weight loss especially when presenting features are atypical (e.g., onset after age 40 years) such as:
  - GI: Gastrointestinal disease
  - Endocrine: Hyperthyroidism
  - Neoplastic: Occult malignant disease
  - Infectious: Acquired immunodeficiency syndrome (AIDS)
  - Individuals with medical conditions may experience serious weight loss however, generally do not have an intense fear of gaining weight

- Consider other DSM-5 disorders such as

	What is similar with anorexia	What is different
Eating Disorders		
• Bulimia nervosa	There may be excessive concern with body shape and weight	In bulimia, weight is normal or above normal There may be Purging Behaviours (e.g., self-induced vomiting)
• Avoidant/restrictive food intake disorder (ARFID)	There is significant weight loss or significant nutritional deficiency in ARFID	In ARFID, troubles with intake are more due to other factors (e.g. sensory issues, significant "picky eating") and individuals are not significantly worried about gaining weight nor becoming fat.
Other conditions		
• Major depressive disorder	Severe weight loss may occur	With major depressive disorder alone, patients do not have desire for excessive weight loss nor intense fear of gaining weight
• Schizophrenia	Odd eating behaviour and occasionally weight loss can occur	Individuals with schizophrenia generally do not fear gaining weight and body image disturbance
• Substance use disorders	May experience low weight due to poor nutritional intake	Patients with substance use generally do not fear gaining weight and do not manifest body image disturbance.
• Social phobia	May feel humiliated or embarrassed to be seen eating in public.	Patients with social phobia have a primary fear of being embarrassed or judged by others (as opposed to simply weight gain)
• OCD	May exhibit obsessions and compulsions related to food	In OCD, there is other obsessions/compulsions unrelated to food
• Body dysmorphic disorder	May be preoccupied with an imagined defect in bodily appearance.	Consider body dysmorphic disorder if the distortion is unrelated to body shape and size (e.g. worry that one's nose is too big).

• Autism spectrum disorder (ASD)	May have narrow stereotyped interests or obsessions related to food and nutrition	Do not generally have fear of gaining weight per se

Comorbidity

- Conditions are commonly seen along with anorexia nervosa:
- Bulimic symptoms: 50% of those with anorexia nervosa eventually develop bulimic symptoms later (Mehler PS., 2001)
- Depression
- Anxiety
- Personality disorder 'Cluster C' traits

Physical Exam

General appearance	Emaciated, sunken cheeks, sallow skin, flat affect, underweight
Vital signs	Bradycardia, hypotension, hypothermia, orthostasis
Height/Weight	Measure height /weight
Skin	Cold, blue hands with slow capillary refill suggests poor metabolism and poor peripheral perfusion Dry skin, lanugo (find body hair), dull or brittle hair, nail changes, hypercarotenemic, subconjunctival haemorrhage
HEENT	Sunken eyes, dry lips, gingivitis, dental caries With recurrent binging/vomiting à Salivary enlargement (parotitis), dental enamel erosion
Breasts	Atrophy
Cardiac	Mitral valve prolapse, click, or murmur; arrhythmias HR <60 suggests hypometabolism Orthostatic difference >25 BPM suggests autonomic dysregulation and/or volume depletion
Abdomen	Scaphoid with severe caloric restriction Distended if significant binging Palpable loops of stool, tender epigastrium
Extremities	Edema, calluses on dorsum of hand (Russell's sign) from induced vomiting, acrocyanosis, Raynaud's phenomenon
Neuromuscular	Trousseau's sign,* diminished deep tendon reflexes

Reference: Williams PM et al., 2008

Investigations

Anorexia is a clinical diagnosis, thus there are no diagnostic tests for anorexia, however it is important to evaluate medical complications of starvation

Recommended investigations (Hay et al., 2014)	Comments
• CBC	May show leukopenia, mild anemia

• Electrolytes: Na, K, Cl	May show metabolic alkalosis, hypochloremia, and hypokalemia, if there is vomiting
• Serum glucose	May be low
• BUN/Cr:	May be elevated in dehydration
• Liver enzymes	May be elevated
• Cholesterol	May be elevated
• Mg, Zn, Phosphate	May be low
• Thyroid: T3, T4	May be low to normal
• ECG	Sinus bradycardia or prolonged QT interval on ECG is common
• Bone mineral density	Indicated at baseline if patient underweight > 6-months; repeat q 2-years if still struggling with an eating disorder (Mehler et al., 2011)
• ESR	Helpful to look for other causes of weight loss

Management in Primary Care

Treatment depends on the severity of illness, whether it is mild, moderate or severe:

1. **Mild**

    - Body image is minimally distorted
    - Patient's goal weight is >90% of average weight for height
    - Weight loss is not excessive, healthy weight loss methods
    - Management
        - Complete assessment of weight loss
        - If patients are underweight, set a healthy goal weight (which fluctuates)
        - Weight goals: A usual weight goal is 0.5-1 kg per week in inpatient settings, and 0.5 kg in outpatient settings (requires 3,500 to 7,000 extra calories a week)
        - Refer to dietician if necessary ("Food is medicine").
        - Refer to mental health services if need is identified.

1. **Moderate**

    - Moderately distorted body image
    - <90% of average weight for height, and patient refuses to gain weight
    - Management
        - Complete assessment of weight loss
        - Establish weight gain goal (target weight of >90% average weight), with target weight gain of 0.5-1 kg/week
        - Discuss daily routines such as
            - Meal schedule / snack schedule
            - Limiting physical exercise unless patient agrees to eat/drink before
        - Referrals
            - Dietician
            - Eating disorder specialists : Most patients with anorexia should be treated as outpatients, or in a day treatment program for eating disorders (as opposed to an inpatient program)
        - Follow-up every 1-2 weeks

1. **Severe**
    - Significantly distorted body image
    - Patient's goal weight is <85% of average weight for height
    - Management
        - Complete assessment of weight loss
        - Establish weight gain goal with target weight gain of 0.5-1 kg/week
        - Referral to mental health and eating disorder specialists: Most patients with anorexia should be treated as outpatients, or in a day treatment program for eating disorders (as opposed to an inpatient program)
        - Follow-up

Management: Indications for Hospitalization For Eating Disorder

Poor intake and/or weight loss despite less intensive treatments	Persistent decline in oral intake, or a rapid decline in weight (> 1 kg/week) in patients who have already lost more than approximately 20% of their individually estimated healthy weights, despite maximally intensive outpatient or partial hospitalization. Weight < 75% ideal body weight in child/adolescent <10% body fat or ongoing weight loss Rapid, progressive weight loss
Abnormal vital signs	Orthostatic hypotension with an increase in pulse of 20 bpm or a drop in standing blood pressure of >10-20 mmHg (within a minute from lying to standing) BP low < 90/60 mm Hg Postural change in BP > 20 mmHg with signs of hypovolemia Syncope Bradycardia: HR <40 bpm in adult; HR <45 bpm in child/adolescent Tachycardia: RR >110 bpm Hypothermic body temperature < 35.5°C or 95.5°F
Metabolic abnormalities such as fluid / electrolyte imbalances	Hyponatremia: Na <130 mmol/L, (normal 136-145) Hypokalemia: K < 2.3 mmol/L in adult; < 3.2 mmol/L in child (normal 3.5-5.10) Hypophosphatemia: Phosphorus below normal on fasting (normal 0.81-1.58) Magnesium <0.55 mmol/L (normal 0.74-1.03) Hypoglycemia: Serum glucose <2.5 mmol/L (normal 3.8-11)
Other medical indications	Severe depression with suicide risk Need for withdrawal from laxatives, diuretics or diet pills Intractable vomiting Esophageal tears, hematemesis Uncontrolled comorbid diabetes, to supervise food intake, exercise and insulin intake. Inadequate cerebral perfusion (e.g. confusion, syncope, altered level of consciousness). Pregnancy if it is felt that the fetus is at risk. Failure to respond to outpatient treatment.

Management: Motivational Enhancement Strategies

Forming a therapeutic alliance is challenging, as many patients with anorexia present in a 'pre-contemplative' state, i.e. they do not believe they have a problem, nor do they believe they need help.

Simply telling them to eat can make them feel criticized and judged, which worsens the therapeutic alliance.

Motivational enhancement strategies can thus be very powerful

Sample questions / statements

Ask for patient's perspective	I'd like to ask some general questions about your health. Any concerns about your weight? How do you feel about your weight? Any concerns about your eating habits? How do you feel about your eating habits?
Broaching the topic about eating habits	I am concerned about your eating. Would it be okay if we talked a bit more about your eating habits?
Validate if the patient doesn't see that they have any problem	Thanks for letting me know that you do not feel your eating or your weight is a problem."
Pre-motivational questions	What do you like about your eating? What do you dislike? Would it be helpful if we could find a way to change the way you eat? On the other hand, if we changed the way you eat, are there any problems from this?
Share with them concerns that you might have	I hope you don't mind, but I'm actually quite worried about your weight. What do you think?
Ask when they might consider weight to be an issue	What would tell you that your weight is a problem? Is there a goal weight that you are aiming for?"
Agree on a common goal	
For patient with issues with stress…	You mentioned that you are under a lot of stress… Would it be helpful if we could find a way to have less stress, or support you with the stress that you are under?
For patient with issues with sleep/energy	You mentioned problems with poor sleep and energy… Would it be helpful if we could find a way to hep you have better sleep and sleep?
Common goals	"Feeling less depressed, or happier" "Feeling less anxious, or more confident" "Less stress, e.g. peers, parents, school." "Getting better sleep"
Agree strategies to reach agreed upon goals	Do you have any ideas on how to help with your stress?
Mentioning eating disorders program	I am worried about you. But I have some good news… I know of an excellent program for individuals with your concerns. How does that sound?"
Thanking the patient	Thanks for being open to thinking about this… It means a lot to me.
Follow up	I would like to see you in a week or two to see how things are going. How's that sound?

Management: Medications

The best medication is food and nutrition, i.e. "food is medicine."

SSRIs	• Possibly helpful for comorbid anxiety / depression, though not for anorexia per se (Sim Let al., 2010) • Fluoxetine: Start at 10 mg daily, increase up 60 mg daily

Antipsychotics	• Small dosages may be helpful for reducing anxiety/obsessions as well as stimulating appetite • Olanzapine: Start at 2.5 mg day, and increase up to 10 mg daily (Bissada et al., 2008) • Quetiapine: Start at 50 mg daily, increase up to 150-300 mg daily (Powers et al., 2012)
Nutritional supplements / vitamins	• Calcium supplements if there is poor dietary intake • Vitamin D is inadequate daily sunlight exposure

Management: Psychological

- Focus on modifying thoughts and beliefs about food, weight, and self-concept and develop relapse prevention (Williams PM et al., 2008)
- Educate patients and their families about their eating disorder
    - Help them understand that the disease is in control of the patient and that it is not by choice
    - Help them understand how serious anorexia is including the risks of death and long term complications
    - Help them lift the blame and the guilt
    - Empower them towards accepting and implementing treatment
- Consider referring for
    - Specialized eating disorder program
    - Individual psychotherapy
        - Patients may have issues that can benefit from 1:1 counseling/therapy
        - Modalities include CBT
        - Cognitive factors: over-evaluation of weight and shape, negative body image, perfectionism
        - Behavioural factors: weight control such as diet restriction and purging behaviours, and body checking
    - Family based therapy
        - Family therapy is important for children/youth with eating disorders
        - Regardless of how the patient’s problems started, the family is always part of the solution
        - Helps to improve patient’s ability to communicate and turn to family members for support, as well as improves family’s ability to support the patient

Management of Anorexia Nervosa: Follow-up visits

- Weight
    - Weigh at every visit
    - Preferably weekly visits though frequency may vary depending on severity of illness
- Typical questions and areas to ask about for follow-up visits:
    - How have things been since last time?
        - How are things with your appetite since last time?
        - How has your mood been?
        - How has your stress level been?

When and Where to Refer

If symptoms are mild • Body image is minimally distorted • Patient’s goal weight is >90% of average weight for height • Weight loss is not excessive, healthy weight loss methods	• Follow-up with family physician • Refer to dietician if necessary • Refer to mental health services if need is identified

If symptoms are moderate • Moderately distorted body image • <90% of average weight for height, and patient refuses to gain weight	• Refer to dietician • Consider referral to eating disorder specialists
If symptoms are severe • Significantly distorted body image • Patient's goal weight is <85% of average weight for height • Weight loss is severe enough to cause disruption of vital signs, and inpatient hospitalization is required to ensure adequate nutrition	• Referral to inpatient hospitalization • Referral to eating disorder specialists

Practice Guidelines

American Psychiatric Association (APA). Practice guideline for the treatment of patients with eating disorders. 3rd ed. Washington (DC): American Psychiatric Association (APA); 2006 Jun. 128 p. Retrieved Aug 14, 2015 from http://www.guideline.gov/content.aspx?id=9318
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