

What the Specialists Want Us to Know: Prevention, Identification and Treatment of Eating Disorders

Sarah Schirmer, DNP, M. Ed., APRN PMHNP-BC
University of Louisville School of Nursing
Louisville Center for Eating Disorders





Kentucky Eating Disorder Council

[Kate Overberg Wagoner](#)

(502) 782-6236



KY ED Council Committees

Early Detection, Intervention and Prevention

Accessibility, Accountability, and Affordability

Standards of Care

Advocacy, Education, and Legislation

Research, Assessment, and Public Health



Public Health
Prevent. Promote. Protect.

- The American Public Health Association (2013) defines public health nursing as, "the practice of promoting and protecting the health of populations using knowledge from nursing, social, and public health sciences".



Agenda

- Fact or Fiction?
- Levels of Prevention and the socioecological model
- What are EDs?
- Epidemiology
- Etiology and risk
- Health consequences
- Screening and evaluation
- EB Treatment
- Research
- Resources

True or False?

Eating disorders are really just diets gone wrong.



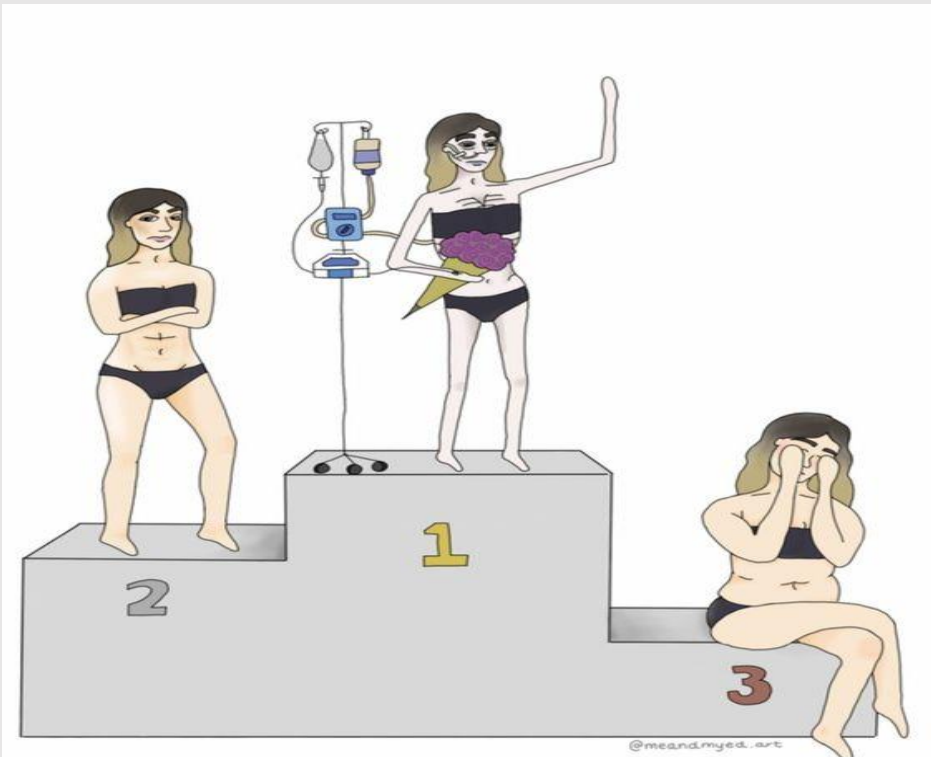
False! Eating disorders are serious, biologically influenced illnesses that require immediate intervention and specialized care. It is true, however, that dieting is both a risk factor for the development of an eating disorder and is common among people who have eating disorders.

True or False?

Anorexia nervosa has the highest mortality rate among all psychiatric disorders.

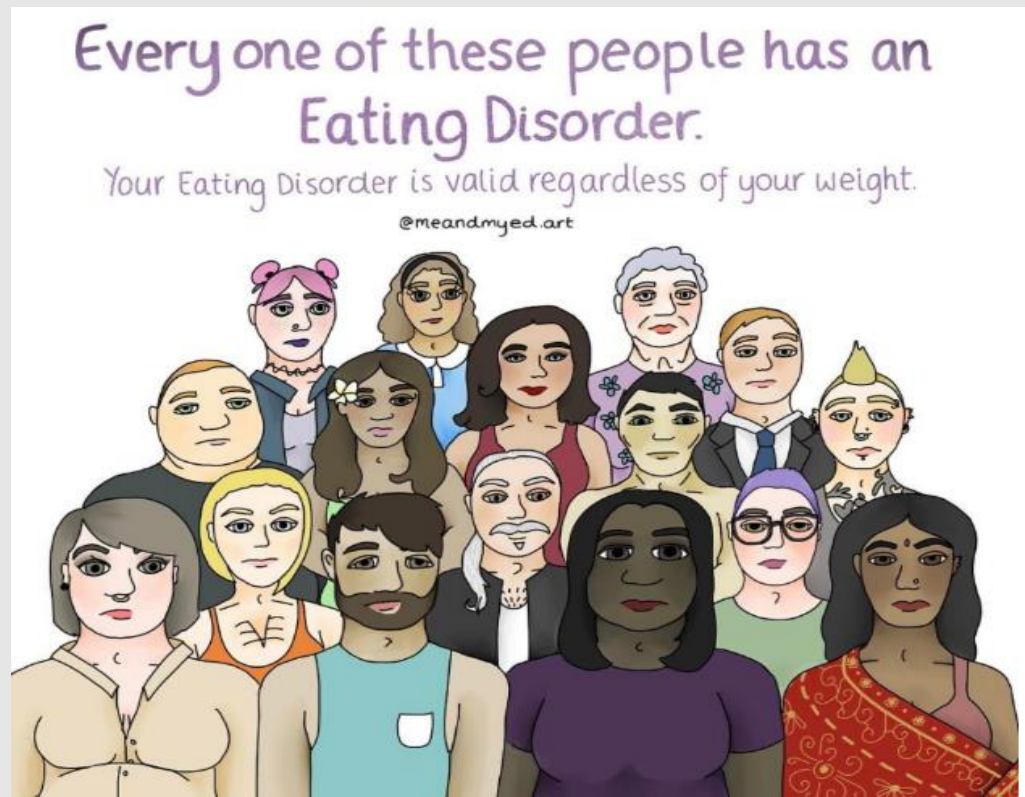
True.

- Mortality rate is estimated to be between 5 - 10 percent.
- 5-10% of people with anorexia will die within 10 years after disease onset and 18-20% will be dead after 20 years.
- One in 5 will die by suicide.



True or False

Only people who are really thin (or obese) have eating disorders?



False.

Many individuals who meet criteria for an eating disorders are at a normal weight and BMI.

Obesity is not an eating disorder.

When screening for an ED it's important to ask about cognitions and behaviors.

True or False

Men are diagnosed with eating disorders.



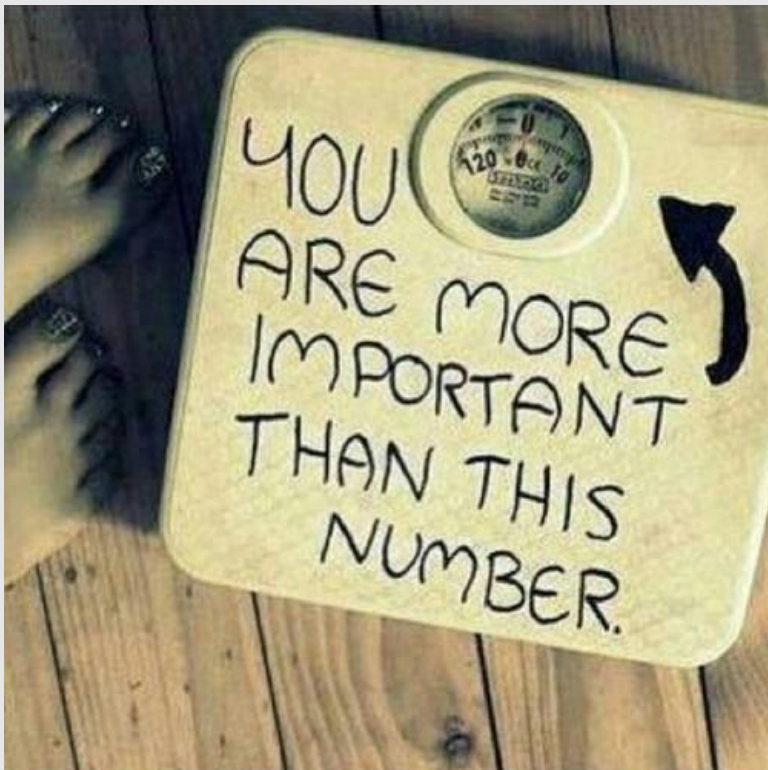
True!

One in three people diagnosed with an eating disorder is male.

Due to cultural bias they are less likely to seek treatment, but once in treatment respond similarly to women.

True or False

All ages and genders are at similar risk for developing an eating disorder.



False!

Due to multiple factors, adolescent girls are at greatest risk for development of an ED.

Adolescence is a time of significant change in:

- Physical appearance
- Hormones and brain development
- Environment and social groups

True or False

There are several FDA approved medication options used in the treatment of eating disorders.

False!

There are only two FDA approved options to treat eating disorders.

Prozac for bulimia nervosa

Vyvanse for binge eating disorder

There are no FDA approved treatment options for anorexia

True or False

It may be helpful to focus on eating disorder treatment as a process toward recovery rather than an end goal.



True!

Eating disorders have exceptionally high relapse rates.

30-50% of patients relapse within 2 years after an inpatient stay

Evidence shows the sooner treatment is started, the shorter the recovery process can be.

Early and targeted care will increase the likelihood of positive outcomes.

True or False

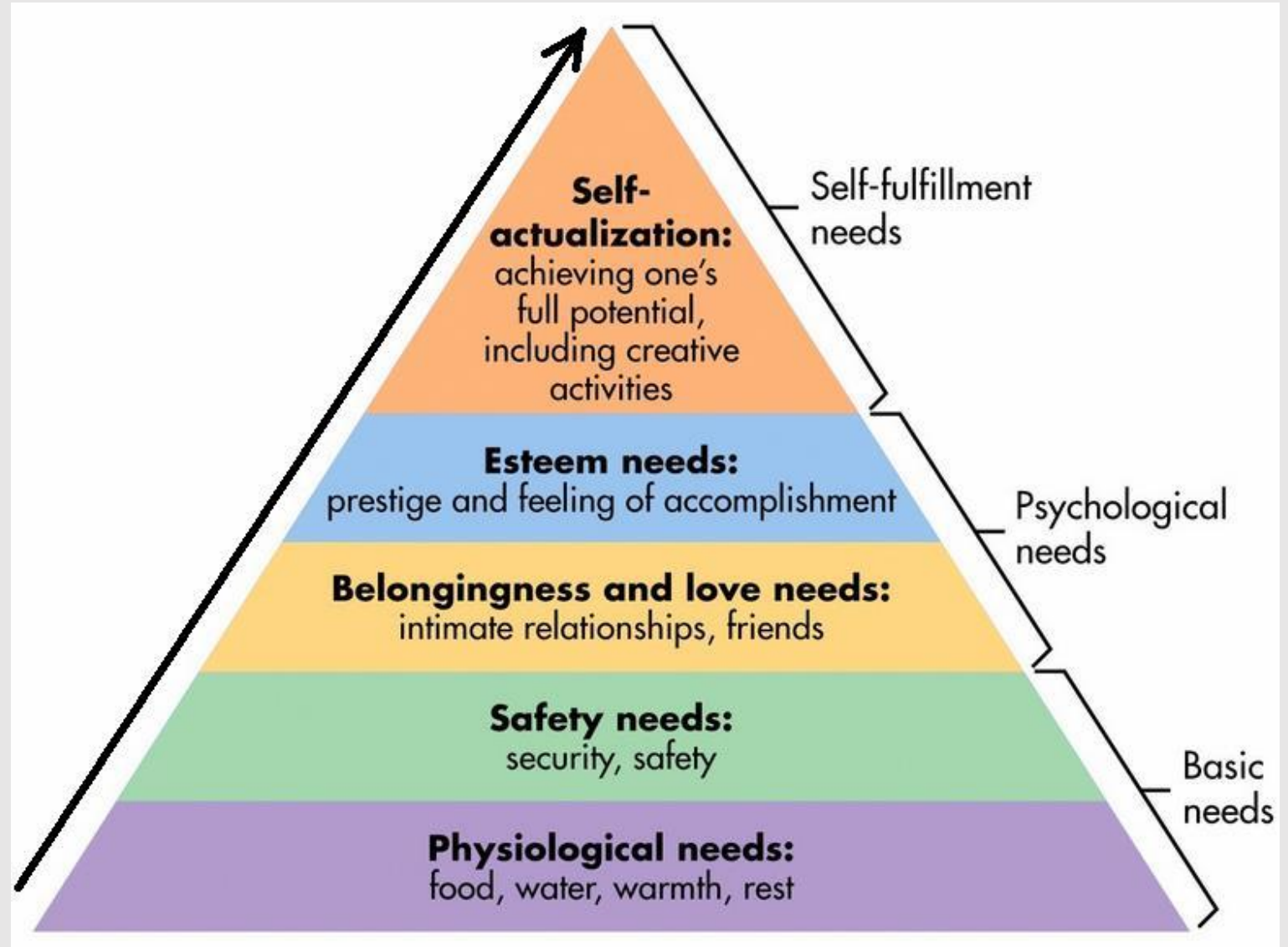
Public health nurses play an important role in the recognition, evaluation, and treatment of eating disorders.



True!

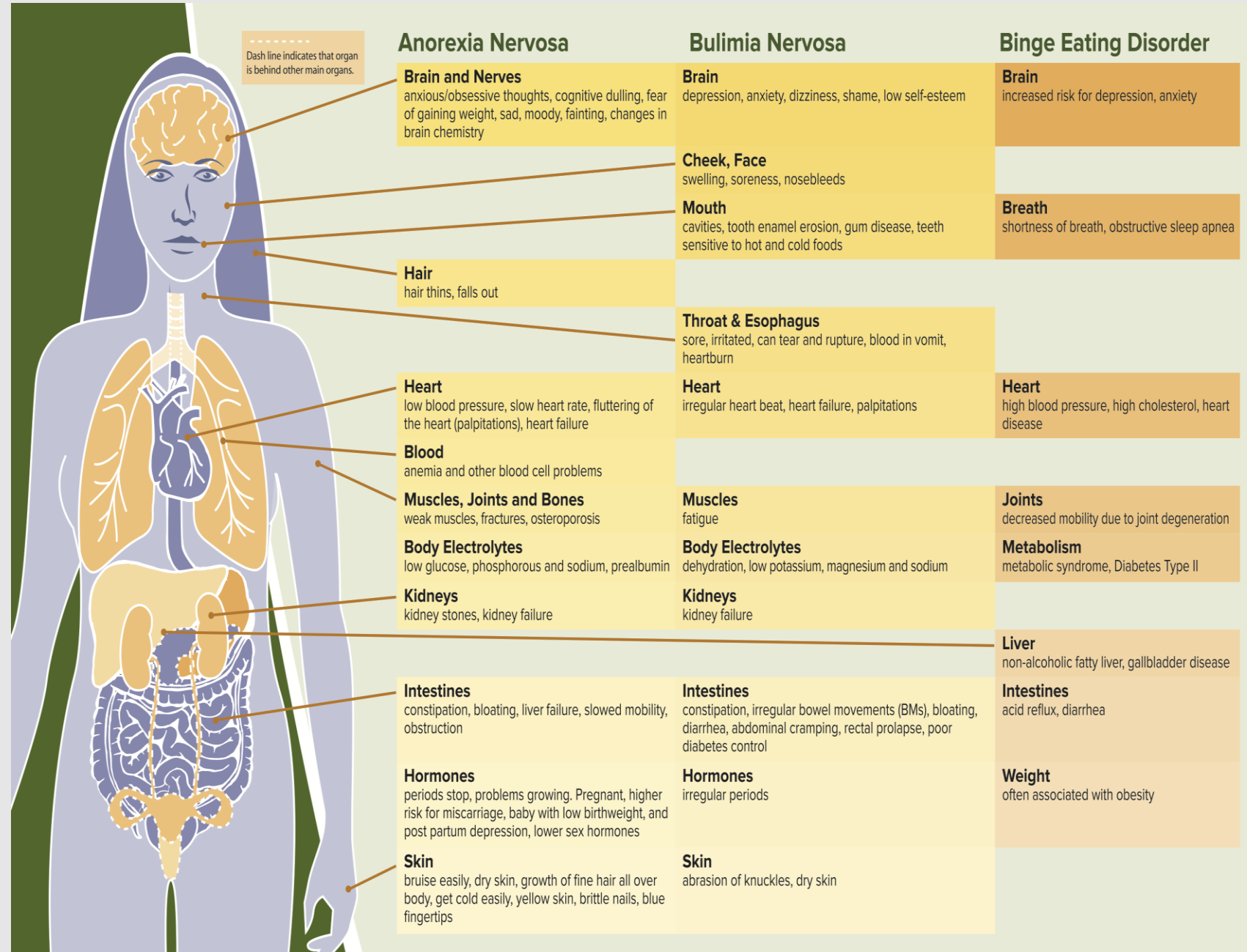
No matter your specialty or practice setting, understanding your role can help prevent the onset of an eating disorder and/or make sure your patients get timely and effective treatment.

Maslow's Hierarchy of Needs



Complications

- Comorbid medical and psychological conditions and serious complications are defining features of EDs
- Require medical and psychiatric expertise and intensive treatment





What does healthy eating look like?

What is disordered eating?

- Chaotic or disturbed eating patterns, behaviors, and cognitions
 - ✓ Excessive concerns about weight, appearance, and eating
 - ✓ Unhealthy weight control behaviors
 - ✓ Chronic/extreme dietary restraint
 - ✓ Binge eating
 - ✓ Loss of control over eating

Disordered Eating Terms

- Fasting – skipping two or more meals in a row or not eating for more than 8 hours
- Dietary Restriction – Limiting caloric intake
- Dietary Restraint – Cognitively attempting to limit dietary intake whether or not successful
- Laxative use – use of laxatives or diuretics to influence weight/shape
- Purging/self-induced vomiting – vomiting after eating to influence weight/shape usually after binge eating episode but not always
- Excessive (aka compensatory/compulsive/driven) exercise—exercise to influence weight/shape, usually feel compelled to engage in exercise, negative emotions when unable to exercise, exercise when injured or sick, interferes with responsibilities or social relationships

Levels of Disease Prevention and Health Promotion for Eating Disorders

Primary

- Prevent eating disorders before they start
 - e.g. Dinner Table Project, Intuitive Eating, body acceptance, promoting cognitive flexibility
- Awareness

Secondary

- Screening and identifying those at risk
 - e.g., use of SCOFF and SDE
- Prevent progression to severe illness
 - e.g., The Body Project
 - Use of EB practices

Tertiary

- Evaluation and treatment of those diagnosed with eating disorders
- Increase availability and affordability of and access to EBT

Socio-Ecological Model



What are eating disorders?

- DSM-V diagnoses
 - Anorexia nervosa
 - Bulimia nervosa
 - Binge eating disorder
 - Avoidant/restrictive food intake disorder (ARFID)
 - Other specified feeding or eating disorders

Comorbidities and Rule Outs

- Mood disorders
 - Unipolar depression
 - Bipolar depression
 - Mania
- Suicidal ideation
- Generalized anxiety
- Social anxiety
- Obsessive compulsive disorder
- Substance abuse
- Self injurious behaviors
- Trauma/PTSD
- Personality Disorders

Epidemiology – Adults

- Prevalence – 9% of US population or 28.8 million Americans will have an eating disorder in their lifetime.
 - Binge eating d/o: 3%
 - females x2 higher
 - 18.5% reported severe impairment
 - Bulimia Nervosa: 0.3-1.5%
 - Females 5x higher
 - 43.9% reported severe impairment
 - Anorexia: 0.6-0.9%
 - Females 3x higher

Epidemiology – Adolescent females

- Prevalence
 - Anorexia
 - Teenage girls 0.3%
 - Bulimia
 - Teenage girls 0.9%
 - Binge Eating Disorder
 - Teenage girls 1.6%

Biopsychosocial Etiology – Risk factors

Mid-to-late adolescence

- Approximately 13% of youth will experience at least one ED by 20
- 15%-47% youth endorse significant disordered eating cognitions and behaviors

Sociocultural idealization of thinness

- Media
- Pressures for thinness
 - Sports, modeling, dance
- Thin-ideal internalization
- Thinness expectancies

Personality variables

- Negative emotionality/neuroticism
- Perfectionism
- Negative urgency and impulsivity

Additional Risk Factors

Female sex

Food insecurity

History of dieting

Family history

Low self-esteem

Trauma

Biopsychosocial Etiology – Correlates



Neurocognitive processes

Cognitive inflexibility
Inhibitory control



Molecular genetics: no specific genes yet

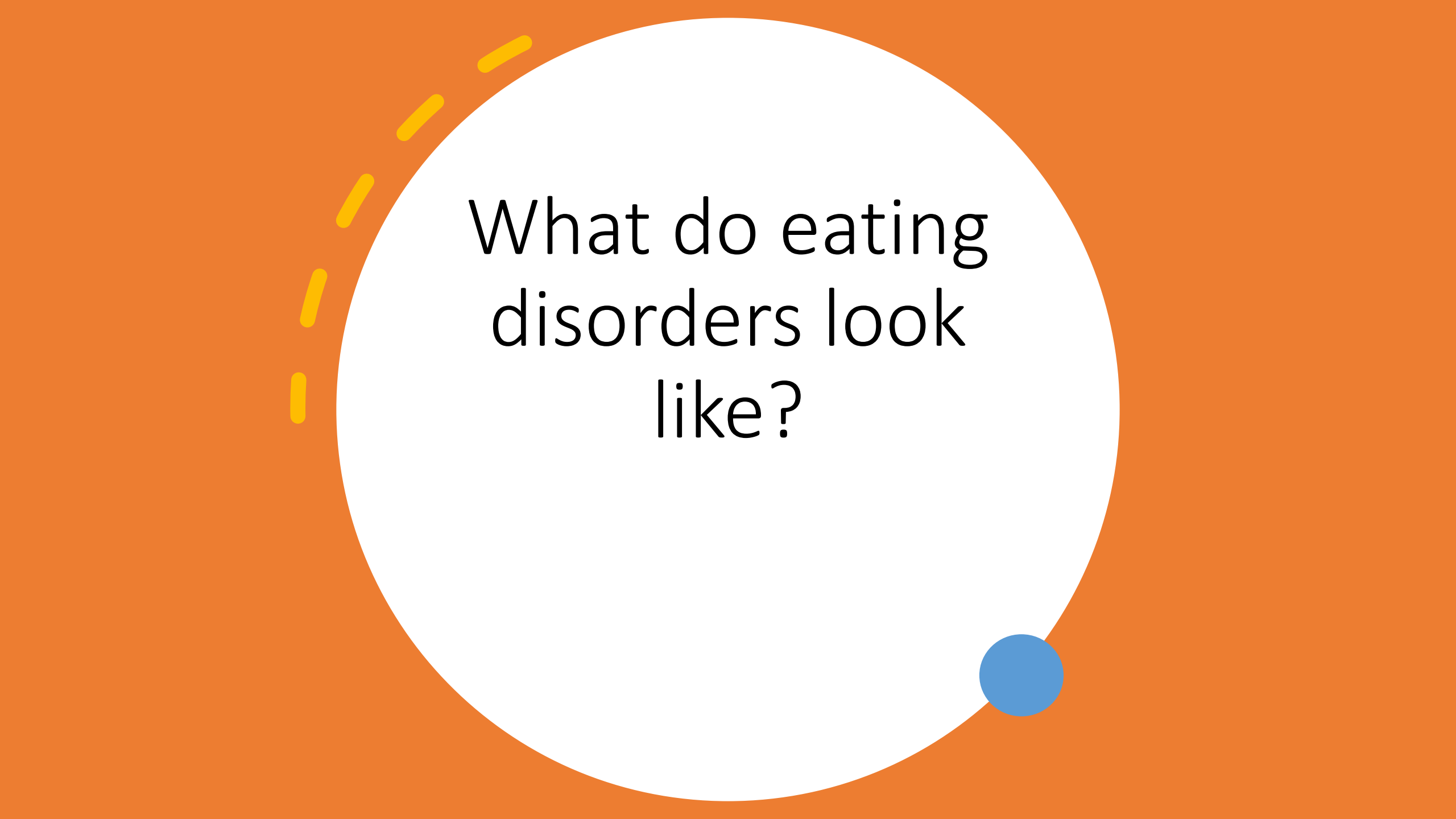
Twin & adoptions studies
Candidate gene association studies of genes in neurobiological systems

- Serotonin
- Dopamine
- BDNF

Preventing Eating Disorders

- [Body Project](#) "Backed by two decades of research and evaluation data, the Body Project is a group-based intervention that provides a forum for women and girls to confront unrealistic beauty ideals and engages them in the development of healthy body image through verbal, written, and behavioral exercises."
- [Dinner Table Project](#) "This project started with the belief that families that eat together, have better relationships. If children have better relationships with their parents and siblings, they are less likely to try drugs and alcohol. Then we found out that the children of families that share meals together also have better academic performance, higher self-esteem, a greater sense of resilience, lower risk of teen pregnancy, lower risk of depression, lower rates of obesity, and a lower likelihood of developing an eating disorder!"
- [Intuitive/Mindful Eating](#) "Mindful eating is a mindfulness practice that helps children develop a deeper connection with food and begin to create lifelong, healthy habits. It encourages children to focus on the present – noticing thoughts, feelings and physical sensations. Connecting this with the food that fuels our bodies helps children to recognize feelings of hunger and fullness, slow down when eating, better digest and fully enjoy snacks or meals!"





What do eating
disorders look
like?

General Physical Signs of Eating Disorders

Rapid/severe weight loss or frequent weight change: unable to maintain normal body weight

Dehydration (severe and prolonged can lead to kidney failure)

Fainting or dizziness (poor circulation)

Cold intolerance (poor circulation)

Bluish tinge to fingers (poor circulation)

Low energy, feeling tired, not sleeping well (extreme hunger or fullness; sleep apnea)

Facial changes (gaunt, sunken eyes)

Academy for Eating Disorders, 2016; Higgins & Cahn, 2017;
Lock & LaVia, 2015; Williams, Goodie, & Motsinger, 2008

Psychological Signs of Eating Disorders

All-or-nothing, black-or-white thinking about food. E.g. “All carbs are bad.” “I should NEVER eat a cookie.”

Preoccupation with weight, shape, eating and food

Distorted body image—Seeing oneself as “fat” when actually thin

Sensitive to comments about weight, food, exercise

Low self-esteem, poor self-image

Depression

Perfectionism

Anxiety—especially related to issues of food, eating

Academy for Eating Disorders, 2016; Higgins & Cahn, 2017;
Lock & LaVia, 2015; Williams, Goodie, & Motsinger, 2008

Behavioral Signs of Eating Disorder

Restricting food

Skipping meals

Compulsions related to food prep, recipes, and nutrition

Won't look at scale when weighed

Looking at self in mirror often

Lying about how much food eaten

Hiding body with baggy clothes

Avoiding situations involving eating in front of others (e.g. eating out)

Avoiding situation where body is revealed (e.g. pool or beach)

Academy for Eating Disorders, 2016; Higgins & Cahn, 2017;
Lock & LaVia, 2015; Williams, Goodie, & Motsinger, 2008

The Academy for Eating Disorders (2016) Recommends:

Further evaluation for an ED if any of the following present:

1. Precipitous weight changes
2. Sudden changes in eating behaviors
3. Sudden changes in exercise patterns, excessive or compulsive exercise or involvement in extreme physical training
4. Body image disturbance
5. Desire to lose weight despite low or normative weight or extreme dieting regardless of weight
6. Abdominal complaints in the context of weight loss behaviors
7. Electrolyte abnormalities without an identified medical cause (especially hypokalemia, hypochloremia, or elevated bicarbonate)
8. Hypoglycemia
9. Bradycardia
10. Amenorrhea or menstrual irregularities
11. Unexplained infertility
12. Type 1 diabetes with poor glucose control or recurrent DKA with or without weight loss
13. Use of compensatory behaviors to influence weight after eating or binge eating
14. Inappropriate use of substances used for weight loss



Screening Tools

SCOFF

Do you make yourself **Sick** (induce vomiting) because you feel uncomfortably full?

Do you worry that you have lost **Control** over how much you eat?

Have you recently lost more than **One stone** (14 lbs. [6.4 kg]) in a three-month period?

Do you think you are too **Fat**, even though others say you are too thin?

Would you say that **Food** dominates your life?

One point for every yes answer; a score of 2 indicates a likely case of AN or BN (sensitivity 100%; specificity 87.5%)

Screening Tools

Screen for Disordered Eating (SDE): Primary Care Screener

Do you often feel the desire to eat when you are emotionally upset or stressed?

Do you often feel you can't control what or how much you eat?

Do you sometimes make yourself throw up (vomit) to control your weight?

Are you often preoccupied with a desire to be thinner?

Do you believe yourself to be fat when others say you are thin?

Scores range from 0-5, cutoff of 2, sensitivity 90.5% specificity 57.5%

What do we do with a positive screen?



Comprehensive assessment

Ask very specific questions



Physical examination

Labs

EKG

Dexa Scan

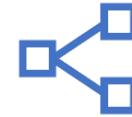
Monitor weight



Diagnostic evaluation



Establish appropriate level of care



Refer

Dentist

Nutritionist

ED psychotherapeutic specialist

Psychiatric provider

Comprehensive Assessment



General eating patterns

Over the last 28 days how many times have you eaten?

Give me an example of what you'd have in a typical meal for...?

Accepted foods vs avoided foods

Typical portions



Dieting, restricting

How old were you when you first dieted?

Over the last 28 days have you tried to restrict your food because of weight concerns?

How have you done this? (skipped meals, avoided certain foods, etc.?)



Food rules

Do you have food rules?

What happens when you break a rule?

Comprehensive Assessment

Binge eating

- Have there been times when you felt that your eating was out of control?
- During these times have you eaten large amounts of food? (Be sure to give examples for people because AN patients believe they are bingeing but not necessarily true bingeing.)
- What's an example when you've felt out of control and eaten a large amount of food?
- At what age did you first binge eat? What age did you begin to binge eat regularly?
- How frequently have binge eaten in the past three months?

Comprehensive Assessment

Compensatory Bx

- Are you using? How much? How often?
- Laxatives, Enemas, Caffeine, Diuretics, Emetics, Diet pills

Exercise

- How much and how often?

Menstrual history

- Have you started your period? When was your last period? Are you regular? How heavy is your period? Do you use oral contraceptives?

Current medication

- Are you taking any medications?
- Any supplements or alternative meds? CBD oil?

Comprehensive Assessment

Family history

- Is there a family history of EDs, obesity, mood or anxiety disorders, or SUDs?

Psychiatric history

- Are you or have you been treated for depression, anxiety, etc.?

Trauma history

- Has anyone ever hurt you physically, sexually or emotionally?

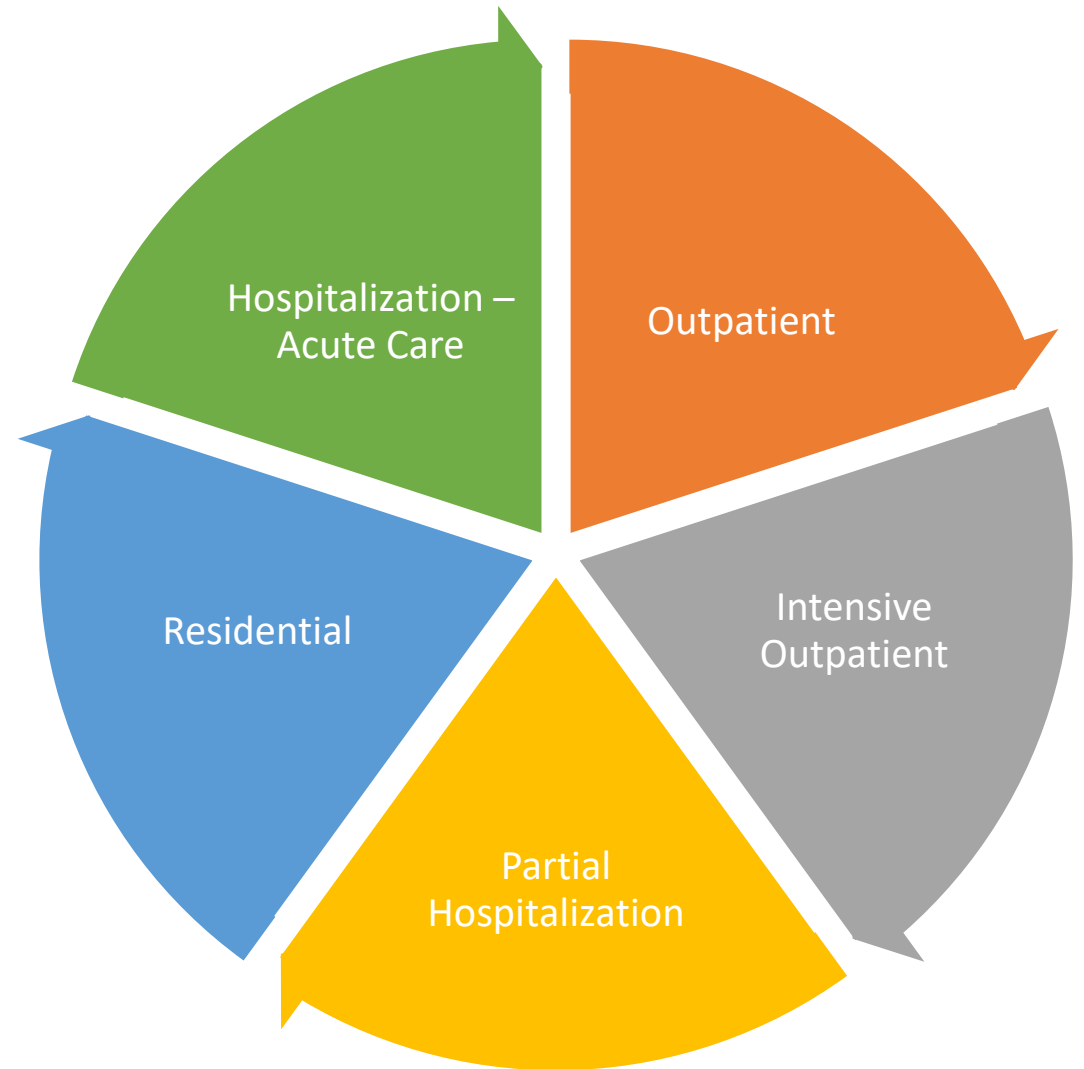
Growth history

- Obtain past growth charts whenever possible.

Treatment Goals

- Medical Stabilization
 - Treat medical complications
- Nutritional Rehab
 - Restore and maintain healthy weight
- Normalization of Eating Behavior
 - Minimize food restrictions
 - Reduce binge/purge
 - Education regarding healthy nutrition/eating
 - Encourage healthy (not excessive) exercise
- Psychosocial Stabilization
 - Treat psychiatric conditions
 - Enhance motivation
 - Address themes and maladaptive thoughts and attitudes
 - Family therapy
- Prevent Relapse

Level-of-care
determination



Outpatient Care

- ✓ Medically stable
- ✓ Low suicide risk
- ✓ Greater than 85% of healthy body weight
- ✓ Fair-to-good motivation to recover
- ✓ Self-sufficient eating
- ✓ Managing compulsive exercising with self-control
- ✓ Can significantly reduce purging in unstructured setting
- ✓ No significant medical complications (e.g. EKG changes) needing acute care
- ✓ Has adequate social and emotional support at home
- ✓ Programming available

Intensive Outpatient Care

- ✓ Medically stable
- ✓ Low suicide risk
- ✓ Greater than 80% of healthy body weight
- ✓ Fair motivation to recover
- ✓ Needs some structure to gain/maintain healthy weight
- ✓ Needs some structure to prevent compulsive exercising
- ✓ Can significantly reduce purging in unstructured setting
- ✓ No significant medical complications (e.g. EKG changes) needing acute care
- ✓ Has adequate social and emotional support at home
- ✓ Programming available

Partial Hospitalization

- ✓ Medically stable
- ✓ Low suicide risk
- ✓ Greater than 80% of healthy body weight
- ✓ Partial motivation; preoccupied with intrusive thoughts > 3 hrs./day
- ✓ Needs some structure to gain/maintain healthy weight
- ✓ Needs some structure to prevent compulsive exercising
- ✓ Can significantly reduce purging in unstructured setting
- ✓ No significant medical complications (e.g. EKG changes) needing acute care
- ✓ Has adequate social and emotional support at home
- ✓ Programming available

Residential

- ✓ IV fluids, NG feedings, daily labs not needed
- ✓ Low suicide risk
- ✓ Less than 85% of healthy body weight
- ✓ Poor-to-fair motivation; preoccupied with intrusive thoughts 4-6 hrs./day
- ✓ Cooperative with highly structured treatment
- ✓ Requires supervision at all meals or will restrict eating
- ✓ Needs some structure to prevent compulsive exercising
- ✓ Can ask for and use support from others; use cognitive & behavioral skills to inhibit purging
- ✓ Conflict or inadequate support at home
- ✓ Local programming not available

Acute Inpatient Hospitalization

Medical Status – Adults

- ✓ < 85% of individually estimated healthy body weight
- ✓ HR < 40 bpm
- ✓ BP < 90/60 mmHg
- ✓ Glucose < 60 mg/dl
- ✓ K+ < 3 mEq/L
- ✓ Other electrolyte imbalance
- ✓ Temp < 97.0 °F
- ✓ Dehydration
- ✓ Hepatic/renal/cardiovascular organ compromise
- ✓ Poorly controlled diabetes

Acute Inpatient Hospitalization

Medical Status – Children and Adolescents

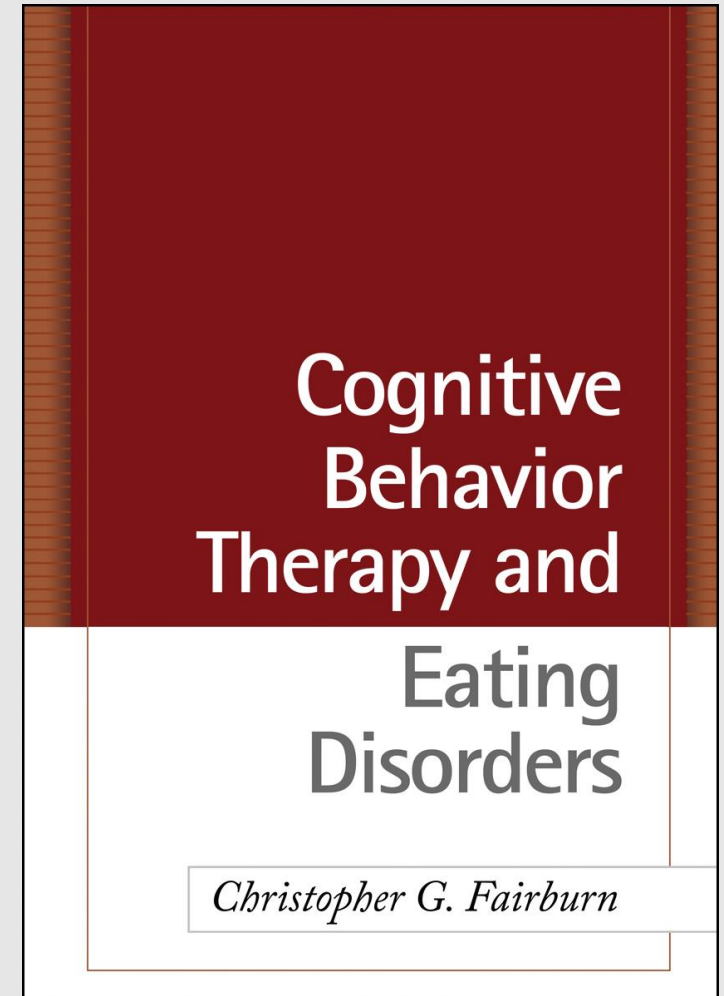
- ✓ Weight < 85% of individually estimated healthy body weight
- ✓ HR near 40 bpm
- ✓ Orthostatic vital sign change
 - > 20 bpm increase in hr
 - >10 mmHg – 20 mmHg drop in BP
- ✓ BP < 80/50 mmHg
- ✓ Hypokalemia
- ✓ Hypophosphatemia
- ✓ Hypomagnesemia

Acute Inpatient Hospitalization

- ✓ Specific plan for suicide with intent=high SI risk
- ✓ Other significant mental illness interfering with ED treatment
- ✓ < 85% acute weight decline—with food refusal even if not < 85% of healthy body weight
- ✓ Very poor to poor motivation; intrusive, repetitive thoughts
- ✓ Uncooperative or only cooperative in highly structured environment
- ✓ Requires supervision during and after all meals or NG/special feeding
- ✓ Requires supervision during and after all meals and in bathrooms
 - Unable to control purging despite trying outpatient care
 - Regardless of presence/absence of metabolic shifts on labs
- ✓ Conflict or inadequate support at home
- ✓ Local programming not available

Psychotherapy - Adults

- CBT-E
 - Examines maintaining behaviors—not initial etiology
 - Stabilize eating behaviors and reduce symptoms
 - Reduce cognitive distortions related to:
 - Over evaluation of weight and body
 - Rigid diet and food rules
 - Being underweight or drive for thinness
 - Event or mood triggered change in eating
 - Self-monitoring, changing behaviors, change self-talk, ABC logs





FAMILY THERAPY for
ADOLESCENT EATING
and **WEIGHT DISORDERS**

NEW APPLICATIONS

EDITED BY KATHARINE L. LOEB, DANIEL Le GRANGE, AND JAMES LOCK

Psychotherapy – Children and Adolescents

- Family-based therapy
 - Parents in charge of refeeding child
 - Choosing food, portioning, and supervision
 - Return autonomy to child when ready
 - Maintenance of regular, healthy eating

Other treatment modalities

- DBT/RO-DBT: distress tolerance skills, mood regulation, interpersonal effectiveness
 - Non-judgement skills
 - Radical acceptance
- Perfectionism-CBT
- Self-esteem-CBT (positive affirmations)
- Body image-CBT
- Exposure Response Prevention (feared foods, eating out and in front of others, grocery shopping)

Psychopharmacology of Eating Disorders

-
- Medications to be used in conjunction with psychosocial interventions
 - Anorexia and BED: substantial evidence base
 - BED: limited evidence, but typically used in clinical practice
 - Timing
 - AN: If possible wait until weight restored
 - BN and BED: when starting psychosocial modalities
 - Know and manage side effects and black box warnings
 - Weigh risks/benefits
 - Antidepressants and increased risks for SI
 - Malnourished, depressed patients more prone to SE
 - Consider cardio consult
 - Large research gap – ED is large public health problem, however lack of psychopharm research and options
 - Only two FDA approved medications to treat ED
 1. Fluoxetine (Prozac) 60 mg for BN
 2. Lisdexamphetamine (Vyvanse) 30, 50, or 70 mg for BED

Psychopharmacology – Children and Adolescents with Anorexia

- *The use of medications, including CAM, should be reserved for comorbid conditions and refractory cases *
- Antidepressants – SSRIs for comorbid anxiety and depression
- Second-generation antipsychotics: not usually recommended
 - risperdal – pilot RCT of using adjunct found few benefits, but well tolerated
 - olanzapine – small case series decrease in body image concerns, agitation, anxiety regarding eating; small controlled trial found no benefit
 - quetiapine – small randomized study some improvements in weight and eating-related thinking, but not statistically different
- APA, 2012; Flament, Bissada & Spettigue, 2012; Frank 2015; Frank et al., 2017; Frank & Shott, 2016; Hagman et al., 2012; Hay & Claudino, 2012; Lock & La Via, 2015

Eating Disorder Research

- [The Eating Anxiety Treatment Laboratory and Clinic](#): University of Louisville
- [EDCare](#): University of Colorado
- [Center of Excellence for Eating Disorders](#): UNC Chapel Hill
- Dasotraline: BED
 - DNRI
 - Sunovion
 - Phase III
- Naloxone: BED and BN
 - Opioid receptor agonist
 - Phase II
- India Globalization Capital (IGC): preclinical drugs IGC 504 and 506 -- cannabis-based combination therapies to treat eating disorders (cachexia) associated with severe illness

ED Resources

[National Eating Disorders Alliance \(NEDA\)](#)

[Louisville Center for Eating Disorders](#): outpatient and IOP (PHP to come)

[EAT Lab](#): outpatient if quality for research

[Elyse Rochman, LCSW](#): outpatient

[UK Health Services](#): outpatient

[Eating Recovery Center of Cincinnati](#): PHP, IOP, VIOP

[Linder Center of Hope at UC](#): Residential and PHP

[McCallum Place](#): Residential, PHP, and IOP

[Center for Change](#): Full spectrum of care

[Laureate](#): Full spectrum of care

[Renfrew](#): Full spectrum of care

[AED's Eating Disorders: A Guide to Medical Care](#)



Questions?

References

- Academy for Eating Disorders. (2016). *Eating disorders: A guide to medical care*. Retrieved from <http://www.nyeatingdisorders.org/pdf/AED%20Medical%20Management%20Guide%203rd%20Edition.pdf>.
- American Public Health Association, Public Health Nursing Section. (2013). *The definition and practice of public health nursing: a statement of the public health nursing section*. Washington, DC: American Public Health Association.
- American Psychiatric Association. (2012). *Guideline watch (August 2012): Practice guideline for the treatment of patients with eating disorders, 3rd edition*. Retrieved from https://psychiatryonline.org/pb/assets/raw/sitewide/practice_guidelines/guidelines/eatingdisorders-watch.pdf.
- American Psychiatric Association. (2006). *Practice guideline for the treatment of patients with eating disorders, 3rd edition*. Retrieved from https://psychiatryonline.org/pb/assets/raw/sitewide/practice_guidelines/guidelines/eatingdisorders.pdf.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders (5th ed.)*. Arlington, VA: American Psychiatric Publishing.
- Andries, A., Frystyk, J., Flyvbjerg, A. & Stoving, R. (2014). Dronabinol in severe, enduring anorexia nervosa: A randomized controlled trial. *International Journal of Eating Disorders*, 47 (1), 18-23.
- Brownley, K., Berkman, N., Peat, C., Lohr, K., Cullen, K., Bann, C., & Bulik, C. (2016). Binge-eating disorder in Adults: A systematic review and meta-analysis. *Annals of Internal Medicine*, 165 (6), 409-426.
- Claudino, A., Silva de Lima, M., Hay, P., Bacaltckuk, J. Schmidt, U., & Treasure, J. (2006). Antidepressants for anorexia nervosa. *Cochrane Systematic Review*. Retrieved from <https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD004365.pub2/full>.
- Culbert, K., Racine, S., & Klump, K. (2015). Research review: What we have learned about the causes of eating disorders – a synthesis of sociocultural, psychological, and biological research. *Journal of Child Psychology and Psychiatry*, 56 (11), 1141-1164.
- Dold, M., Aigner, M., Klabunde, M., Treasure, J., & Kasper, S. (2015). Second-generation antipsychotic drugs in anorexia nervosa: A meta-analysis of randomized controlled trials. *Psychotherapy and Psychosomatics*, 84, 110-116.
- Dolder, P., Strajhar, P., Vizeli, P., Hammann, F., Odermatt, A., & Liechti, M. (2017). Pharmacokinetics and pharmacodynamics of lisdexamfetamine compared with D-Amphetamine in healthy subjects. *Frontiers in Pharmacology*, 8, (617). Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5594082/>.
- Eating disorders in men and boys. (2019, February 24). Retrieved from <https://www.apastyle.org/learn/faqs/web-page-no-author>
- Eating disorder statistics. (2019, January 20). Retrieved from <https://anad.org/education-and-awareness/about-eating-disorders/eating-disorders-statistics/>.
- Eli Lilly. (2016). Prozac: Highlights of prescribing information. Retrieved from <http://pi.lilly.com/us/prozac.pdf>.
- Fairborn, C. (2008). *Cognitive Behavior Therapy and Eating Disorders*. New York, NY: Guilford Press.

- Fichter, M. (2016). Mortality in eating disorders – results of a large prospective clinical longitudinal study. *International Journal of Eating Disorders*, 49 (4), 391-401.
- Flament, M. Bissada, H. & Spettigue, W. (2012). Evidence-based pharmacology of eating disorders. *International Journal of Neuropsychopharmacology*, 15, 189-207.
- Food Intake and Starvation Induce Metabolic Changes. (2002). *Biochemistry*. Retrieved from <https://www.ncbi.nlm.nih.gov/books/NBK22414/>.
- Fornaro, M., Solmi, M., Perna, G., De Berardis, D., Veronese, N., Orsolini, L., Gananca, L., & Stubbs, B. (2016). Lisdexamfetamine in the treatment of moderate-to-severe binge eating disorder in adults: Systematic review and exploratory meta-analysis of publicly available placebo-controlled, randomized clinical trials. *Neuropsychiatric Disease and Treatment*, 12, 1827-1836.
- Frank, G., (2015). Aripiprazole, a partial dopamine agonist to improve adolescent anorexia nervosa – A case series. *International Journal of Eating Disorders*, 49 (5), 529-533.
- Frank, G., & Shott, M. (2016). The role of psychotropic medications in the management of anorexia nervosa: Rationale, evidence and future prospects. *CNS Drugs*, Retrieved from https://eatingdisorder.care/wp-content/uploads/2017/07/frank-shott_anpharmacology.pdf.
- Frank, G., Shott, M., Hagman, J., Schiel, M., DeGuzman, M., & Rossi, B. (2017). The partial dopamine D2 receptor agonist aripiprazole is associated with weight gain in adolescent anorexia nervosa. *International Journal of Eating Disorders*, 50 (4), 447-450.
- Friedli, N., Stanga, Z., Sobotka, L. Culkin, A., Kondrup, J., Laviano, A., Mueller, B. & Schuetz, P. (2017). Revisiting the refeeding syndrome: Results of a systematic review. *Nutrition*, 35, 151-160
- Guzman, F. (2017). The psychopharmacology of fluoxetine: mechanism of action, indications, pharmacokinetics, and dosing. *Psychopharmacology Institute*. Retrieved from <https://psychopharmacologyinstitute.com/antidepressants/ssris/psychopharmacology-fluoxetine-illustrated-review-prescribers/>.
- Hagman, J., Gralla, J., Sigel, E., Ellert, S., Dodge, M., Gardner, R., O’Lonegan, T., Frank, G., & Wamboldt, M. (2012). A double-blind placebo controlled study of risperidone for the treatment of adolescents and young adults with anorexia nervosa: A pilot study. *Journal of the American Academy of Child and Adolescent Psychiatry*, 50 (2), 915-924.
- Hay, P. & Claudino, A. (2012). Clinical psychopharmacology of eating disorders: a research update. *International Journal of Neuropsychopharmacology*, 15, 209-222.
- Higgins, A. & Cahn, S. (2017). Detection of Anorexia nervosa in primary care. *Eating Disorders*, 26 (3), 213-228.412-425.
- Leitner, M., Burstein, B., Agostino, H. (2016). Prophylactic phosphate supplementation for the inpatient treatment of restrictive eating disorders. *Journal of Adolescent Health*, 58 (6), 616-620. Retrieved from <https://www.sciencedirect.com/science/article/pii/S1054139X15006825>.
- Levinson, C. (2018). Detection, Treatment, and Specialty Resources for Eating Disorders. [PowerPoint Slides]

- Lock, J. La Via, M., and the American Academy of Child and Adolescent Psychiatry (AACAP) Committee on Quality Issues (CQI). (2015). Practice Parameter for the Assessment and Treatment of Children and Adolescents with Eating Disorders. *Journal of the American Academy of Child & Adolescent Psychiatry* (54), 5
- Maguen, S., Hebenstreit, C., Li, Y., Dinh, J., Donalson, R., Dalton, S., Rubin, E., Masheb, R. (2018). Screen for disordered eating: Improving the accuracy of eating disorder screening in primary care. *General Hospital Psychiatry*, 50, 20-25.
- Marzola, E., Desedime, N., Giovannone, C., Amianto, F., Fassino, S. & Abbate-Daga, G. (2015). Atypical antipsychotics at augmentation therapy in anorexia nervosa. *PLOS*, 10 (4), retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4414549/>.
- McElroy, S., Guerdjikova, A., Mori, N., & Keck, P. (2015). Psychopharmacologic treatment of eating disorders: Emerging finding. *Current Psychiatry Reports*, 17 (35), Retrieved from <https://link.springer.com/article/10.1007/s11920-015-0573-1>.
- Mehanna, H., Moledina, J., & Travis, J. Refeeding syndrome: What it is, and how to prevent and treat it. *The British Medical Journal*, 336 (7659), 1495-1498.
- Morgan, J., Reid, F., & Lacey, J. (1999). The SCOFF questionnaire: Assessment of a new screening tool for eating disorders. *The British Medical Journal*, 319 (7223), 1467-1468.
- Patient-Centered Outcomes Research Institute. (2017). *Compared effectiveness of outpatient treatment for adolescents with eating disorders*. Retrieved from <https://www.pcori.org/sites/default/files/PCORI-Communication-Dissemination-Research-Advisory-Panel-Eating-Disorders-Topic-Brief.pdf>.
- Peebles, R., Lesser, A., Park, C., Heckert, K., Timko, C., Lantzouni, E., Liebman, R., & Weaver, L. (2017). Outcomes of an inpatient medical nutritional rehabilitation protocol in children and adolescents with eating disorders. *Journal of Eating Disorders*, 5 (7). Retrieved from <https://jeatdisord.biomedcentral.com/articles/10.1186/s40337-017-0134-6>
- Pharma intelligence. (2018). Drug development for eating disorders and obesity: Weighing up the difference. Part I. Retrieved from <https://pharmaintelligence.informa.com/resources/product-content/drug-development-for-eating-disorders-and-obesity-part-1>
- Shire US. (2017). Vyvanse: Highlights of prescribing information. Retrieved from https://www.accessdata.fda.gov/drugsatfda_docs/label/2017/208510lbl.pdf
- Southard, E., Bauer, R., & Kummerow, A. (2015). Dying to be thin: Recognizing and treating anorexia in adolescents. *Women's Healthcare*, 3 (3), Retrieved from <https://npwomenshealthcare.com/dying-to-be-thin-recognizing-and-treating-anorexia-vol3-no3/>.
- Starvation Symptoms and Implications for Eating Disorders (2019, February 8). Retrieved from <https://www.river-centre.org/starvation-symptoms/>
- Swanson, S., Crow, S., LeGrange D., Swendsen, J., & Merikangas, K. (2011). Prevalence and correlates of eating disorders in adolescents: Results from the National Comorbidity survey replication adolescent supplement. *Archives of General Psychiatry*, 68 (7), 714-723.
- Williams, P., Goodie, J., & Motsinger, C. (2008). Treating eating disorders in primary care. *American Family Physician*, 77 (2), 187-195.