



EATING DISORDERS TOOLKIT:

Standards of Practice in
the Primary Care Setting

2nd Edition by Dr. Jennifer Mooney
and the Provincial Steering Committee

20
23

Table of Contents

1	Purpose
2	Important Things You Should Know About Eating Disorders
2	Your Role as a Practitioner
3	General Considerations
3	The Patient's Experience
4	Building Therapeutic Alliance and Communication
5	Additional Considerations
6	Youth
7	Common Signs, Symptoms, & Physiologic Impact of EDs
8	Initial Assessment: History
8	Screen for Disordered Eating (SDE)
8	The Nine Item Avoidant/Restrictive Food Intake Disorder Screen (NIAS)
9	Further Areas of Inquiry
10	Initial Assessment: Physical Exam
11	Estimate Severity/Degree of Malnutrition (Youth)
11	Estimate Severity/Degree of Malnutrition for Underweight Individuals (Adults)
13	Initial Assessment: Investigations
14	Ongoing Medical Monitoring
15	Supportive Treatment for Ongoing Physical Symptoms
16	Indications for Hospital Admission due to Medical Instability
17	Criteria for Involuntary Admission Under the Mental Health Act (MHA)
18	Specific Criteria for Involuntary Admission & Psychiatric Treatment of EDs
19	Refeeding Syndrome
20	Algorithm: Approach to an ED in the Community
21	Local Resources for Eating Disorder Care
22	Helpful Resources
23	Acknowledgements
24	About the Artist (Cover Illustration)
25	References

Purpose

The aim of this toolkit is to provide a reference to primary care practitioners (PCPs) that promotes early recognition of eating disorders (EDs) and prevention of associated medical morbidity and mortality.

This document also aims to clarify the role of the PCP in working with, monitoring, and treating eating disorders in a shared care model.

We strive for early diagnosis of EDs and connection to treatment in a patient/family-centered, safe, and compassionate manner.



Important Things to Know About Eating Disorders

Your Role as a Primary Care Practitioner

11, 19, 27

- Medical providers play a critical role in diagnosing and managing eating disorders, which often present to primary care as the initial point of contact
- Many EDs go undetected in primary care despite frequent contact. Early recognition and treatment results in proved morbidity, decreased chronicity of illness, and decreased mortality
- Recovery from an ED is possible for all populations
- Expertise in eating disorders are not a prerequisite to effective management
- Early recognition and dx prevent chronicity
- PCPs may provide care in a shared model with ED specialized supports

- Providing compassionate and collaborative care will support the therapeutic alliance, however it must be balanced with ensuring patient safety
 - Mandatory treatment is required if a patient is medically or psychologically unstable
 - Some aspects of care are not negotiable (nutrition, working on ED behaviors, medical monitoring, medical follow up, etc.). This is particularly important as some patients may deny ED concerns. For youth in the outpatient setting, providers can empower and support parents/caregivers in setting treatment non-negotiables

- PCPs play a crucial role in the following:
 - Recognizing patients with possible EDs and excluding other causes of weight loss
 - Assessing nutritional and psychosocial status
 - Providing medical monitoring for growth and development (youth), medical instability and complications of EDs
 - Developing an ongoing relationship, providing holistic care and identifying concurrent diagnoses
 - Facilitating interventions and referrals as needed
 - Encouraging nutritional restoration, cessation of ED behaviors, social reconnection, and supporting patients toward recovery
 - Supporting youth throughout the transition from pediatric to adult healthcare

General Considerations

1, 11, 27

- Acute malnutrition and associated complications (electrolyte imbalances, medical instability) are medical emergencies. Failure to thrive and chronic malnutrition require urgent medical attention
- Limited insight into the severity of illness is common. Feelings of shame and guilt may also result in limited sharing of ED symptoms and behaviors
- Plotting growth parameters on a WHO growth chart from birth to age 18 is crucial in recognizing a possible ED, indicating medical instability, and directing care
- EDs carry a high mortality risk due to both medical complications and suicide. ALWAYS assess psychiatric safety and risk of suicide

The Patient's Experience

11, 13

- It is helpful to take an individualized approach with each patient as every patient is different
- A trauma-informed approach can create safety for those who may have past experiences with trauma or adverse events
- Ambivalence or fear of change is an expected part of the illness
- Change is difficult because EDs function as a strong coping mechanism



Building Therapeutic Alliance and Communication^{7, 14}

- Therapeutic alliance is foundational to treatment follow through
- Empathizing, recognizing strengths and validating emotions is important
- Always provide encouragement and support
- Acknowledge that your goal is to ensure medically stability and work towards achieving a healthy weight to support physiologic function
- Emphasize that food is the medicine required for medical stability and recovery
- Avoid arguing with obvious ED thoughts
- Remain aligned as the healthcare team
- Explore barriers to progress and how to support them in overcoming these
- Use mindful language when interacting to align more effectively with the patient

When you say...	Someone with an ED might think...	Try to validate the emotion/emotional experience instead using...
<p>"You look healthier"</p> <p>"You look great!"</p>	<p>"I look fat"</p>	<p>"Nice to see you smiling"</p> <p>"Thank you for coming in today, it's great to see you"</p>
<p>"You don't look sick"</p> <p>"You don't look like you have an ED"</p>	<p>"I'm not thin enough..."</p> <p>"I'm not sick enough..."</p>	<p>"Let's talk about what's been going on for you. You mentioned that you're struggling with eating..."</p>
<p>"You look thinner"</p> <p>"You've lost weight"</p>	<p>"Great! I should stay this way"</p>	<p>"I am concerned about your health because I care about you and know you deserve better"</p>
<p>"You look awful like this; you need to eat more"</p>	<p>"I don't want to"</p> <p>"I feel guilty if I eat more... I don't deserve to eat"</p> <p>"I'll gain weight"</p>	<p>"From what you've told me, you're having a hard time and eating is difficult. You also said you want to avoid hospitalization. How can we work together to achieve your goal?"</p>
<p>"I know how you feel"</p>	<p>"You have no idea"</p>	<p>"This has been very difficult... you've been working hard and that takes a lot of courage"</p>

Additional Considerations

Youth	Please see section below (Youth) for additional details specific to youth.
Median/higher BMI ¹⁶	Can be severely malnourished. Have the same risks as those with low BMIs if there has been significant weight loss.
Gender ^{5, 25}	Males often go underrecognized. They may present with a focus on muscularity as opposed to thinness. Increased ED behaviors may be seen in gender diverse individuals. Gender-affirming motivations may lead to dietary restriction or compensatory behaviors to prevent puberty onset or progression. It is important to support gender identity and connect to supports while simultaneously supporting nutritional needs.
Athletes ^{10, 30}	Disordered eating/EDs are common among athletes. Malnutrition significantly impacts health and sport performance. Athletes require higher caloric meal plans. If not meeting energy needs, there is a risk of relative energy deficiency in sport, which may impact BMD, reproductive health, and physiologic processing. HR < 50 may warrant further assessment in the context of weight loss, even in high performance athlete.
Racialized Populations ^{1, 15, 22}	EDs exist among all cultural and racial backgrounds. Racialized populations face unique barriers to care: stigmatization, lack of recognition by the community or clinicians, lack of available services, and historical mistrust and discomfort navigating the healthcare system due to colonial practices.
Chronic Illness ¹⁶	Individuals with chronic conditions requiring dietary control may be at increased risk of EDs (i.e., diabetes mellitus, cystic fibrosis, inflammatory bowel disease, celiac disease).
Neurodivergence ⁴	Neurodivergent children are shown to experience feeding difficulties and EDs at higher rates compared to neurotypical children. ARFID and AN are both commonly comorbid with Autism. If restricted eating causes risk to nutritional status, a thorough nutritional and medical assessment is recommended.
Substance Use ²⁹	Individuals with EDs use substances at a higher rate than the general population. Substance use may also have appetite suppressing qualities and mask the ED. The most common substances used include caffeine, tobacco, alcohol, and stimulants. Simultaneous care for ED and substance use disorder is important.

- **Plotting growth parameters from birth to age 18 on a WHO Growth Chart can assist in diagnosis, classify severity, and direct treatment. WHO Growth Charts can be found [here](#)**
- Youth may present with weight loss OR a failure to gain weight/height in a developmentally appropriate pattern. Consider using parameters on history, ER records or other available medical records to supplement data when historical data is not available in office
- Calculating Treatment Goal Weight is encouraged. It may be reassessed every 6 months to account for growth. The goal is to slowly return to treatment goal weight over time
- Treatment goal weight may be estimated using any of the following methods:
 - Premorbid growth trajectories (ideally)
 - Calculating weight using current height and 50th percentile BMI or median BMI (mBMI)
 - Using a weight that falls on the same percentile as the current height
 - Using the weight at loss/resumption of menses plus 2kg for assigned females
 - Please see the Canadian Pediatric Statement "[Determining Treatment Goal Weight for Children and Adolescents with Anorexia Nervosa](#)" for details
- **A Weight that is < 70% of the calculated treatment goal weight indicates severe malnutrition and medical instability. This is calculated by [current weight / treatment goal weight] x 100**
- Most pediatric patients with EDs can be managed as outpatients
- Family-Based Treatment (FBT) is the treatment approach that is most recommended in Canadian guidelines for pediatric eating disorders. **It is helpful to start FBT principles in the community while awaiting treatment if appropriate**
 - Educate: Parents do not cause EDs, it is a serious illness with neurobiological roots and requires treatment. Parents/caregivers are the best supports to help their child's recovery
 - Externalize: The patient is not their ED, it is okay to be mad at the ED but not at the child who is suffering, the ED may impact the child's ability to make nutrition related decisions
 - Empower: Caregivers are empowered to take control of the patient's nutrition and exercise behaviors and encouraged to support and supervise all snacks and meals
 - Please see "[Family-Based Treatment of Children and Adolescents with Anorexia Nervosa: Guidelines for the Community Physician](#)" for details
- Prognosis: Early diagnosis is associated with shorter duration of untreated illness and improved outcomes
 - Full restoration of weight is an important early goal and associated with better outcomes
 - Overall recovery rates are approximately 70%, however vary greatly ¹⁶

For more Information on children/youth with EDs, use the links below to access the BC Child and Youth Eating Disorders Complex Care Clinical Pathway and Support Tool (launching early 2024):



Pathways BC (www.pathwaysbc.ca)



Compass BC (www.compassbc.ca)

Common Signs, Symptoms, & Physiologic Impact of EDs ^{1, 7, 9, 16, 17, 20, 21}

	Signs & Symptoms	Physiologic Impact
General	Preoccupation with weight, food, or body Weight loss, gain, or fluctuations in weight Failure to gain appropriate weight in youth Fatigue, cold intolerance	Low energy, weakness
Neuropsychiatric	Poor concentration, insomnia, anxiety, low mood, obsessive behaviors, social withdrawal, self-harming behaviors	Seizures, brain atrophy, memory loss, decreased executive functioning, learning difficulties
Head and Neck	Oral trauma, parotid enlargement, temporal wasting, subconjunctival hemorrhage	Gingivitis, enamel erosion
Cardiorespiratory	Hypotension, bradycardia, arrhythmias, dizziness, syncope, chest pain, palpitations, edema	Prolonged QTc, cardiac atrophy, pericardial effusion, congestive heart failure, mitral valve prolapse, sudden death
Gastrointestinal	Bloating, early satiety, epigastric discomfort, gastroesophageal reflux, constipation	Dysphagia, Esophagitis, Barrett's Esophagus, Mallory-Weiss Syndrome, Boerhaave Syndrome, gastroparesis, superior mesenteric artery syndrome, cathartic colon, acute pancreatitis, transaminitis
Endocrine & Metabolic	Hypoglycemia, delayed puberty, decreased libido, unexplained infertility, amenorrhea or irregular menses, decreased erections	Hypoglycemia, sick euthyroid syndrome, cortisol dysregulation, pubertal suppression, infertility
Renal	Recurrent UTIs, acute kidney injury, fluid retention, decreased bladder control	Electrolyte abnormalities (Hypokalemia, hypophosphatemia, metabolic alkalosis), chronic kidney injury
Growth & Musculoskeletal	Muscle wasting, short stature, failure to thrive	Decreased bone mineral density, fracture risk, growth stunting
Dermatologic	Lanugo, hair loss, carotenemia, Russell's sign, xerosis	Poor wound healing, easy bruising, acrocyanosis, cheilitis, nail dystrophy

Initial Assessment: History

Screen for Disordered Eating (SDE)¹⁹

<https://www.nyeatingdisorders.org/documents/Screen%20for%20Disordered%20Eating.p>

- 1 Do you often feel the desire to eat when you are emotionally upset or stressed?
- 2 Do you often feel that you can't control what or how much you eat?
- 3 Do you sometimes make yourself throw up (vomit) to control your weight?
- 4 Are you often preoccupied with a desire to be thinner?
- 5 Do you believe yourself to be fat when others say you are thin?

If the patient answers 'yes' to two or more questions, this suggests a possible eating disorder. A comprehensive history and physical is recommended.

Nine Item Avoidant/Restrictive Food Intake disorder screen (NIAS)³

The SDE does not capture ARFID. NIAS screens for three ARFID subtypes, [found here \(pg 1\)](#).

It is scored strongly disagree (1) to strongly agree (6).

- A score ≥ 10 on questions 1-3 may indicate sensory sensitivity subtype
- A score of ≥ 9 on questions 4-6 may indicate lack of interest subtype
- A score of ≥ 10 on questions 7-9 may indicate fear of aversive consequences subtype

Further Areas of Inquiry ^{7, 11, 16, 17}

Nutrition	Typical intake including fluids (24h food record), calorie counting/daily calories Dietary rules and rituals, avoided foods, changes in eating behaviors
Core ED thoughts & behaviors	Restricting, over exercising, binge eating episodes, self-induced vomiting Misuse of diet pills, laxatives, diuretics, prescription medication Fear of weight gain, distorted body image Psychosocial impairment secondary to ED thoughts and behaviors
Weight history	Highest and lowest weight, previous growth curves for youth, rapidity of weight loss, desired weight
Reproductive health	Last menstrual period for assigned females at birth (LMP) If amenorrheic, approximate weight at LMP Decrease in morning erections for assigned males at birth Change in libido
Social history	Confidential SHADEESS/HEEADSS history for youth Strengths, Home, activities, substance use, education, eating, sexual health, safety
Family history	Mental health, eating disorders
Mental health assessment	Low mood, anxiety, substance use, suicidal ideation, self-harm behaviors, obsessive-compulsive thoughts or behaviors
Comprehensive review of systems	Signs & symptoms of an ED (See Early Recognition – Common Signs & Symptoms) Rule out other causes of weight loss (Inflammatory bowel disorder, celiac disease, diabetes mellitus, hyperthyroidism, malignancy, immunodeficiency, etc.)

Initial Assessment: Physical Exam ^{8, 12, 17, 18}

Oral Temperature

Orthostatic vitals:

- Patient supine for 5 minutes in quiet room, then do HR and BP
- Patient stands for 2 minutes then repeat HR and BP.

Measure height, weight, and BMI:

- Consider blinded weights (i.e., patient weighed back on to the scale and number not discussed)
- Ideal if completed post void and in a hospital gown
- Plot on growth curve if under 18
- BMI = (wgt in KG/hgt in meters)

Assess:

- Affect
- Hydration status, capillary refill,² pulse, heart sounds
- Hair loss, lanugo, dryness of the skin, signs of self-harm
- Dental erosion, parotid gland hypertrophy
- Edema, muscle wasting, muscle weakness (Sit-up-squat-stand test)



Estimated Severity/Degree of Malnutrition (Youth)

Severity	% Treatment goal weight = $\frac{\text{Current wgt}}{\text{calculated treatment goal wgt}} \times 100$ OR %mBMI = $\frac{\text{BMI}}{\text{mBMI for age/sex}} \times 100$	Amount of weight loss = $\frac{[(\text{usual wgt} - \text{presentation wgt}) / \text{usual wgt}] \times 100$	Rapidity of weight loss = % of body wgt lost (current wgt/previous wgt)
Mild	80-90%	5%	N/A
Moderate	70-79%	7.5%	5% in 1 month 7.5% in 3 months 10% in 6 months 20% in 1 year
Severe	< 70%	10%	>5% in 1 month >7.5% in 3 months >10% in 6 months >20% in 1 year

Estimated Severity/Degree of Malnutrition for Underweight Individuals (Adults)

- Mild – BMI 17 to 19 kg/m²
- Moderate – BMI 16 to 17 kg/m²
- Severe – BMI 15-16
- Extreme < 15

Estimated Severity of BN (based on frequency of inappropriate compensatory behaviours)

- Mild - An average of 1-3 episodes per week
- Moderate - An average of 4-7 episodes per week
- Severe - An average of 8-13 episodes per week
- Extreme - An average of 14 or more episodes per week

Initial Assessment: Investigations ^{1, 7, 11, 16, 17}

Initial investigations are performed to screen for complications of EDs and rule out alternate diagnoses. Laboratory investigations are often normal; normal results do not exclude the presence of serious illness.

Investigation	Interpretation of abnormal results
CBC	Leukopenia (malnutrition), anemia (Iron, B12 deficiency), thrombocytopenia (malnutrition)
Glucose	If low, malnutrition; If high, Insulin omission (if Type 1 diabetes mellitus)
Sodium	If low, water loading, vomiting, laxative/diuretic use; If high, dehydration
Potassium & Chloride	Vomiting, laxative, or diuretic use. Refeeding syndrome (Potassium)
Bicarbonate	If high, vomiting/diuretic use; If low, laxative use
BUN & Creatinine	Dehydration
Phosphate	If low, malnutrition, refeeding syndrome
Magnesium	If low, malnutrition, laxative use, refeeding syndrome
Calcium	Malnutrition
Total Protein/Albumin	Malnutrition
LFTs & Bilirubin	Liver dysfunction
Ferritin	If high, inflammation; If low, iron deficiency
Amylase	High: Purging
TSH and T4	Sick euthyroid from malnutrition or thyroid disorder
IgA and Ttg	Celiac disease
CRP	Inflammatory disorder

- **Urine Analysis with specific gravity:** High specific gravity indicates dehydration, low specific gravity indicates water loading or inability to concentrate urine appropriately, proteinuria may indicate an alternative diagnosis.
- **ECG:** Abnormal finding includes bradycardia (HR < 45), arrhythmia, prolonged QTc (> 460 msec), T wave inversion, ST-T wave changes, U waves (hypokalemia or hypomagnesemia).
- **DEXA:** Complete if assigned female at birth and amenorrheic for 6 months or more. Consider for assigned males at birth if longstanding history of severe malnutrition. *Note:* Indicate Hypothalamic Pituitary Suppression on Requisition (as per MSP coverage).
- **Additional investigations based on history:** Vitamin B12, 25OH Vit D, Zinc, FSH, LH, Estradiol, Testosterone.

Ongoing Medical Monitoring^{7, 16, 17, 24}

- In person appointments are necessary for appropriate anthropometric monitoring
- Ongoing medical monitoring must continue for as long as ED symptoms are active
- The suggested goal of weight gain for underweight patients is an average minimum of 0.5kg per week in the outpatient setting. Early weight gain in the first month of treatment is a predictor of positive outcome
- It is important to remind youth and families about the parameters of confidentiality, especially for those at transition age. Confidential conversations with youth at each appointment is encouraged. It may also be beneficial to discuss the importance of family involvement, if appropriate, and how to best achieve this
- Frequency depends on severity and potential for decline:
 - Weekly (if possible): Newly diagnosed, significantly underweight, significant weight loss, continuing to lose weight, or frequent self-induced vomiting or laxative misuse
 - Frequency can be extended as patient makes progress and stability is ensured. We would recommend monthly appointments at a minimum
- Please monitor/discuss the following at all appointments:
 - Nutritional intake: Regular eating is an important component of ED treatment and should consist of 3 meals and 2-3 snacks per day plus fluids. Calorie tracking is not recommended
 - ED behaviors: e.g., restriction, binge eating, self-induced vomiting, laxative use
 - Motivations, benefits, and risks of exercising and modifications needed for safety
 - Symptoms of malnutrition, dehydration, or fluid overload
 - Weight (consider blinded), Orthostatic vitals, temperature, and physical exam
 - Consider point of care glucose and/or ECG if clinically indicated
- Consider adding a multivitamin, Calcium supplementation, and Vitamin D supplementation
- Regular bloodwork to assess electrolyte abnormalities as appropriate, especially for patients who are purging, misusing laxatives, clinically declining, or at risk of refeeding syndrome
- Early referral to an ED program and early preparation for youth needing transition to adult care is important due to long wait times



Supportive Treatment for Ongoing Physical Symptoms^{1, 16, 23}

- GI dysmotility is common in EDs (abdominal pain, bloating, delayed gastric emptying)
- May be exacerbated by or direct consequences of starvation, binge eating and purging behaviors
- Provide education that symptoms will improve with regular nutrition and weight gain
- Short term use of medications may be considered based on symptoms:
 - Constipation: Polyethylene glycol
 - Delayed gastric emptying: metoclopramide (monitoring needed for side effects)
 - Bloating: Simethicone
 - Abdominal pain/reflux: Calcium Carbonate

Indications for Further Assessment/Admission due to Medical Instability^{16, 17, 24, 27}

Indicator	Youth	Adult
Temperature	< 36.6 degrees Celsius	< 36 degrees Celsius
Heart rate	< 50 bpm while awake < 45bpm while asleep	< 50 bpm
Blood Pressure	< 90/45	< 90/60
Orthostatic changes	Systolic BP drop > 20 mm Hg Diastolic BP drop > 10 mm Hg	Sustained HR increase > 30bpm Systolic BP drop > 20 mm Hg Diastolic BP drop > 10 mm Hg
Weight	< 70% treatment goal weight	BMI < 15
Electrolyte abnormalities	Hypoglycemia, hypokalemia, hyponatremia, hypophosphatemia	
ECG abnormalities	Severe bradycardia, prolonged QTc (>450msec)	
Other acute medical complications requiring emergent care	Acute food refusal (youth) Uncontrolled bingeing and purging Uncontrolled medical co-morbidity (e.g., diabetes mellitus) Seizure, syncope or altered level of consciousness Dehydration Cardiac failure Pancreatitis	
Additional considerations of hospitalization or higher-level care	Arrested growth and development (youth) Unable to progress in the outpatient setting Pregnancy with at-risk infant Severe psychiatric co-morbidity (e.g., severe depression and suicide risk)	

****Please Send Patient to Emergency Room Immediately****

Note: If planning to admit an adult patient with medical instability, please consider calling the physician on the Internal Medicine Eating Disorder Service to discuss (accessible via St. Paul's hospital Switchboard)

Criteria for Involuntary Admission Under the Mental Health Act (MHA)

- Individuals with EDs are at higher risk of having suicidal ideation. Always do a risk assessment
- MHA authorizes involuntary psychiatric treatment for people who meet **all** the following:
 - Person suffers from a mental disorder (i.e., ED) that seriously impairs one's ability to react appropriately to the environment or associate with others,
 - Requires psychiatric treatment in or through a designated facility,
 - Person requires care, supervision, and control in, or through, a designated facility to prevent substantial mental/physical deterioration, or for the person's own protection of others, and
 - Person is not suitable for voluntary care
- Please see [Clinical Practice Guidelines for the BC Eating Disorders Continuum of Services, Pg. 127-129](#)
- Note: Attempt to offer choices if possible (*"You are medically unstable and require close monitoring and support to keep you safe, are you able to go voluntarily? If not, I must certify you because I care about you and need to ensure you are medically safe and receive the care you need"*)

Specific Criteria for Involuntary Admission & Psychiatric Treatment of EDs

- EDs are considered psychiatric disorders
- There is consensus that treatment includes both psychiatric and medical treatment, including NG feeds, required to achieve medical stability where the deterioration of health is caused by the ED
- Additional criteria specific to EDs have been added to the above MHA criteria as an indication for involuntary admission under the **Mental Health Act**
- Involuntary admission may be more likely for restrictive EDs and very low weight, however all EDs should be assessed for these criteria

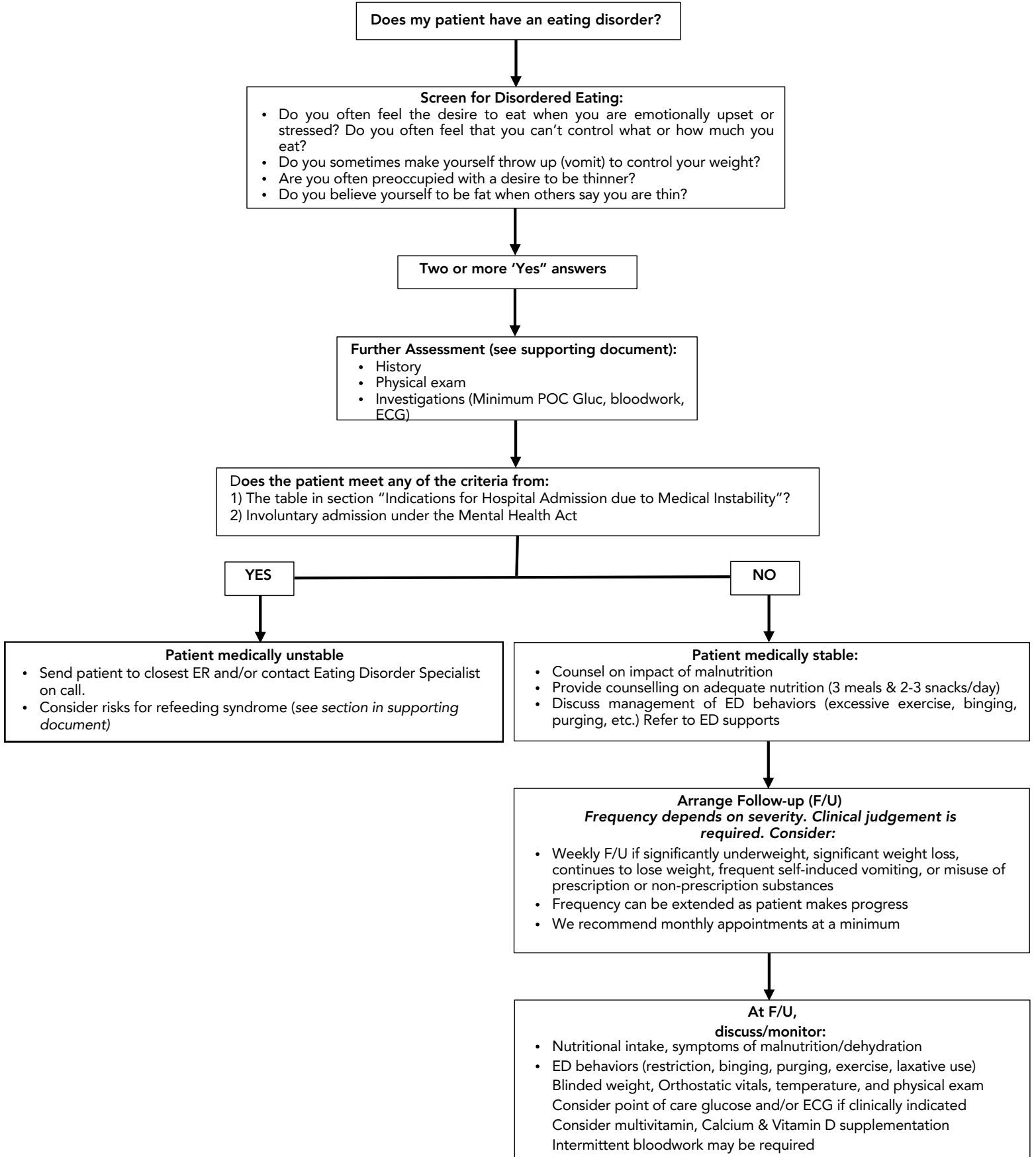
The variables below, when combined with low BMI, is an indication for involuntary admission to a designated facility and psychiatric treatment under the Mental Health Act	
Pediatric Criteria	Adult Criteria
<ul style="list-style-type: none"> • HR < 45 • Prolonged QTc > 0.45 or rhythm disturbance • Volume depletion that may require close monitoring or fluid resuscitation: BP < 80/50, Orthostatic sBP drop > 20 • Hypothermia (T < 36 degrees Celsius) • Electrolyte derangements (Hypoglycemia, Hypokalemia, Hypophosphatemia, or other electrolyte derangement) 	<ul style="list-style-type: none"> • Delirium • Seizure • Severe motor and cognitive slowing • Sinus tachycardia, Prolonged QTC, wave changes on ECG • Clinical congestive heart failure or renal failure • Electrolyte abnormalities (K, Na, Mg) • Hypoglycemia on blood sample 2.5 to 3.5 • Fever or any infection

Refeeding Syndrome^{8, 28}

- A clinical and metabolic derangement that can occur during the refeeding of a malnourished patient, which may result in potentially fatal electrolyte and fluid shifts.
- Hypophosphatemia is the hallmark feature, but it may present with a decrease in serum phosphorus, potassium, or magnesium within 5 days of introducing nutrition.
 - Mild: 10-20% decrease
 - Moderate: 20-30% decrease
 - Severe: >30% decrease and/or organ dysfunction
- The following individuals are more at risk:
 - Malnourishment
 - Highest risk for youth < 70% treatment goal weight or adults with BMI < 16
 - Increase risk if history of significant alcohol intake
 - Rapid weight loss regardless of weight at presentation (including post bariatric surgery)
 - No or negligible intake for > 7 days
 - A history of misuse of medications to purge or lose weight
 - Abnormal pre-feeding electrolyte results
 - Younger age
- Phosphate supplementation (e.g., 500 mg elemental phosphate bid) and regular monitoring of electrolytes are recommended for 5-7 days
- Consult your local pediatrician, internist, or RACE line for further details

Note: Please see next page for an algorithm outlining an approach to EDs in the community

Algorithm: Approach to an ED in the Community



Local Resources for Eating Disorders Care

Provincial Consultation

BC Children’s Hospital Tertiary Level Services	<ul style="list-style-type: none"> • Business hours: May call Intake Coordinator at 1-604-875-2161 to discuss referrals • Physician On-Call: <ul style="list-style-type: none"> ◦ For urgent questions or concerns about a patient ◦ Hospital switchboard: 1-604-875-2345 and ask for Adolescent Medicine on-call • Team-to-team consultation: • One hour slot to discuss a patient case with ED specialists. • Up to four sessions can be scheduled for a single case. • Intake coordinator (business hours): 1-604-875-2161
Provincial Adult Tertiary Level Services	<ul style="list-style-type: none"> • Provincial Adult Tertiary Services for Eating Disorders Program (PATSED) • St. Paul’s Hospital • Business hours (0900-1700): Call Intake Coordinator at 1-604-806-8654, who will triage with Medical Internist on-call • After hours: Call EDP 4NW Inpatient at 1-604-682-8654, ext. 62971 and contact information for Medical Internist on-call will be provided • Rapid Access to Consultative Expertise (RACE) <ul style="list-style-type: none"> ◦ St. Paul’s Hospital ◦ Business hours (0800-1700): 1-877-696-2131 (Toll-free) or 1-604-696-2131 (Lower Mainland), Eating Disorder Psychiatry: Option 3, Menu 6. ◦ Website: www.raceconnect.ca/
Local Community Referrals	<ul style="list-style-type: none"> • See details of services in your region • https://keltyeatingdisorders.ca/finding-help/programs/

Specialized Intensive Treatment Centers in BC

BC Children’s Hospital (Vancouver, BC) – Specialized, tertiary care	<ul style="list-style-type: none"> • Programs available: Specialized outpatient, day treatment, and inpatient services • Available for youth under age 17 • Intake Coordinator: 1-604-875-2106 • Website: http://www.bcchildrens.ca/our-services/mental-health-services/assessment-treatment/eating-disorders
St. Paul’s Hospital (Vancouver, BC) – Specialized, tertiary care	<ul style="list-style-type: none"> • Programs available: Inpatient acute care (4NW), day/residential treatment program (Discovery/Vista) • Available for 17 years of age and older • Intake Coordinator: 1-604-806-8347 • Website: http://mh.providencehealthcare.org/programs/provincial-adult-tertiary-eating-disorders-program
Looking Glass Residence (Vancouver, BC)	<ul style="list-style-type: none"> • Program available: 14-bed residential treatment facility • Available for individuals aged 16-24 • Phone: 1-604-829-2585 • Website: https://www.lookingglassbc.com/about/looking-glass-residence/

Helpful Resources

<p>Kelty Mental Health Resources Center at BC Children’s Hospital (Vancouver, BC)</p>	<ul style="list-style-type: none"> • Free information, referrals, online resources, drop-in access for individuals and their families, peer support, videos on how to complete meal support • All ages • Phone: 1-800-665-1822 • Website: https://keltyeatingdisorders.ca/
<p>Looking Glass Foundation for Eating Disorders (Vancouver, BC)</p>	<ul style="list-style-type: none"> • Provincial online support groups for patients and caregivers, community initiatives (research, scholarships, speakers, fundraisers) • All ages • Phone: 1-604-314-0548 • Website: http://www.lookingglassbc.com
<p>Jessie’s Legacy (North Vancouver, BC)</p>	<ul style="list-style-type: none"> • Education, resources, and inspiration in addressing and preventing disordered eating • Website: www.jessieslegacy.com
<p>Family Resource Centre at BC Children’s Hospital – Eating Disorder Section</p>	<ul style="list-style-type: none"> • Recommended workbooks, personal stories, and parental supports • Free to order for anyone living in BC or Yukon • Website: https://cw-bc.libguides.com/ED
<p>National Eating Disorders Information Center (Toronto, Ontario)</p>	<ul style="list-style-type: none"> • Website: www.nedic.ca
<p>Practice Guidelines</p>	<ul style="list-style-type: none"> • Clinical Practice Guidelines for the BC Eating Disorders Continuum of Services • Canadian practice guidelines for the treatment of children and adolescents with eating disorders (Couturier et al, 2020) • Canadian Pediatric Society <ul style="list-style-type: none"> ◦ Position Statement: Determining Treatment Goal Weight for Children and Adolescents with Anorexia Nervosa ◦ Position Statement: Family-Based Treatment of Children and Adolescents with Anorexia Nervosa: Guidelines for the Community Physician
<p>Additional Information & Therapeutic Support</p>	<ul style="list-style-type: none"> • Understanding Eating Disorders in Adolescents • F.E.A.S.T. (Families Empowered And Supporting Treatment) for Eating Disorders • F.E.A.S.T – Section on Family-Based Treatment • Mental Health Foundations: Resources for caregivers and Families using Emotion-Focused Family Therapy approach

Acknowledgements

This toolkit was updated in 2023 in a collaborative process by:

Dr. Jen Mooney, FRCPC

Dr. Pei-Yoong Lam, FRCPC

Mary Lamoureux, RN, MSN

Updates were made based on most recent literature, expert opinion, and feedback from community clinicians.

Final edits were provided from a sub-committee of the Provincial ED Network:

Coelho, J., Fujiwara, J., Geller, J., Mitchell, K., Raudzus, J., Roberts, E., Sze, S., Tandan, T., & Van der Leer, G.

Art by:

Mamo, P.

Document design by:

Tung, A., with support from the BC Eating Disorders Research Excellence Cluster



THE UNIVERSITY
OF BRITISH COLUMBIA

BC Eating Disorders
Research Excellence Cluster

Original document was created in 2018 as a collaborative project by:

Jessica Callin (UBC MD 2019, Flex Project) and Mary Lamoureux (RN, MSN)

Final edits provided from a sub-committee of the Provincial ED Network:

Lam, P.Y., Raudzus, J., Geller, J., Klassen, V., Barbour, L., van der Leer, G., Mantie, C., Malabar, C., Vogels, S.

About the Artist (Cover Illustration)

Biography

My name is Pip Mamo, and I am a sculptor and installation artist focused on textiles and found objects. I am a graduate of UBCO's BFA program, and a current student in Emily Carr University's MFA program. I have a wide range of conceptual focus, but my current practice is focused on the home, memory, and mental illness.

Statement

This illustration uses symbolic imagery to represent my experience with eating disorder recovery. One of the foundational moments of my recovery was beginning to look outside of my own suffering at the world around me. By taking the time to really notice how beautiful the world is, I began to realize that there were so many things I wanted to experience that wouldn't be possible without recovery. To begin with, this took the form of hiking and paying attention to the natural world. By thinking of myself as an extension of the world that I love, I was able to find more compassion for myself and love for the things my body allows me to do.

The images in this work represent a sort of ecosystem of recovery. Recovery is interdependent on many factors, the same way that the members of an ecosystem are dependent on each other. Recovery is a long, ever-changing process that looks different at different times, like the flow of the natural world. Trees represent strength and growth, and the multiple trees are representative of the various forms of strength needed to recover. The trees open onto a calm lake, like the hope that comes out of recovery. The birds represent the freedom that comes with recovery, being able to fly wherever you want but still being able to land somewhere supportive. The imagery of hands represents the gentle care that I need from my loved ones, and the uplifting that they provide me with. In the composition, the hands would cradle the piece, like the gentle support and uplifting I needed from those around me.

References

1. Becker AE, Hadley Arrindell A, Perloe A, Fay K, Striegel-Moore RH. A qualitative study of perceived social barriers to care for eating disorders: perspectives from ethnically diverse health care consumers. *Int J Eat Disord*. 2010;43(7):633-47. doi: [10.1002/eat.20755](https://doi.org/10.1002/eat.20755)
2. Bermudez O, Devlin M, Dooley-Has S, Guarda A, Katzman D, Madden S, et al. *Eating Disorders: A Guide to Medical Care*. Academy for Eating Disorders. 2016; 3rd edition.
3. Burton Murray, H, Dreier, MJ, Zickgraf, HF, et al. Validation of the nine item ARFID screen (NIAS) subscales for distinguishing ARFID presentations and screening for ARFID. *Int J Eat Disord*. 2021; 54: 1782–1792. doi: [10.1002/eat.23520](https://doi.org/10.1002/eat.23520)
4. Cobbaert, L. & Rose, A. (2023). *Eating Disorders and Neurodivergence: A Stepped Care Approach*.
5. Coelho JS, Suen J, Clark BA, Marshall SK, Geller J, Lam P-Y. Eating disorder diagnoses and symptom presentation in transgender youth: a scoping review. *Curr Psychiatr Rep*. 2019;21(11):107. doi: [10.1007/s11920-019-1097-x](https://doi.org/10.1007/s11920-019-1097-x)
6. Couturier, J., Isserlin, L., Norris, M., Spettigue, W., Brouwers, M., Kimber, M., ... & Pilon, D. (2020). Canadian practice guidelines for the treatment of children and adolescents with eating disorders. *Journal of Eating Disorders*, 8(1), 1-80. doi: [10.1186/s40337-020-0277-8](https://doi.org/10.1186/s40337-020-0277-8)
7. Crone C, Fochtmann LJ, Attia E, Boland R, Escobar J, Fornari V, et al. The American Psychiatric Association Practice Guideline for the Treatment of Patients With Eating Disorders. *Am J Psychiatry*. 2023;180(2):167-71. doi: [10.1176/appi.ajp.23180001](https://doi.org/10.1176/appi.ajp.23180001)
8. da Silva JSV, Seres DS, Sabino K, Adams SC, Berdahl GJ, City SW, et al. ASPEN Consensus Recommendations for Refeeding Syndrome. *Nutr Clin Pract*. 2020;35(2):178-95. doi: [10.1002/ncp.10474](https://doi.org/10.1002/ncp.10474)
9. Findlay S, Pinzon J, Taddeo D, Katzman D. Family-based treatment of children and adolescents with anorexia nervosa: Guidelines for the community physician. *Paediatr Child Health*. 2010;15(1):31-40. doi: [10.1093/pch/15.1.31](https://doi.org/10.1093/pch/15.1.31)
10. Flatt RE, Miller AJ, Foreman T, Shannon J. Considerations for Athletes with Eating Disorders Based on Levels of Care. *Curr Sports Med Rep*. 2022;21(3):92-9. doi: [10.1249/JSR.0000000000000942](https://doi.org/10.1249/JSR.0000000000000942)
11. Geller J, Goodrich S, Chan K, Cockell S, Srikameswaran S. *Clinical Practice Guidelines for the BC Eating Disorders Continuum of Services* 2013.
12. Geller J, Srikameswaran S. Treatment Non-Negotiables: Why We Need Them and How to Make Them Work. *European Eating Disorders Review*. 2006;14:212-7. doi: [10.1002/erv.716](https://doi.org/10.1002/erv.716)
13. Geller J, Williams KD, Srikameswaran S. Clinician Stance in the Treatment of Chronic Eating Disorders. *Eating Disorders European Eating Disorders Review*. 2001;9(6):365-73. doi: [10.1002/erv.443](https://doi.org/10.1002/erv.443)
14. Geller J, Gernandes A, Srikameswaran S, Pullmer R, Marshall S. The Power of feeling seen: perspectives of individuals with eating disorders on receiving validation. *Journal of Eating Disorders* 2021;9(149). doi: [10.1186/s40337-021-00500-x](https://doi.org/10.1186/s40337-021-00500-x)

15. Goode RW, Cowell MM, Mazzeo SE, Cooper-Lewter C, Forte A, Olayia OI, & Bulik CM (2020). Binge eating and binge-eating disorder in Black women: A systematic review. *International Journal of Eating Disorders*, 53(4), 491–507. [doi: 10.1002/eat.23217](https://doi.org/10.1002/eat.23217)
16. Hornberger LL, Lane MA, ADOLESCENCE CO. Identification and Management of Eating Disorders in Children and Adolescents. *Pediatrics*. 2021;147(1). [doi: 10.1542/peds.2020-040279](https://doi.org/10.1542/peds.2020-040279)
17. Klein DA, Sylvester JE, Schvey NA. [Eating Disorders in Primary Care: Diagnosis and Management. *Am Fam Physician*](#). 2021;103(1):22-32.
18. Madden, S., Miskovic-Wheatley, J., Wallis, A., Kohn, M., Hay, P., & Touyz, S. (2015). Early weight gain in family-based treatment predicts greater weight gain and remission at the end of treatment and remission at 12-month follow-up in adolescent anorexia nervosa. *International Journal of Eating Disorders*, 48(7), 919-922. [doi: 10.1002/eat.22414](https://doi.org/10.1002/eat.22414)
19. Maguen S, Hebenstreit C, Li Y, Dinh JV, Donalson R, Dalton S, et al. Screen for Disordered Eating: Improving the accuracy of eating disorder screening in primary care. *Gen Hosp Psychiatry*. 2018;50:20-5. [doi: 10.1016/j.genhosppsych.2017.09.004](https://doi.org/10.1016/j.genhosppsych.2017.09.004)
20. Mehler PS, Brown C. Anorexia nervosa - medical complications. *J Eat Disord*. 2015;3:11. [doi: 10.1186%2Fs40337-015-0040-8](https://doi.org/10.1186%2Fs40337-015-0040-8)
21. Mehler PS, Walsh K. Electrolyte and acid-base abnormalities associated with purging behaviors. *Int J Eat Disord*. 2016;49(3):311-8. [doi: 10.1002/eat.22503](https://doi.org/10.1002/eat.22503)
22. Miskonoodinkwe-Smith C, Trevena D, Montgomery E. [Let's Talk About Disordered Eating and Eating Disorders in the Indigenous Communities](#). 2023.
23. Moolla M, Dang JT, Shaw A, Dang TNT, Tian C, Karmali S, et al. Simethicone decreases bloating and improves bowel preparation effectiveness: a systematic review and meta-analysis. *Surg Endosc*. 2019;33(12):3899-909. [doi: 10.1007/s00464-019-07066-5](https://doi.org/10.1007/s00464-019-07066-5)
24. Norris ML, Hiebert JD, Katzman DK. [Determining treatment goal weights for children and adolescents with anorexia nervosa](#). *Paediatr Child Health*. 2018;23(8):551-2.
25. Parker LL, Harriger JA. Eating disorders and disordered eating behaviors in the LGBT population: a review of the literature. *J Eat Disord*. 2020;8:51. [doi: 10.1186/s40337-020-00327-y](https://doi.org/10.1186/s40337-020-00327-y)
26. Society for Adolescent Health and Medicine. Refeeding hypophosphatemia in hospitalized adolescents with anorexia nervosa: a position statement of the Society for Adolescent Health and Medicine. *J Adolesc Health*. 2014;55(3):455-7. [doi: 10.1016%2Fj.jadohealth.2014.06.010](https://doi.org/10.1016%2Fj.jadohealth.2014.06.010)
27. Society for Adolescent Health and Medicine. Medical Management of Restrictive Eating Disorders in Adolescents and Young Adults. *J Adolesc Health*. 2022;71(5):648-54. [doi: 10.1016/j.jadohealth.2022.08.006](https://doi.org/10.1016/j.jadohealth.2022.08.006)
28. Society for Adolescent Health and Medicine. Refeeding Hypophosphatemia in Hospitalized Adolescents With Anorexia Nervosa. *J Adolesc Health*. 2022;71(4):517-20. [doi: 10.1016%2Fj.jadohealth.2014.06.010](https://doi.org/10.1016%2Fj.jadohealth.2014.06.010)
29. *The National Center on Addiction and Substance Abuse (CASA) at Columbia University. Food for Thought: Substance Abuse and Eating Disorders. The National Center on Addiction and Substance Abuse (CASA) Columbia University; New York: 2003.*
30. Wells KR, Jeacocke NA, Appaneal R, Smith HD, Vlahovich N, Burke LM, et al. The Australian Institute of Sport (AIS) and National Eating Disorders Collaboration (NEDC) position statement on disordered eating in high performance sport. *Br J Sports Med*. 2020;54(21):1247-58. [doi: 10.1136/bjsports-2019-101813](https://doi.org/10.1136/bjsports-2019-101813)