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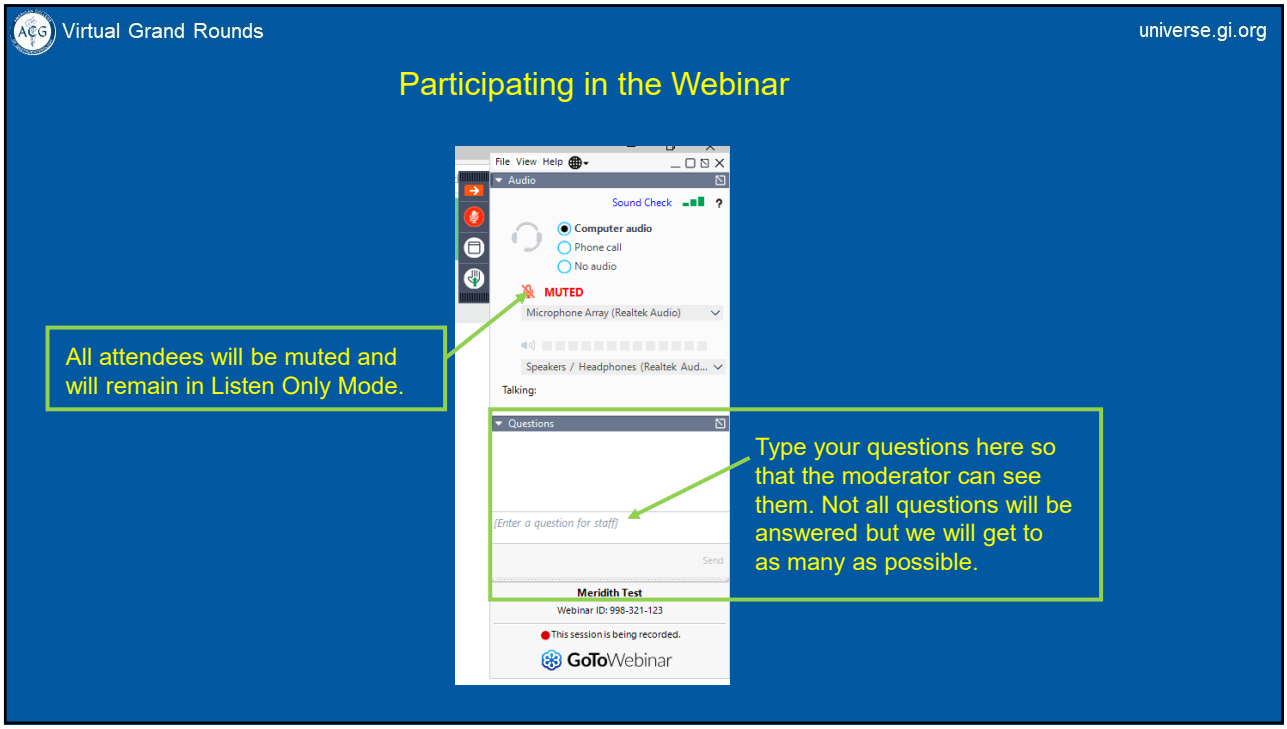
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2

How to Receive CME and MOC Points

LIVE VIRTUAL GRAND ROUNDS WEBINAR

ACG will send a link to a CME & MOC evaluation to all attendees on the live webinar.

ABIM Board Certified physicians need to complete their MOC activities by December 31, 2021 in order for the MOC points to count toward any MOC requirements that are due by the end of the year. No MOC credit may be awarded after March 1, 2022 for this activity.

3

MOC QUESTION

If you plan to claim MOC Points for this activity, you will be asked to: Please list specific changes you will make in your practice as a result of the information you received from this activity.

Include specific strategies or changes that you plan to implement.
THESE ANSWERS WILL BE REVIEWED.

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ACG Virtual Grand Rounds

Join us for upcoming Virtual Grand Rounds!

Week 22, 2021
Addressing Sexual Trauma and Abuse with GI Patient
Laurie A. Keefer, PhD
June 3, 2021 at Noon Eastern

Week 23, 2021
Tackling Small Bowel Malabsorptive Disorders and IBS Masqueraders
Baharak Moshiree, MD, MS-CI, FACG
June 10, 2021 at Noon Eastern

Visit **gi.org/ACGVGR** to Register

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Disclosures:

Speaker:
Monia E. Werlang, MD
Dr. Werlang, faculty for this educational event, has no relevant financial relationship(s) with ineligible companies to disclose.

Speaker:
Leslie Sim, PhD, LP
Dr. Sim, faculty for this educational event, has no relevant financial relationship(s) with ineligible companies to disclose.

Moderator:
Brian E. Lacy, MD, PhD, FACG
Dr. Lacy, faculty for this educational event, has no relevant financial relationship(s) with ineligible companies to disclose.

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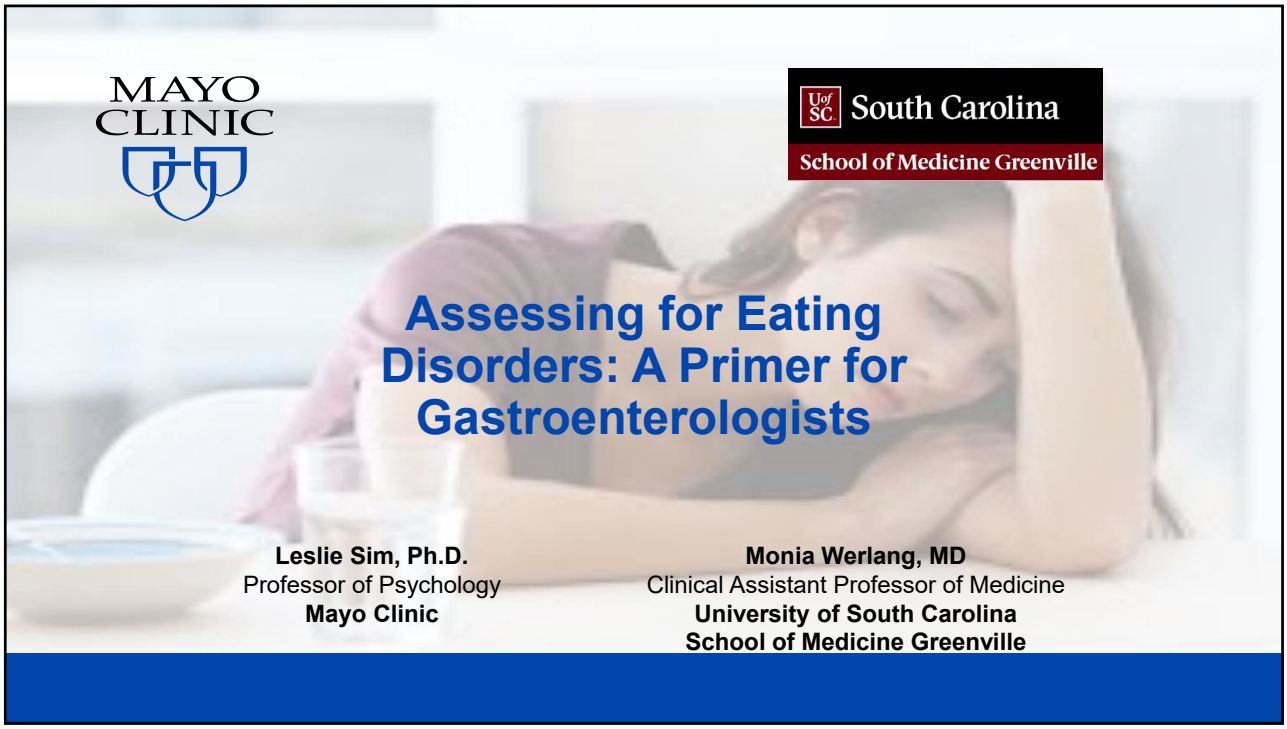
MAYO CLINIC
South Carolina
School of Medicine Greenville
Assessing for Eating Disorders: A Primer for Gastroenterologists
Leslie Sim, Ph.D.
Professor of Psychology
Mayo Clinic
Monia Werlang, MD
Clinical Assistant Professor of Medicine
University of South Carolina
School of Medicine Greenville

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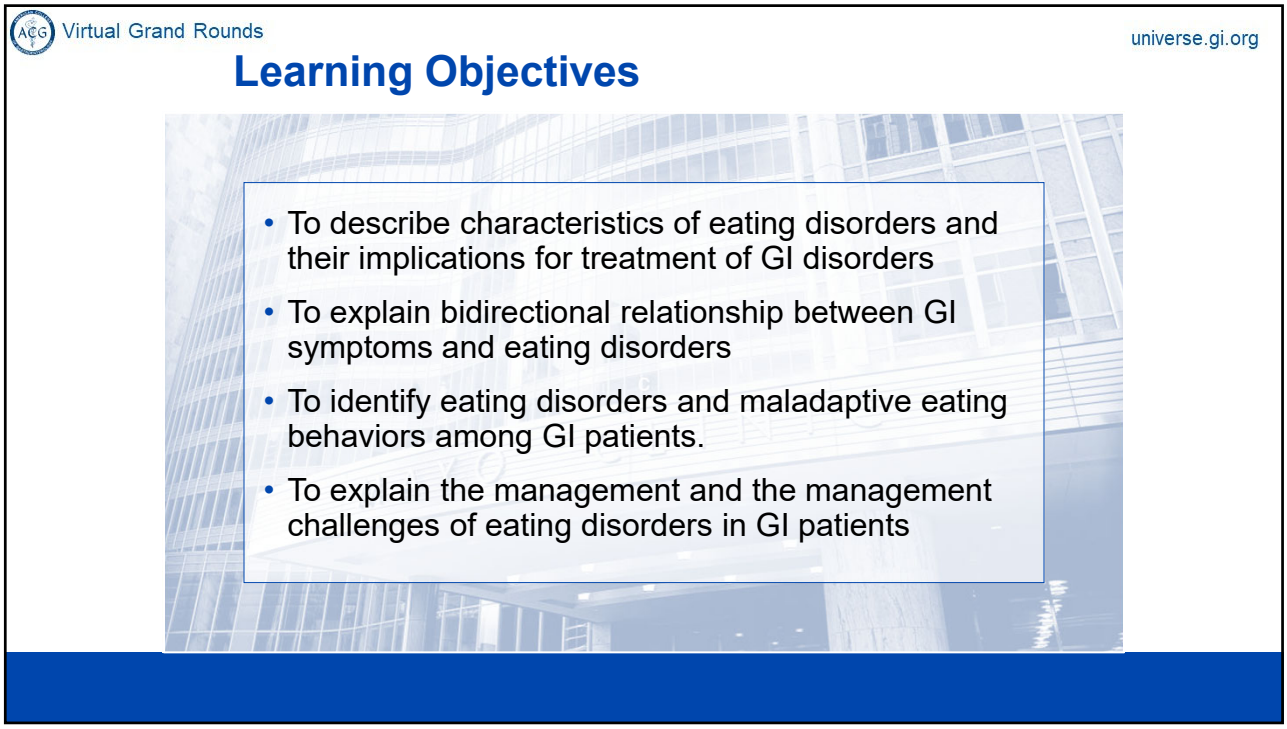
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Learning Objectives
To describe characteristics of eating disorders and their implications for treatment of GI disorders
To explain bidirectional relationship between GI symptoms and eating disorders
To identify eating disorders and maladaptive eating behaviors among GI patients.
To explain the management and the management challenges of eating disorders in GI patients

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Anorexia Nervosa

DSM-IV-TR

- Refusal to maintain body weight below 85% of expected
- Intense fear of gaining weight
- Body image disturbance
- Amenorrhea
- 2 types:
  - *Restricting type*
  - *Binge-eating/purging type*

DSM-5

- Restriction of energy leading to a low body weight in the context of age, sex, developmental trajectory and physical health
- Intense fear of gaining weight or persistent bx that interferes with weight gain
- Body image disturbance or lack of recognition in the seriousness of the low body weight
- 2 types:
  - *Restricting type*
  - *Binge-eating/purging type*

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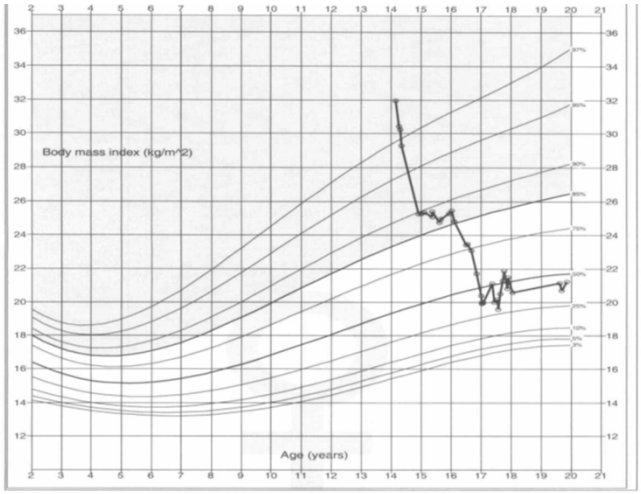
Atypical Anorexia Nervosa



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Characteristics and Outcome of AN

- Common comorbid psychopathology
- Individuals with AN lack insight
- Ego-syntonic
- 50% patients recover
- Protracted recovery (57-59 months)
- 30% of restrictors develop binge eating
- Elevated mortality rate

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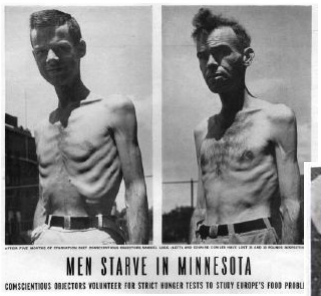
Minnesota Starvation Experiment



MEN STARVE IN MINNESOTA

CONSCIENTIOUS OBJECTORS VOLUNTEER FOR STRICT HUNGER TESTS TO STUDY EUROPE'S FOOD PROBL

FIGURE 2 *Life* magazine photograph of conscientious object during starvation experiment. July 30, 1945. Volume 19, Number 5 43. Credit: Wallace Kirkland/Time Life Pictures/Getty Images.

GURE 8.5. Minnesota volunteers at mealtime. pyright 1950 by the University of Minnesota ess. Reprinted by permission.

FIGURE 8.6. Minnesota volunteers after weight loss. Photo by Wallace Kirckland. Copyright 1950 by Life–Time–Warner.

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Bulimia Nervosa

DSM-IV-TR	DSM-5
• Recurrent episodes of binge eating (large amount/loss of control) (2x week)	• Recurrent episodes of binge eating (large amount/loss of control) (1x week)
• Recurrent inappropriate compensatory behavior to prevent weight gain (2x week)	• Recurrent inappropriate compensatory behavior to prevent weight gain (1x week)
• Self evaluation is unduly influenced by shape and weight	• Self evaluation is unduly influenced by shape and weight

• 2 types:
  ◦ *Binge-eating/purging type*
  ◦ *Nonpurging subtype*
	• Disturbance does not occur during episode of AN

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Characteristics and Outcome of BN

- Normal to slightly above normal weight
- Restrictive eating/dieting
- High rate of depression
- Ego-dystonic
- 42-47% full recovery
- 18% will meet criteria for OSFED
- Cross over to AN rare
- Lifetime frequency of suicide attempts 15-40%

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Binge-Eating Disorder

DSM-IV

- EDNOS

DSM-5

- Recurrent episodes of binge eating (large amount/loss of control)
  - Rapid, uncomfortably full, large amount when not hungry, disgust/guilt with self (3 or more)
- Marked distress regarding BE
- No compensator behavior

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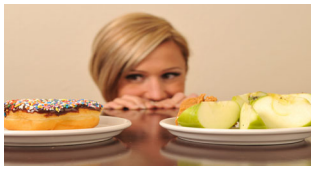
Other Specified Eating Disorder (OSED)

- Formerly known as EDNOS
- Eating disorders in which most criteria are met or do not meet the frequency/duration criteria
- Individuals with EDNOS make up the majority of patients presenting to clinical settings
- Most patients with OSED resemble BN
- Similar illness severity to BN



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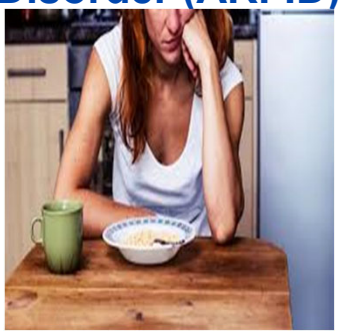
Avoidant Restrictive Food Intake Disorder (ARFID)



- Concerns about aversive consequences of eating
- Wt loss/failure to gain, nutritional deficiency, dependence on alimentation, interference in psychosocial functioning
- No weight/shape concerns
- Sensory sensitivities, food avoidance, decreased appetite, abdominal pain and emetophobia

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Relevance of ED in GI Practice

General GI Practice:

- ED prevalence in general GI clinic ~24%
- ARFID as prevalent as 20% in adult patients with disorders of brain-gut interaction
- Malnutrition and low BMI independently associated with several GI complaints and diagnosis, particularly motility disorders such as gastroparesis and constipation

Satherley R, Appetite 2015; Murray HB, CGH 2019; Cremonini F, JACG 2005; Tack J, Gastroenterology 1998; Rigaud D, DDS, 1988; Chun AB AJG 1997

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Relevance of ED in GI Practice

IBD Practice:

- Crohn's disease hospitalizations: in-hospital mortality grows 10-fold if AN is present
- ARFID prevalence 10%, more common in CD vs UC
- ARFID More likely to be present if severe disease
- Non-ARFID ED prevalence up to 24% of patients with IBD
- Possible worse prognosis → frequent corticosteroid refusal and deliberate medication abandonment to achieve exacerbation of IBD in weight loss efforts

Werlang M, DDW Abstract 2020; Robellin K, DDW abstract 2020; Ilzarbe L, J Psychosom Res 2017.

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Relevance of ED in GI Practice

Disorders of Gut-Brain Interaction:

- Prevalence of IBS in patients with AN and BN as high as 66%
- Patients with IBS have more chances of having EDs when compared with healthy adults (odds ratio 5.3)
- No particular subtype of IBS is at higher risk of EDs
- Among patients with ED, 31% have functional dyspepsia (post-prandial distress syndrome subtype)
- 90% of patients with IBS will undergo some type of restrictive/elimination diet
- Hx of ED is independent risk factor for rumination syndrome

DeJong H, Int J Eat Disord 2011; Kayar Y, Gastroenterol Hepatol 2020; Murray H, Int J Eat Disord 2020; Harer K, Gastro Clin North Am 2021; Cai JX, J Clinc Gastro 2021

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Relevance of ED in GI Practice

Gastroparesis:

- If comorbid AN, improvement in nutritional status substantially improves gastric emptying for those with gastroparesis
- In patients presenting with functional dyspepsia/gastroparesis symptoms, eating disorder symptoms were present in 55% of patients; screening was positive for ARFID in 40%. More likely to screen + for ARFID with more severe symptoms, but unrelated to GES results
  - Gastroparesis/dyspepsia may mimic ED / ARFID – caution on diagnosis

Rigaud D, 1988 DDS; Murray HB, 2020 Neurogastroenterol Motil

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Relevance of ED in GI Practice

Microbiome

- Microbiome is affected by starvation and ED; unclear clinical consequences

Chronic constipation

- 19% of patients had concomitant disordered eating
- If AN present, constipation and defecatory issues are likely to improve with weight restoration

Celiac disease

- Diet-controlled illnesses (i.e., diabetes and celiac disease) at higher risk of developing ED
- Compared to general population, risk increase15-fold of ED in patients with celiac disease

Murray HB, CGH 2020; Quick VM Adv Nutr 2013; Conviser JH Int J Eat Disord 2018; Chun AB, AJG 1997; Lam YY, Nutrients 2017; Glenny EM, Curr Psyc Rep 2017; Alkhayyat M, J Gastro Hepatol 2021

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Challenges Identifying and Treating Eating Disorders in GI patients

- Patients with chronic pain and eating disorders take longer to be identified
  - Patients/Physicians focused on assessment of pain
  - Pain masks eating disorder
  - GI symptoms– socially acceptable excuse
- Lack of reliable and valid screening measures
  - Measures that focus on weight/shape concerns may be inadequate for identifying EDs in GI patients
- No research on interventions to address ARFID in youth with chronic pain

Sim et al., 2017, J Pediatr Health Care

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What questions can I ask if the patient does not volunteer ED history, but my suspicion is high?

Tell me about your diet over the past few days…
Have you changed/limited your diet recently? If yes, why?
Are your symptoms affected by food? How so?
Does the [gastrointestinal symptom] prevent you from eating?
Have you or any of your family members suffered from an eating disorder?
Do others consider you too thin, while you consider yourself overweight or fat?
How much time do you spend planning your meals or thinking about foods?
Does your family/friends consider you to be a very picky eater? Why?
Do you exercise? How much/how often?
What feelings do you have at mealtime or when you look at food?
Do you feel anxious or fearful when you think about eating?

Werlang M, Sim L, Lebow J, Lacy B, AJG 2020

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What questions can I ask if the patient does not volunteer ED history, but my suspicion is high?

For patients who volunteer information on weight loss/appear malnourished
What do you think caused you to lose so much weight?
What if we could restore the weight you had before you got sick?
Would you like to go back to your previous weight, before you got sick?
Are you concerned about your weight loss?
Has your weight ever influenced how you feel about yourself?
Would you be willing to change your current diet to recover the weight you lost?

Werlang M, Sim L, Lebow J, Lacy B, AJG 2020

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What questions can I ask if the patient does not volunteer ED history, but my suspicion is high?

For patients with frequent vomiting and/or diarrhea with suspected purging
What do you think that makes you vomit so often?
Do you feel nauseated before vomiting?
Is the vomiting spontaneous or do you ever force it/induce it?
Do you ever induce vomiting to relieve yourself after a large meal?
How often do you feel you lost control over how much you eat?
How often do you eat too much to the point that you are sick?
Do you use laxatives even when you are not constipated? What symptoms/ feelings make you decide to use them?

Werlang M, Sim L, Lebow J, Lacy B, AJG 2020

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Behavioral Assessment of Eds in GI patients

Educate

- Pain is not related to illness/injury
- Weight loss and malnutrition pose a greater harm to physical health and well-being than the pain itself

Prescribe

- Eat by plan not the pain
- Increase amounts to gain a specified amount per week

Follow-up

- If patients struggle to make improvements in eating or weight, consider more comprehensive ED assessment/treatment

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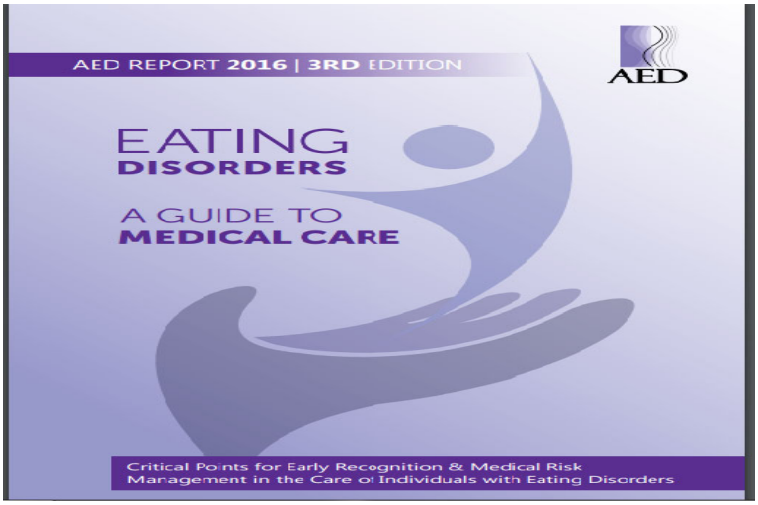
Resource for Medical Evaluation



https://www.aedweb.org/resources/professional-resources

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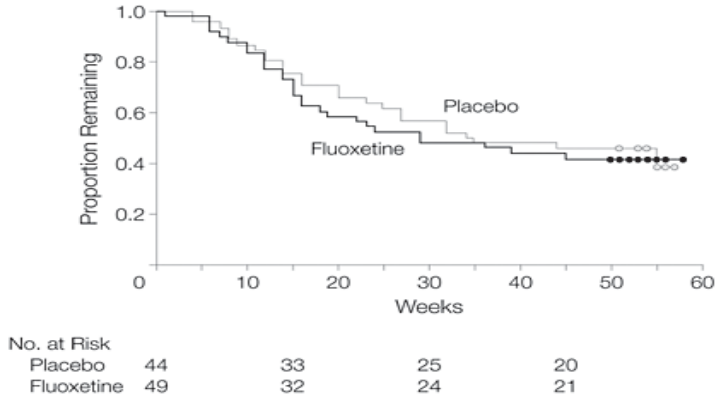
Rate to relapse in AN does not differ between fluoxetine and placebo



Patients Receiving Placebo and Fluoxetine Remaining in Treatment vs Number of Weeks After Treatment Inception

Walsh, B. T. et al. *JAMA* 2006 295:2605-2612.

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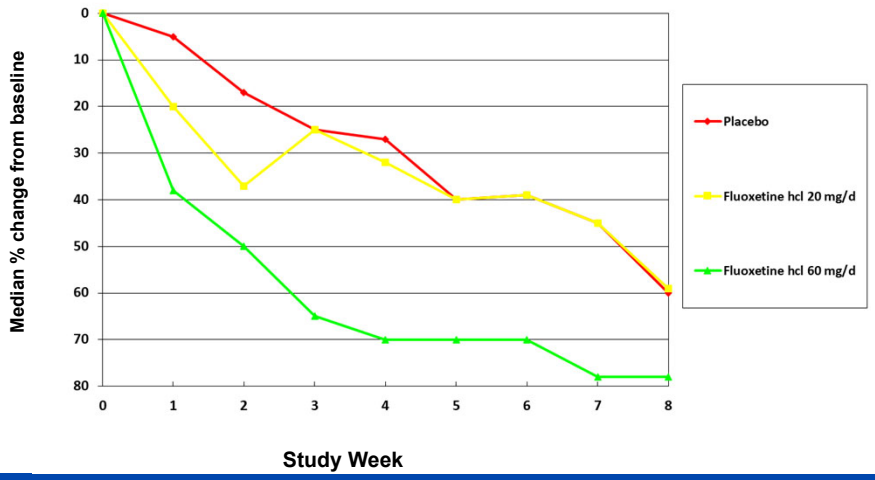
Reduction of binge eating with high dose fluoxetine



Walsh et al, *Arch Gen Psychiatry*, 49;1992

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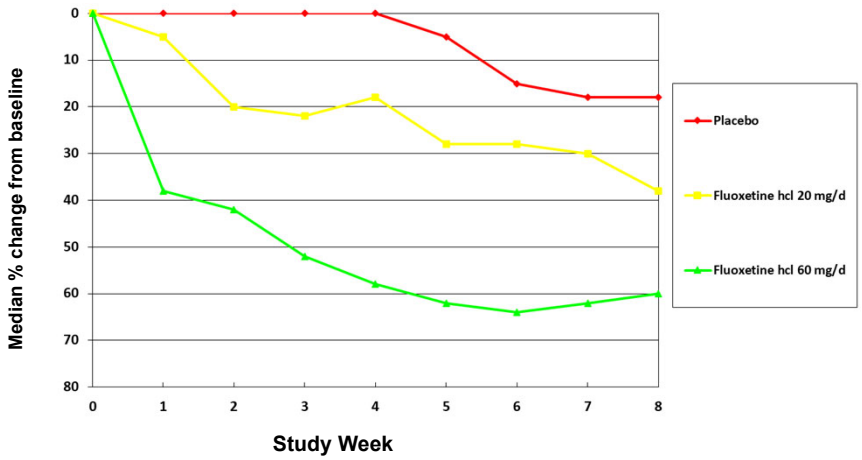
Reduction of vomiting with high dose fluoxetine



Walsh et al, *Arch Gen Psychiatry*, 49;1992

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Family Based Treatment (FBT) for Adolescent AN

- Family is enlisted as a resource
- Adolescent /young adult no longer capable of making sound choices
- Parents mobilized to support patient's recovery
- Superior outcomes for younger, early onset patients
- FBT demonstrates favorable 5-year outcomes

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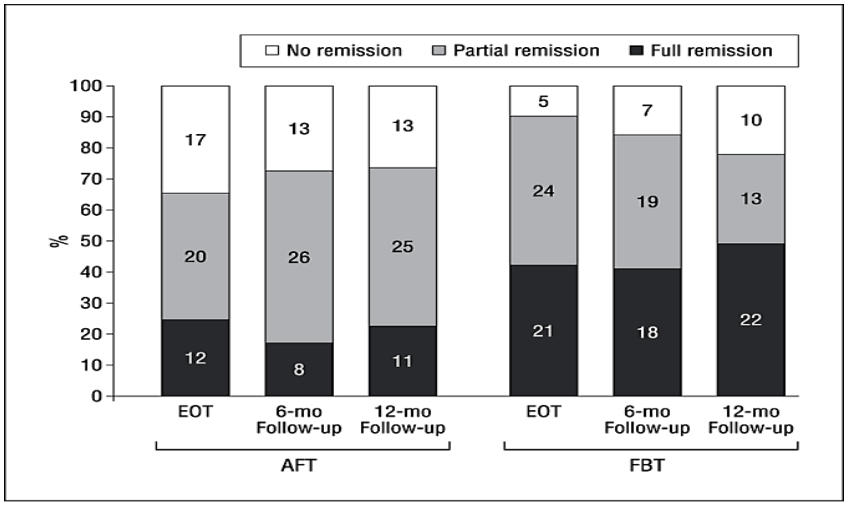
Remission rates for FBT vs. AFT



Lock, J. et al. Arch Gen Psychiatry 2010;67:1025-1032.

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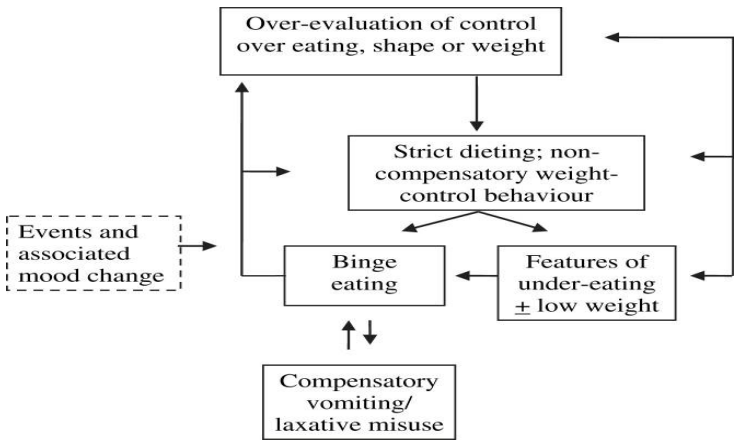
CBT Model for Eating Disorders



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Management of Eating Disorders in GI Patients

- Target weight and nutritional restoration to improve physical and disease management, as well as psychiatric symptoms
- Re-establish eating patterns in spite of pain/lack of hunger
  - Eat by the plan and not the pain and symptoms
  - Desensitization
- Refer to CBT / ACT
- Discuss malnutrition as more pernicious to health than GI disease
  - "You are not going to die of your pain……."

Sim et al. (2020). Clin Psych Med Settings

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Management of Eating Disorders in GI patients: Refeeding

- 35 adolescents (16.2y; 16.2 BMI) admitted for med stabilization
- Mean kcals increased 1300-2700 over 16 days.
- No incidence of refeeding syndrome
- Higher kcals = faster weight gain/ shorter stay
- For each 100kcal increase, 1-day shorter stay

Garber et al., 2012; *J Adol Health*

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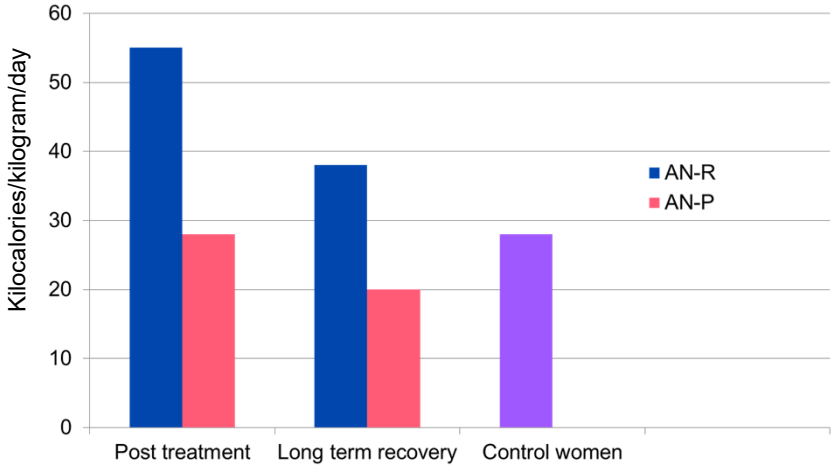
Comparison of Daily Kcal Requirements between AN and Control Women



Marzola et al. BMC Psychiatry, 2013; 13: 290

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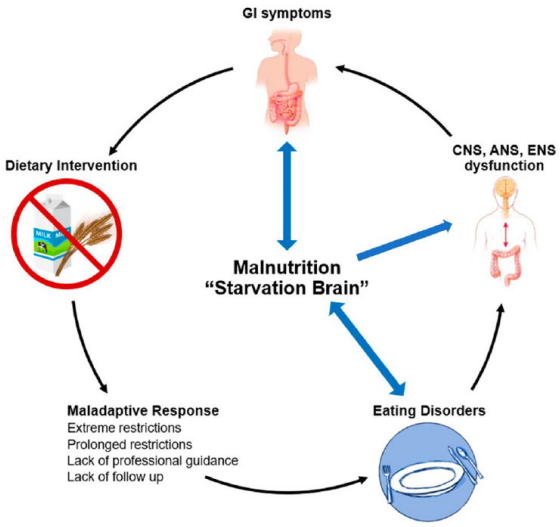
Eating Disorders in GI patients: Are we part of the problem?



Werlang, Sim, Lebow, Lacy, 2020 AJG

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GI and Hepatology Challenges in the Management of ED

Gastroparesis

- Confirmatory test may not be needed if typical symptoms
- Highly likely to improve with weight restoration
- If atypical symptoms or to provide further incentive for weight restoration, GES may help
- Treatment: metoclopramide, macrolides

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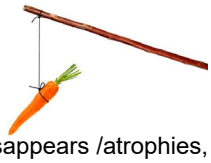
GI and Hepatology Challenges in the Management of ED



Superior Mesenteric Artery Syndrome

- Direct consequence of substantial weight loss: artery cushioning fat pad disappears /atrophies, allowing for migration of the SMA medially constricting the duodenum.
- Postprandial pain and nausea, with vomiting of undigested food as early as 15 minutes within a meal.
- Occurs early in the refeeding efforts.
- Treatment: temporary changing the diet towards softer and more liquid foods, with high-calorie and high-protein liquid supplements.
- Clinical improvement may be achieved with as little as 5-10 pounds of weight gain

Merrett ND, J Gastrointest Surg. 2009

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GI and Hepatology Challenges in the Management of ED

Diarrhea

- Loose stools are frequent in refeeding
- Rule out infections first: Giardia and C diff
- Review medication list
- Consider malabsorptive state → transient state of "short-gut syndrome" → Marked weight loss causing small intestine villous atrophy
  - Diamine oxidase level
  - Treatment: increasing the content of complex carbohydrates and protein, and decreasing liquids ingested during meals.
  - With weight restoration, this entity corrects itself

Takimoto Y, Int J Eat Disord. 2014; Cost J, Cleve Clin J Med. 2020

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GI and Hepatology Challenges in the Management of ED

Abnormal levels of Aminotransferases

- AST and ALT elevation are common before refeeding in patients who are underweight – starvation-induced hepatocyte autophagy
- If AST and ALT elevate during refeeding, steatohepatitis. Fortunately, this condition responds well to changes in the diet macro-composition, reducing calories from carbohydrates

Rosen E,. Int J Eat Disord 2016; Rautou PE. Gastroenterology. 2008

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Summary

- ED are common in every demographic: we all should be comfortable talking about this!
- ARFID – "new" diagnosis; *extreme picky eating;* restriction unrelated to body perception/weight control
- "Starvation Brain" – severe malnutrition can cause
- Be mindful when recommending restrictive / elimination diets – majority of these diets should be temporary: remember maladaptive behaviors, lack of follow up…
- ED are treatable – multidisciplinary approach

Rosen E,. Int J Eat Disord 2016; Rautou PE. Gastroenterology. 2008

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Questions / Comments

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Questions?

Speaker:
Monia E. Werlang, MD

Speaker:
Leslie Sim, PhD, LP

Moderator:
Brian E. Lacy, MD, PhD, FACG

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