

Presented by the Alaska Eating Disorders Alliance



**Key Information about  
Eating Disorders for  
Alaska Primary Care Practitioners**

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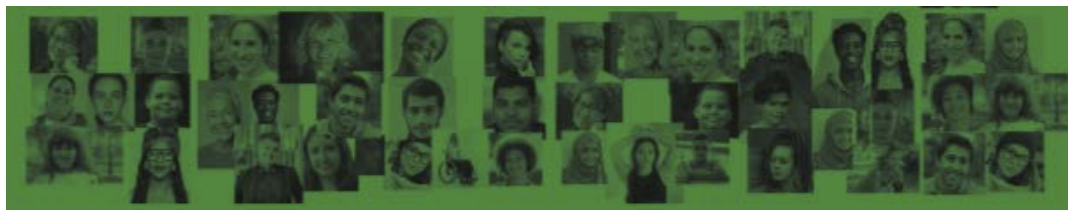
# Objectives

- Identify key medical complications and management related to caloric restriction
- Identify key medical complications and management related to purging
- Recognize the diversity of individuals who can present with eating disorders (“EDs”)
- Understand how to apply a Health at Every Size (HAES®)/weight-inclusive treatment philosophy to primary care

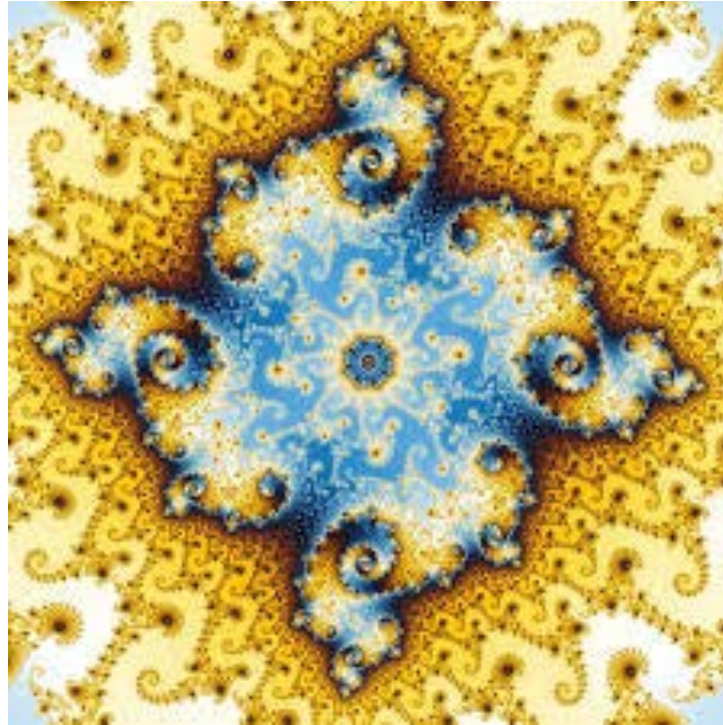
# Plans for today



- **Cave person brain**
- **Case 1, Emily**
  - Medical assessment tools, heart rate abnormalities gastroparesis, constipation, periods and bones, nutritional rehabilitation
  - Internalized thin bias
- **Case 2, Meena**
  - Hypoglycemia
  - Gender and sexual minorities, minority stress
- **Case 3, Jorge**
  - Purging, Relative Energy Deficiency in Sports (RED-S)
  - Males and athletes with eating disorders
- **Case 4, Patricia**
  - Older patients
- **Case 5, Ella**
  - Weight inclusive treatment



# Challenges in primary care



Much of wellness and illness cannot be measured,  
which can be tough on patients & practitioners

# Un-silo



# Use objective evidence

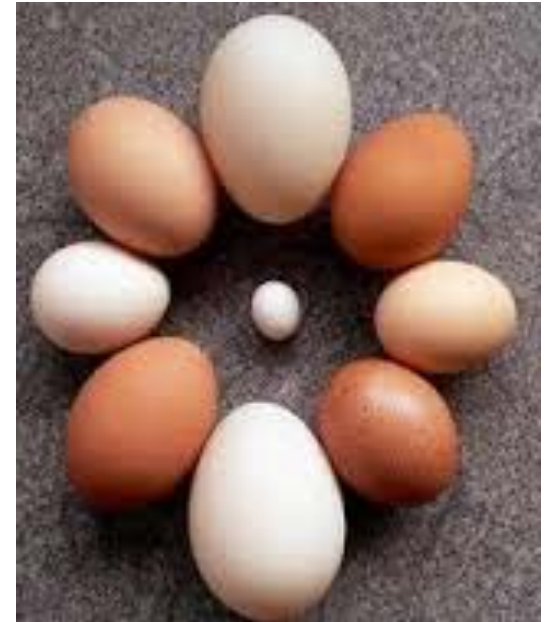
In disorders where patients routinely think they are “fine” and unworthy of treatment or changing behaviors...



...to validate physical suffering and speak truth to the ED

# Types of eating disorders

- Anorexia nervosa
- Bulimia nervosa
- Binge eating disorder
- Avoidant restrictive food intake disorder (ARFID)
- Atypical anorexia nervosa
- “Orthorexia”
  - Death rates 2-6x age-matched peers



**The majority of folks with eating disorders aren't visibly underweight**





# The problem with “best practices”

- I will present “optimal,” resource-neutral cases
- I recognize the patients who: aren’t insured, have inadequate insurance for mental health treatment (governmental insurers, veterans benefits, no out of network benefits), are poor, from minority groups that can’t advocate within the system, or are never even diagnosed
- Serious ethical problems when we determine what patients “should” receive, when in many/most cases there aren’t financial resources



# The problem with “best practices”


- New research shows the mostly-privileged patients we typically care for are probably the tip of the iceberg of patients with EDs
  - Individuals enrolled in TX food bank program
  - The higher the food insecurity, the higher the ED behaviors seen: binge eating, overall ED pathology, any-reason dietary restraint, weight self-stigma
  - 17% of those in the child hunger food insecurity group reported clinically significant ED pathology



Becker CB, Middlemass K, Taylor B, Johnson C, Gomez F. Food insecurity and eating disorder pathology. *Int J Eat Disord.* 2017;50:1031–1040.

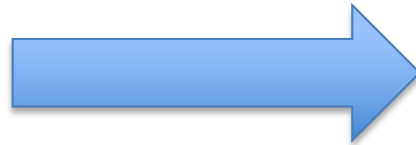


# Fundamental Restriction Concepts



# The bigger perspective

- How does our brain respond to malnutrition?
  - Malnutrition meaning insufficient food for whatever reason, compared with what a body needs, regardless of body shape or size



“Cave person brain” concept





# Overview of cave person brain response

- “I’ll slow your metabolism to save your life”  
(That means alter the way body works to use less energy)
  - Cooler body temps, including hands and feet
  - Slowed heart rate
  - Slowed digestion
  - Reversion of sex hormones to pre-puberty (which contributes to fragile bones)
  - Starved brain, rigidity, less creative/slower cognitive ability
- **Weight may or may not change with eating disorder behaviors, depending on genes**





# Different and the same

- There are a known set of ways our brain will respond to inadequate nourishment, but each person's individual experience will be unique
- This relates to our genetic make-up and “sensitive genetics” or “survivor genetics”

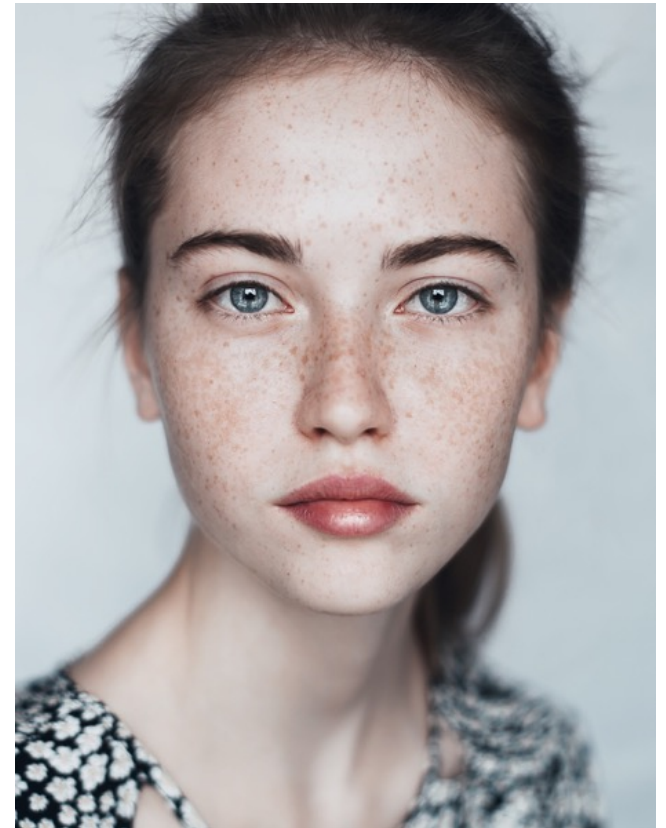




Medical Assessment,  
Gastroparesis, Constipation,  
Periods, Bones, Nutritional  
Rehabilitation

# Case

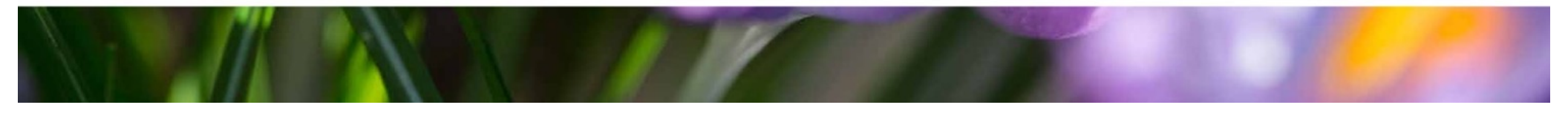
- Emily is a 17-year-old Caucasian cisgender cross country runner and straight-A high school student
- For the last 6 months, she's gone on a "health food kick"
- She loses weight, while not formally underweight, and everyone compliments her, including her coach
- Her period stops, she gets full quickly, and she starts experiencing constipation
- She trends from healthy choices into rigid food rules
- As her brain gets more starved, she develops body distortions





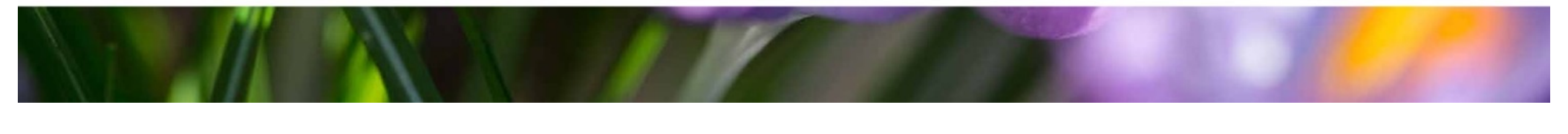


# In non-ED informed settings

- Parents are concerned and bring her to the doctor as she keeps losing weight
  - Nurse tells her on the way in that she looks “great”
  - Doctor sees a heart rate of 45 and believes her when she says it’s because she’s a runner
  - Lab work normal
  - He tells her to just keep eating healthy foods: “I deal with the opposite all day”
  - She drops 15 more lbs, insisting she’s fine the whole time, before she passes out and is admitted to a hospital and then to a program, where her stay is prolonged 7 extra weeks due to the excess weight loss
- 




# Harm: internalized thin bias

- Because she looked like a stereotypical “successful 17 year old” (thin, white, athletic, academically successful, health-focused), the pediatrician missed key signs and enabled her eating disorder
  - Crucial time and resources were wasted
  - She could have died in the meantime from medical complications of starvation
- 



# Assessment tools

- Basic vital signs, including an ambulatory pulse (formal orthostatics optional)
  - Blinded weight/height
  - Fingertick blood glucose
  - EKG
  - Basic blood work: CBC with diff, CMP with phos, TSH, Vit D OH, estradiol or testosterone
  - DXA bone density scan
  - Physical exam
  - Urinalysis
- 

# Urinalysis

- Highly dilute urine can suggest over-drinking (risk for hyponatremia & “water loading” to make weight look higher)
- “Arrive at clinic with yellow pee”
- Also watch for ketones, reflecting muscle breakdown in the absence of adequate carbohydrate intake



# Body temperature



# Orthostasis: overused!

- Heart rate changes in anorexia are due to starvation are *not* orthostasis



# Starved heart

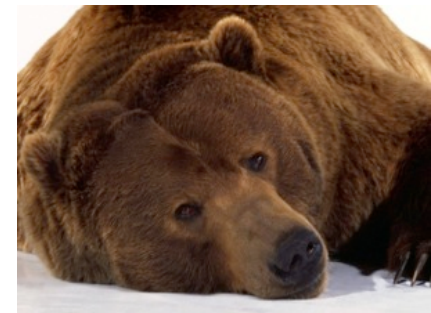
- Hibernation mode due to high vagal tone
  - Bradycardia at rest
  - Blood pressure unchanged posturally
  - **“Walk across the room test” helps distinguish between athletic and starved hearts**

**PS: While hibernating, bears don't:**

Go to school

Go to work

Raise a family



Play sports

Do extracurriculars

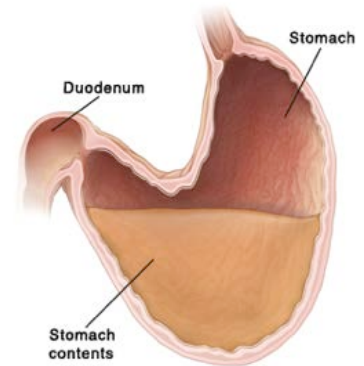
Or maintain their social media presence

**....they SLEEP**

# Gastroparesis

- **Loss of normal stomach peristalsis (movement)**

- Nearly universal in weight loss...regardless of body size
- Causes early fullness, nausea, bloating, gassiness
- Rarely is a nuclear med emptying study needed in this population





# Gastroparesis

## Worsens

- High fiber diets
- Rapid weight loss or longtime underweight

## Helps

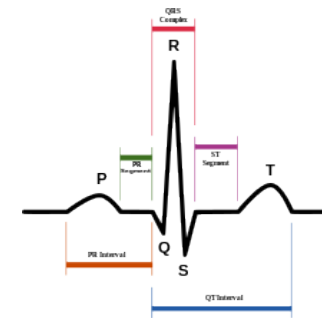
- Smaller meals
- Liquids/semi-solids
- Low fiber
- Kcal dense
- Lying on right side after a meal



# Gastroparesis

- **Prescription options**

- Metoclopramide 2.5 mg 30-45 min before meals, and hs
- Cyproheptadine 2-4 mg qhs
- Erythromycin ethylsuccinate 200 mg BID another option, or additive
- Azithromycin 250 mg a day
- Review risks and benefits

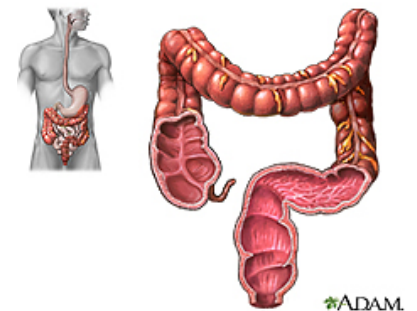


Chini P, Toskes PP, Waseem S, Hou W, McDonald R, Moshiree B. Effect of azithromycin on small bowel motility in patients with gastrointestinal dysmotility. *Scand J Gastroenterol.* 2012 Apr;47(4):422-7

Moshiree B, McDonald R, Hou W, Toskes PP. Comparison of the effect of azithromycin versus erythromycin on antroduodenal pressure profiles of patients with chronic functional gastrointestinal pain and gastroparesis. *Dig Dis Sci.* 2010 Mar;55(3):675-83

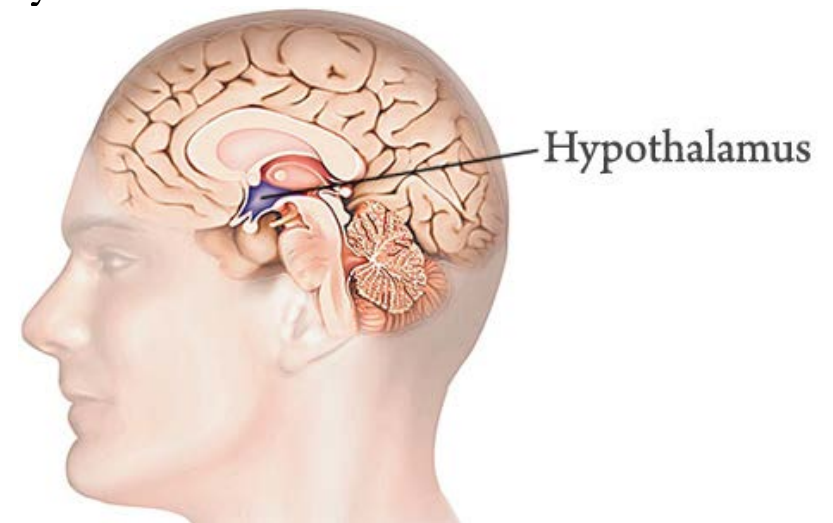
# Constipation

- **Constipation nearly universal in caloric restriction, regardless of body size or weight loss**
  - Slowed GI transit due to metabolic slowing
- High fiber worsens at low weights
- Long term laxative abuse slows the colon further, maybe permanently
- Osmotic laxatives, good nutrition, glycerin suppositories can all help



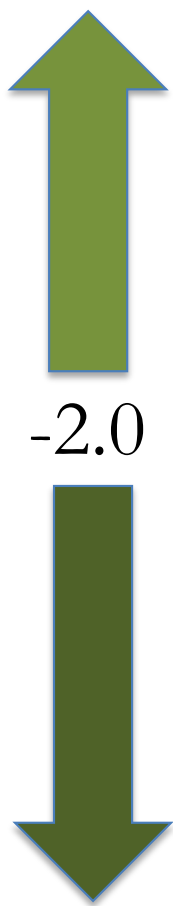
# Why no sex hormones in malnutrition?

- Cave person brain reads malnutrition and thinks:
  - Slow metabolism by rolling back sex hormone production to pre-adolescence
    - No calories spent on sex drive, having sex, wasting monthly blood on a period, or pregnancy
  - Sex drive falls
  - Period disappears
  - Ovaries/uterus regress



# Diagnosis per DXA results

**Z-score**



**Adolescents**

Normal bone density for age

Bone density lower than expected for age.

Osteoporosis: Only if  $< -2.0$  and Vertebral fracture or 2 long bone fractures by age 10, or 3+ long bone fractures by age 19

**20-50 years old**

Normal bone density for age

Bone density lower than expected for age.

Osteoporosis: Only if  $< -2.0$  and Secondary cause or fragility fracture

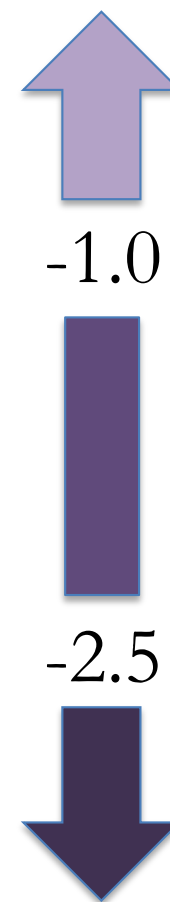
**>50 years old**

Normal

Osteopenia

Osteoporosis

**T-score**



-1.0

-2.5

# DXA scores interpreted

\*For young athletes, the International Olympic Committee says that a Z-score  $< -1$  (not  $< -2$ ) is low. So Z-score  $< -1$  plus absence of period due to inadequate fueling in an athlete  $< 50$  means osteoporosis.



# Know your patient population

- DXA results and radiologist diagnoses are a big source of misinformation for patients with AN
  - “Normal” bones? Great! I’m fine!
  - **A bone density Z-score less than -1 in young athletes is abnormal<sup>1</sup>**
  - An experienced physician has to combine DXA results and clinical context for ultimate diagnosis

1. Mountjoy M, Sundgot-Borgen J, Burke L, Carter S, Constantini N, Lebrun C, Meyer N, Sherman R, Steffen K, Budgett R, Ljungqvist A. The IOC consensus statement: beyond the Female Athlete Triad--Relative Energy Deficiency in Sport (RED-S). Br J Sports Med. 2014 Apr;48(7):491-7

# Treatment

- In anorexia nervosa, gold standard is weight should restore to target range, +/- period
- **NO ORAL ESTROGEN**
- Weight-bearing exercise once weight-restored
- If weight restoration taking a long time/delayed...consider rx





# Transdermal estrogen

- **For adolescents** (bone age 15 years) who are unable to gain and sustain weight gain and have a BMD Z-score  $< -2.0$  (in my practice,  $< -1.0$ )
- Consider 17- $\beta$  estradiol patch (100 mcg twice weekly) with nightly cyclic oral progesterone (for 10–12 days every month)
- This increased bone accrual rates at the spine and hip in adolescents with AN
- To stem bone density loss during recovery



Misra M, Katzman D, Miller KK, Mendes N, Snelgrove D, Russell M, et al. Physiologic estrogen replacement increases bone density in adolescent girls with anorexia nervosa. *J Bone Miner Res* 2011;26:2430–2438.

# Transdermal estrogen: clinical practice

- **For adult women <50 years old** with eating disorder/absent periods/underweight
- **For athletes** (energy inadequacy/absent period)  
and  
– DXA result showing Z-score <-1.0

Singhal V, Ackerman KE, Bose A, Torre Flores LP, Lee H, Misra M. Impact of Route of Estrogen Administration on Bone Turnover Markers in Oligoamenorrhoeic Athletes and its Mediators. *J Clin Endocrinol Metab.* 2018 Nov 23. doi: 10.1210/jc.2018-02143. [Epub ahead of print] PubMed PMID: 30476179.

Ackerman KE, Singhal V, Baskaran C, Slattery M, Campoverde Reyes KJ, Toth A, Eddy KT, Bouxsein ML, Lee H, Klibanski A, Misra M. Oestrogen replacement improves bone mineral density in oligo-amenorrhoeic athletes: a randomised clinical trial. *Br J Sports Med.* 2018 Oct 9. pii: bjsports-2018-099723. doi: 10.1136/bjsports-2018-099723. [Epub ahead of print] PubMed PMID: 30301734.

# Transdermal estrogen in athletes

- New studies are even showing the value of transdermal estrogen in women with RED-S
  - Energy deficient athletes with bone density loss and absence of natural menstrual periods
- Also, transdermal estrogen in athletes has been shown to improve memory and cognition

Southmayd EA, Hellmers AC, De Souza MJ. Food Versus Pharmacy: Assessment of Nutritional and Pharmacological Strategies to Improve Bone Health in Energy-Deficient Exercising Women. *Curr Osteoporos Rep.* 2017;15(5):459-472

Baskaran C, Cunningham B, Plessow F, Singhal V, Woolley R, Ackerman KE, Slattery M, Lee H, Lawson EA, Eddy K, Misra M. Estrogen Replacement Improves Verbal Memory and Executive Control in Oligomenorrheic/Amenorrheic Athletes in a Randomized Controlled Trial. *J Clin Psychiatry.* 2017 May;78(5):e490-e497

# Starting kcals

- Used to start too low, 600-1000 kcal a day
  - “Prevent refeeding syndrome. Start low, go slow.”
- That’s **wrong**



# Starting kcals

- We now know that the **underfeeding syndrome** is more prevalent and more dangerous to patients with acute malnutrition





# Starting kcals

- What's the underfeeding syndrome?
  - Giving patients too few calories to start out, keeping organs acutely malnourished despite being in a higher level of care
  - Brains remain starved and thus rigid, irrational, anxious, and paranoid longer
  - GI, cardiac, skin, bone marrow, liver, and overall metabolic systems remain starved and malfunctioning
  - A little nutrition boosts the metabolism beyond caloric input, causing ongoing weight loss while in treatment



# Starting kcals

- **Instead, start no lower than 1600 calories a day, and increase by 400-500 kcal/week**



# Starting kcals

- Does the literature support this as being the safest and best approach? Yes. Unanimously. (Typically performed in higher LOC settings with lower BMIs)





# Evidence (for your later review)

- Peebles R, Lesser A, Park CC, Heckert K, Timko CA, Lantzouni E, Liebman R, Weaver L. Outcomes of an inpatient medical nutritional rehabilitation protocol in children and adolescents with eating disorders. *J Eat Disord*. 2017 Mar 1;5:7
  - 215 patients average 15.3 years old (5.8-23.2y); 64% AN, 18% atypical anorexia, 6% BN, 5% purging disorder, 4% ARFID, 3% UFED
  - LOS was 11 days. Initial kcals 1466, discharge kcals 3800
  - Phos supplementation for refeeding lows in 14% of inpatients; full-threshold refeeding syndrome did not occur.

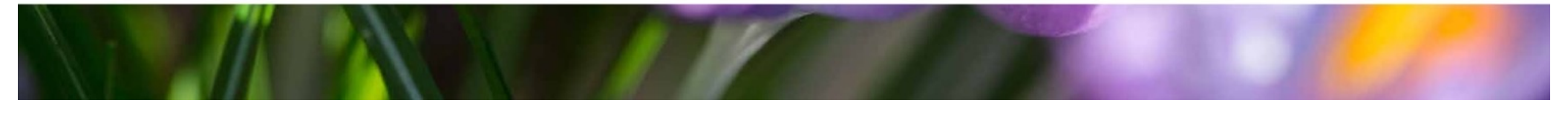
# Evidence

- Smith K, Lesser J, Brandenburg B, Lesser A, Cici J, Juenneman R, Beadle A, Eckhardt S, Lantz E, Lock J, Le Grange D. Outcomes of an inpatient refeeding protocol in youth with Anorexia Nervosa and atypical Anorexia Nervosa at Children's Hospitals and Clinics of Minnesota. *J Eat Disord.* 2016 Dec 19;4:35
  - 1500 kcal initial. Average kcals at 14 days was 3600. Calorie increases made in 500 kcal increments
  - The macronutrient composition 50–60 % carbohydrate, 20–30 % fat, and 15–20 % protein
  - Mean admission BMI 15.9 (11.9-20.6 kg/m<sup>2</sup>), weight gain 1.4 kg/week
  - 47% incidence of phos <3 mg/dL, checked twice weekly




# Evidence

- O'Connor G, Nicholls D, Hudson L, Singhal A. Refeeding Low Weight Hospitalized Adolescents With Anorexia Nervosa: A Multicenter Randomized Controlled Trial. *Nutr Clin Pract*. 2016 Oct;31(5):681-9
  - 6 UK hospitals, 10-16 years with a BMI <78%
  - Randomized to 1200 vs 500 kcal/day starting
  - Higher kcal pts gained more, no differences in phos
  - Only admit BMI and WBC predicted low phos





# Refeeding syndrome

- Refeeding syndrome is a term broadly used to describe edema or low phosphorus level in someone receiving nutritional rehabilitation
  - **Very** few patients with AN get full-blown refeeding syndrome, which actually refers to a medical emergency of volume overload and cellular breakdown from critically low phosphorus
  - **Key to preventing it is watching for it and treating early**
- 



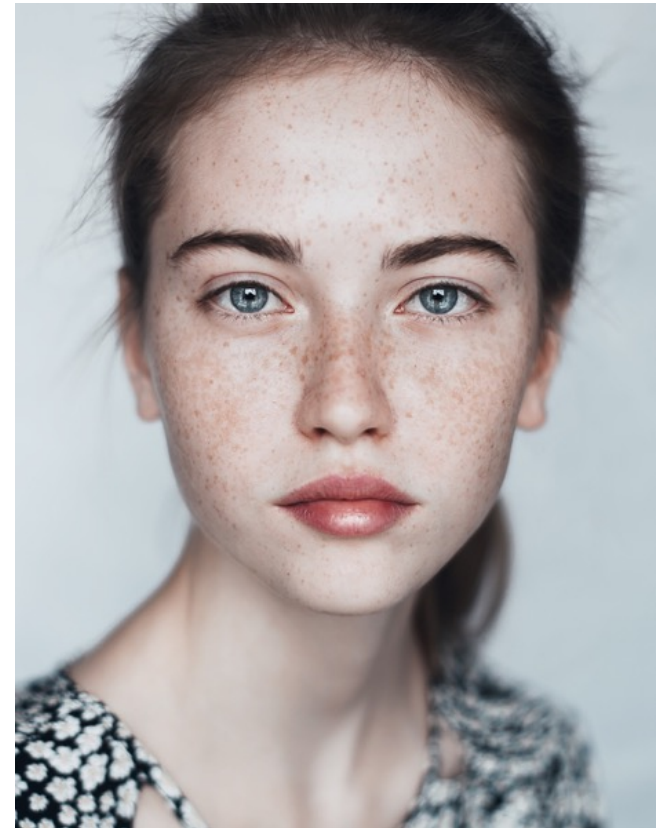
# Phos supplementation

- Like most electrolytes (except magnesium), phos is better given by mouth
  - Check phosphorus level weekly
  - Whatever oral preparation is cost effective is fine
  - Give 3x/day for any phos  $<3$  mg/dL, until appears to be holding above 3 and then taper off
  - Send for IV phos if persistently below 3 mg/dL on maximum oral phos (2 packets tid)...have hospital hang IV Kphos or NaPhos q6h round the clock
  - Can cause diarrhea, so adjust bowel regimen & educate



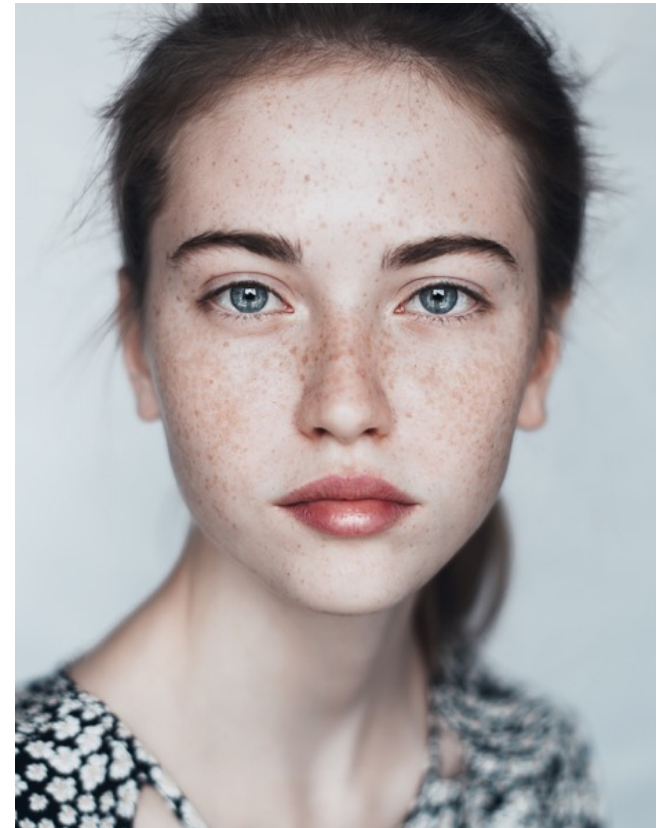
# Better practices

- Emily is found to have a resting pulse of 58, ambulating pulse of 93. BP is normal at 119/78.
- She has lanugo hair growth, and her hands are cool and pale with purplish fingertips
- O<sub>2</sub> sat initially 83, rises to 99 with hand warming
- She has sweet, ketotic breath
- Urinalysis shows spec grav 1.030, 2+ ketones
- In an expert setting, we will treat her gastroparesis and constipation from day one
- Order estradiol level and bone density test



# Better practices

- Note all the signs and symptoms of malnutrition at that first visit
- Listen to her goals and values
- Diagnose anorexia nervosa and set compassionate but clear requirements for her to remain outpatient
- Communicate clearly with family
- Refer her swiftly to RD and therapist too
- Track her closely for need of a higher LOC





# Hypoglycemia




# Case: Meena

- Meena is a 24-year-old who was assigned female at birth and identifies as gender non-binary, using pronouns they/them
- They have had an eating disorder since age 15, restrict calories without purging, have a history of over-exercise, and live in a body size constructed as “normal”
- In part, the caloric restriction helps keep them from getting a period, since periods feel gender dysphoric
- They have had episodes of shakiness, dizziness, light—headedness, and sweats
- Their therapist has begged them to get evaluated medically






# In non-ED informed settings

- In the doctor's office, the form says "Gender: M/F." No one asks about their pronouns
  - They are asked to get on the scale and see their weight, a triggering and dangerous act, despite writing "eating disorder" on the form
  - The doctor asks with surprise, "You have an eating disorder? You look like a healthy girl to me." She offers Meena birth control pills to "jumpstart her period"
  - Meena leaves vowing never to see a doctor again, mortified and feeling more isolated than ever
- 




# Harm

- Lack of provider awareness and curiosity about key elements of queer identity
    - Medical forms should ask for **sex** and offer M/F/intersex (combination of gene and gene expression)
    - Gender identity: sense of oneself (cis/trans/non-binary)
    - Gender presentation: how one chooses to self-represent, non-binary with male and female as opposite poles
    - Sexuality: how one experiences or expresses themselves sexually or romantically, also not binary
  - Minority stress in the doctor's office
  - Invisibility of eating disorder because not underweight and also a person of color
- 



# Gender dysphoria


- People with gender dysphoria have high rates of eating disorders and disordered eating.
  - Studies on LGBTQ patients have to cover a very diverse group of people and often lack statistical power to investigate transgender and gender dysphoric patients specifically
- 



# Trans individuals


- In a large study, those who were assigned female at birth (AFAB) and gender non-binary had highest rate of self-reported and formally diagnosed EDs in their lifetime, at 7.4%. Non-binary individuals were 3x likelier to have had an ED compared with trans binary<sup>1</sup>
- In another large study, transgender students were 2-4x (200-400%) more likely to use ED behaviors than a reference population of cis/hetero females<sup>2</sup>

Diemer EW, White Hughto JM, Gordon AR, Guss C, Austin SB, Reisner SL. Beyond the Binary: Differences in Eating Disorder Prevalence by Gender Identity in a Transgender Sample. *Transgend Health*. 2018;3(1):17-23

2. Diemer EW, Grant JD, Munn-Chernoff MA, Patterson DA, Duncan AE. Gender Identity, Sexual Orientation, and Eating-Related Pathology in a National Sample of College Students. *J Adolesc Health*. 2015;57(2):144-9
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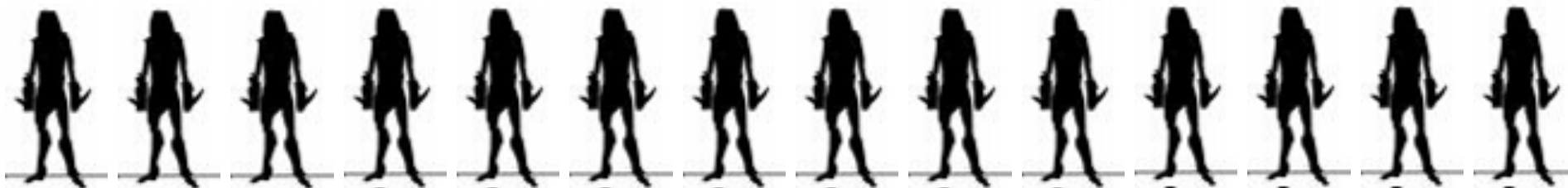
# Possible explanations

- **Minority stress**
    - Refers to the excess stress experienced by individuals in stigmatized social categories: gender, racial, religious, sexual, and others
    - Violence, discrimination, bullying, loneliness, internalized stigma, and pressure by family, school, religious, and social communities to conceal one's identity all have a major impact on mental health
  - **Eating disorders make sense...**
    - For someone attempting to look like stereotypical construct associated with their identified gender
  - **Sexual/Gender minority patients had about 2x higher incidence of sexual abuse, bullying, and other trauma of 2800 patients assessed at a single center, where 17% identified as SGM**
    - Mensinger JL, Granche JL, Cox SA, Henretty JR. Sexual and gender minority individuals report higher rates of abuse and more severe eating disorder symptoms than cisgender heterosexual individuals at admission to eating disorder treatment. *Int J Eat Disord.* 2020;53(4):541-554. doi:10.1002/eat.23257
- 

# “Atypical” AN

- Atypical AN
  - Up to 3% of population
  - 2x death risk
  - Often missed as patients are not visibly/medically “underweight.” *Weight suppression* is key
  - Represent a rising proportion of patients in treatment centers

Whitelaw M, Lee KJ, Gilbertson H, Sawyer SM. Predictors of Complications in Anorexia Nervosa and Atypical Anorexia Nervosa: Degree of Underweight or Extent and Recency of Weight Loss? J Adolesc Health. 2018 Dec;63(6):717-723. doi: 10.1016/j.jadohealth.2018.08.019. PubMed PMID: 30454732.





# Weight suppression is important

Not all restriction leads to weight loss, but rapid or significant weight loss regardless of body size can cause serious medical complications (and so can restriction without weight loss)

**Highest recent body weight – Current body weight**

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**Current body weight**

- Even 5% weight suppression may be clinically significant

Forney KJ, Brown TA, Holland-Carter LA, Kennedy GA, Keel PK. Defining “significant weight loss” in atypical anorexia nervosa. *Int J Eat Disord.* 2017 August; 50(8):952–962. doi: 10.1002/eat.22717.






# Hypoglycemia

- **Probably the killer in AN**
  - Glucose is cellular fuel
  - Glucoses  $< 60$  mg/dL are low
  - In underweight, result from depletion of glucose “building blocks” in liver





# Hypoglycemia

- A nutritional sign that adequate calories aren't being taken in
  - **Preprandial (before a meal)**
    - Common with starvation/underweight
    - Continue to push up on kcals
  - **Postprandial (after a meal)**
    - Can occur due to overabundant insulin production in response to carbohydrates
    - Consider reducing carb fraction to 40% of total, giving 4 oz milk (or equivalent) an hour after meals
- 

# Better practices

- Make sure paperwork and staff culture are congruent with inclusivity. Pronouns are respected, and mistakes are acknowledged without incurring microaggressions
- Identify that checking body weight isn't a vital sign that matters unless monitoring weight restoration
- Talk with the referring therapist in advance to get important background information and to be sure medical evaluation is responsive to existing concerns



# Better practices

- Validate patient courage in sharing their eating disorder, listens to goals/values, mitigate physical symptoms that stand in the way of recovery work
- Assure patient that atypical anorexia nervosa is a serious eating disorder that is worthy of multidisciplinary support, and that full recovery is possible.
- Take all medical problems seriously, and discuss risks of hypoglycemia as well as treatment strategy
- Do not attempt to induce a period: offer IUD
- Refer them to an RD who has LGBTQ competency



# Purging, RED-S

The image features a city skyline at sunset, with a large white rectangular overlay in the center containing the text 'Purging, RED-S'. The foreground shows a park with a lake, trees, and a building. The sky is a mix of blue and orange, and the city buildings are silhouetted against the light. The foreground includes a green lawn, a paved path, and a few people walking. A large, multi-story building with a red roof is visible on the left side of the foreground. The lake reflects the sunset colors, and there are several trees scattered throughout the park area.

# Case: Jorge

- Jorge is a 21-year-old cisgender Latino male college wrestler
- He's been through countless seasons of dropping weight to make his weight class, from significant caloric restriction to laxative abuse to “sweating it out”
- Each season, he's felt worse about himself and dreads the start of competition and practice
- This year, he's starting out ten pounds heavier, having grown an inch since last season, but his coach still wants him to compete in the same weight class



# Case (Continued)

- Jorge wants to compete. His scholarship depends on his sport participation. He'll do whatever he has to do
- He hears guys in the locker room talking about low carb diets and Paleo diets, and he tries them, only to end up feeling exhausted and weak at practice. He finds himself comparing his body to theirs. He doesn't want to be thin. He wants to be "ripped," with low body fat
- Ravenous, depleted, exhausted, he starts bingeing at night and doing extra exercise during the day to "undo" those consumed calories. He purges by vomiting increasingly as well. When he tries to stop purging, he swells up and gains weight, reinforcing his belief that stopping is dangerous.
- His muscles feel increasingly cramped
- Sex drive and function radically decrease
- The coach and trainer know about the diets and at least some of the behaviors and encourage them. It's just how the sport is



# Harm

- Males often feel unseen and underrepresented
  - They may not even know they have an eating disorder
  - The very abbreviation “ED” for males signals “erectile dysfunction,” not “eating disorder,” and may be a barrier to seeking help
  - The butterflies, body-love messages, and discussion of thinness in treatment settings may not connect at all
  - And yet: their eating disorders are no less life-altering and potentially deadly





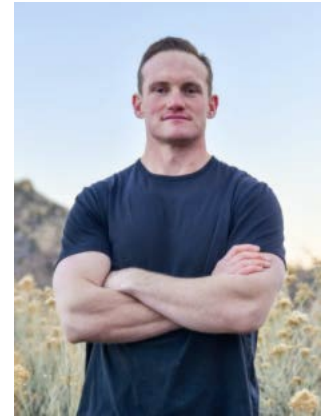
# Males

- Swedish study evaluated over 600 male patients who received hospital care for anorexia nervosa over 27 years
- Male patients with anorexia nervosa and any other psychiatric comorbidity had a **death rate nine times higher** than healthy peers
- Males with anorexia nervosa who abused alcohol were more than **11 times as likely to die** of natural (disease-associated) causes, and more than **35 times as likely to die** of unnatural (accident, overdose, or suicide) causes
- Kask J, Ramklint M, Kolia N, Panagiotakos D, Ekblom A, Ekselius L, Papadopoulos FC. Anorexia nervosa in males: excess mortality and psychiatric co-morbidity in 609 Swedish in-patients. *Psychol Med.* 2017 June; 47(8):1489–1499. doi: 10.1017/S0033291717000034.



# Great resources for guys

- Great website (and Ted talk) by football player Patrick Devenny:
- <https://www.patrickdevenny.com/about>
- Brilliant article by Matt McGorry, Hollywood actor about body pressures and true wellness
- <https://humanparts.medium.com/my-journey-toward-radical-body-positivity-3412796df8ff>



# Purging: Why the rebound edema?



## Secondary hyperaldosteronism



Bahia A. Mascolo M. Gaudiani JL. Mehler PS.  
PseudoBartter syndrome in eating disorders.  
Int J Eat Disord 2012;45(1): 150-3



# Pseudo-Bartter syndrome

- Key points to treat

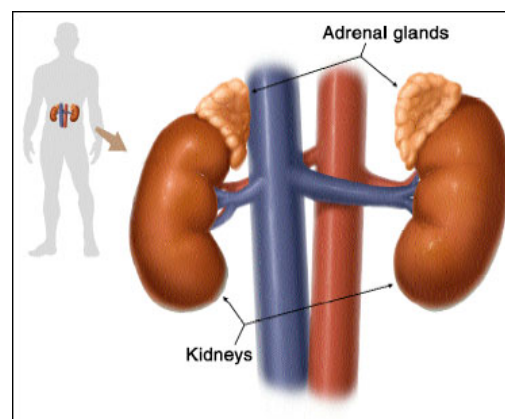
1. Stop purging

2. **Slowly** rehydrate

3. Treat the hormone over-production until body down-regulates

Spironolactone 25 mg daily for 2 weeks if mild

For those with laxative abuse, much harder task. May need 50-100 mg a day and a slow taper over 6 weeks. Will still see weight surge.



# Jorge passes out and goes to the hospital

- Potassium: 2.5 mEq/L
  - **Hypokalemia**
- Bicarbonate: 35 mEq/L
  - **Contraction metabolic alkalosis**
- BUN/Cr: 40/1.3
  - **Azotemia and acute kidney injury**



# Treating Jorge

- Give NS at 50 cc/hr until bicarbonate  $< 30$  mEq/L
- If potassium  $< 3.0$  mEq/L consider adding 20 meq KCl in the IV fluid (it burns)
- Give gentle oral potassium (10-20 mEq three times daily) until level  $> 4$  mEq/L
  - Intestinal function best at K in mid 4's
- Start spironolactone 12.5-25 mg/day, x 2-4 weeks



# Treating Jorge II

- Let's imagine he's a little less sick, is outpatient, is able to contract NOT to purge
  - No purging at all
  - Stay off the scale (body will still change with simple rehydration)
  - Oral potassium 20 mEq tid, check potassium levels twice a week then once weekly
  - Spironolactone 25 mg a day for 2-3 weeks
  - No salt restriction, but maybe max 2-3 L fluids/day
  - No athletic participation until cleared



# Watch the bicarbonate

- Very high bicarbonate = Pseudo-Bartter Syndrome in this population
  - Anything over 30 mEq/L with purging, assume they need spironolactone, etc
  - Anything over 40 mEq/L with purging: risk increases for seizure or serious complication of purging cessation. Consider checking a venous pH. Consider ICU.





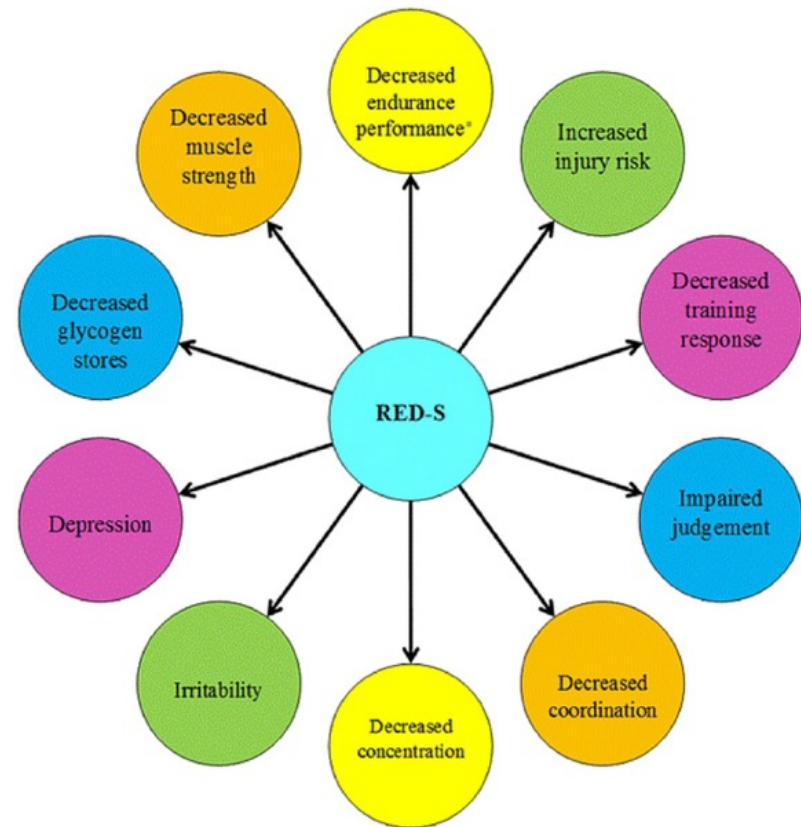
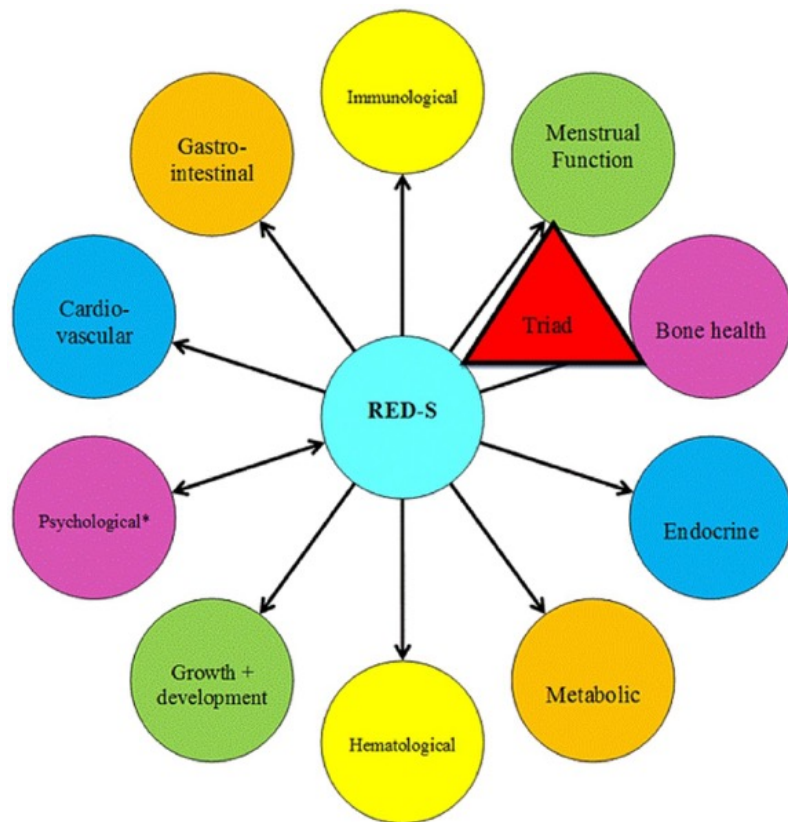
# RED-S

- Relative Energy Deficiency in Sport
  - Replaces Female Athlete Triad, more encompassing of all the issues related to bodies and food and sport
  - Impaired physiological function including, but not limited to, metabolic rate, menstrual function, bone health, immunity, protein synthesis, cardiovascular health caused by **relative energy deficiency** (inadequate kcals intake relative to body exertion)

Mountjoy M, Sundgot-Borgen J, Burke L, Carter S, Constantini N, Lebrun C, Meyer N, Sherman R, Steffen K, Budgett R, Ljungqvist A. The IOC consensus statement: beyond the Female Athlete Triad--Relative Energy Deficiency in Sport (RED-S). Br J Sports Med. 2014 Apr;48(7):491-7



# RED-S

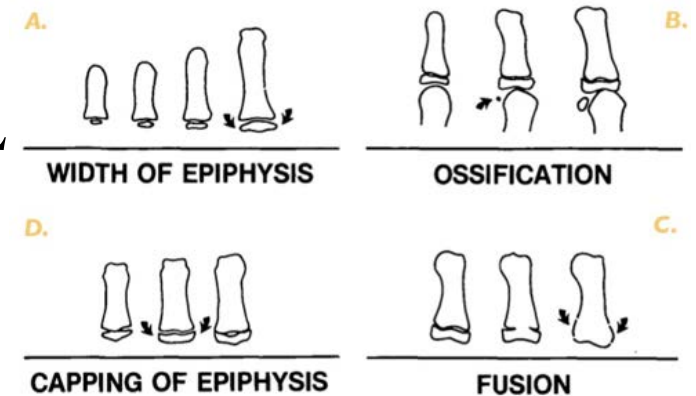


Margo Mountjoy et al. Br J Sports Med 2014;48:491-497



# Testosterone: check it

- If total am testosterone  $<300$  ng/dL
  - Check bone age by hand radiograph (if around 25 years old or less, with longstanding malnutrition)
  - If growth plates closed, rx testosterone patch after d/w patient
  - Mechanism of action = bisphosphonate
  - Once weight restored, trial off to see if hypothalamus has woken up
  - NOT for competitive athletes, as testosterone use forbidden.  
Nutritional management only

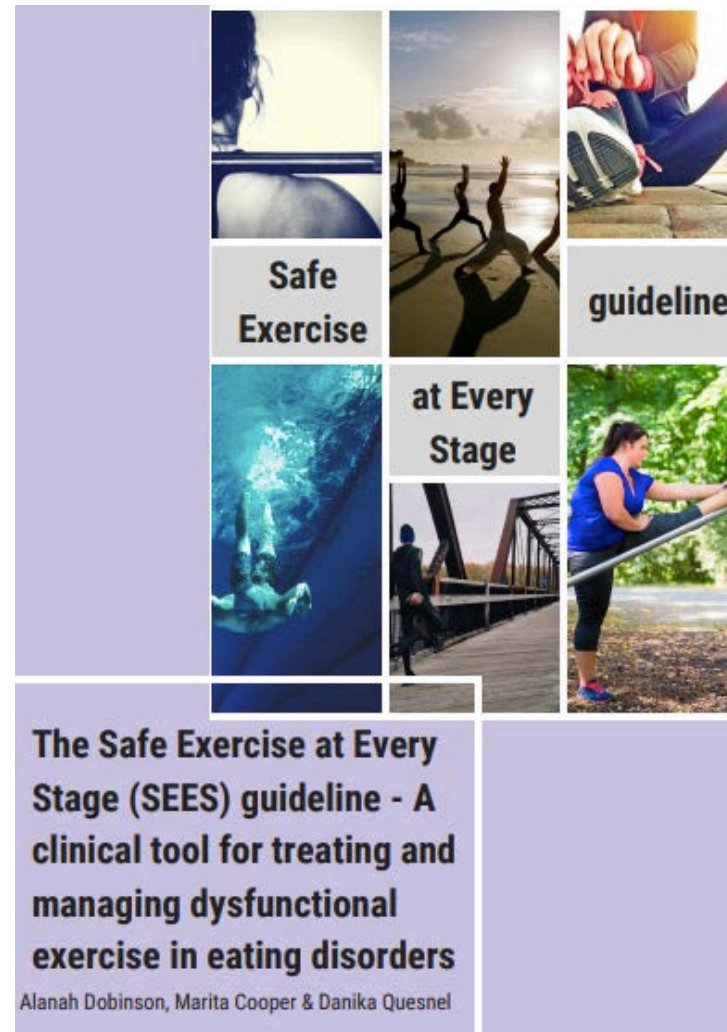


# Return to play

- Big topic across the disciplines
- When? What's medical stability? How do we know if they're psychologically stable enough?



# New resource: SEES



<https://www.safeexerciseateverystage.com/access-sees-guideline>





# Better practices

- Through student physical or sports medicine evaluation, talk openly with him about the pressures male athletes of all varieties face to inhabit a body that “looks” the part, especially in a sport that has to make weight. Note that men get eating disorders too, and they present differently from women
- Ask how weight pressures are affecting him
- Advocate with coach that increases in height require increases in weight class, and evaluate safety of practices in this sport within this school





# Better practices

- Educate about the errors of “bro science”\* and that carbs and adequate calories are needed for athletic performance and to keep the brain from craving foods that lead to binges
- Once medically stable, refer to therapist and sports RD and pull from training and competition when it becomes clear that an eating disorder has developed, with aim to return to sport if desired as early as safe



\*With thanks to Patrick Devenny!





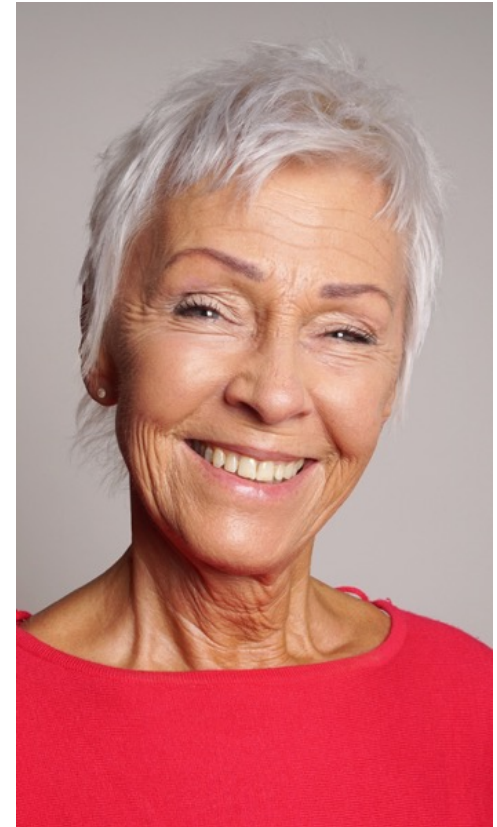
Older patients





# Case: Older patients

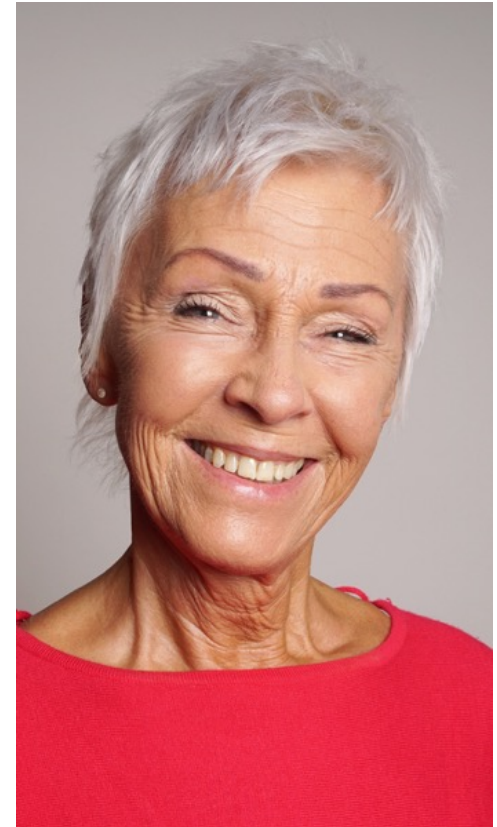
- Patricia is a 56-year-old cisgender Caucasian female who developed anorexia nervosa, restricting subtype, when she was 15 years old. Admitted to treatment program, awful experience
- She completed her education, living a fairly isolated and rule-bound life. In her late 20s, she married and started a career. For a time, she was healthier. She was able to get pregnant after a year of trying, and her son was born when she was 34
- Eating then started to become a struggle again. She completed a second treatment program when her son was in third grade. It was better than the first treatment experience but still hard for her





# Case (Continued)

- While in treatment, she missed her family, felt ashamed as a woman “still” struggling in her 40s, and experienced social isolation while surrounded by younger patients. Did ok for the next 15 years
- Despite years of therapy, Patricia always focused on everyone else’s needs before her own and had a hard time resting and recharging
- Divorced as her son finished college and moved out of town
- Faced with losing the two people she’d spent her adulthood taking care of, and worried about how she’d support herself financially, Patricia’s anorexia came roaring back
- She doesn’t know where to turn, doesn’t want to go back to treatment







# Harm

- Isolation of older age: Patients perceive that they are the only “non 20-year-olds” with eating disorders, and this keeps them from seeking a team or higher level of care
- Doctors may not be aware of EDs in older patients, or that times of transition are key pressure points for EDs to flare, and may assume frailty is natural as women age





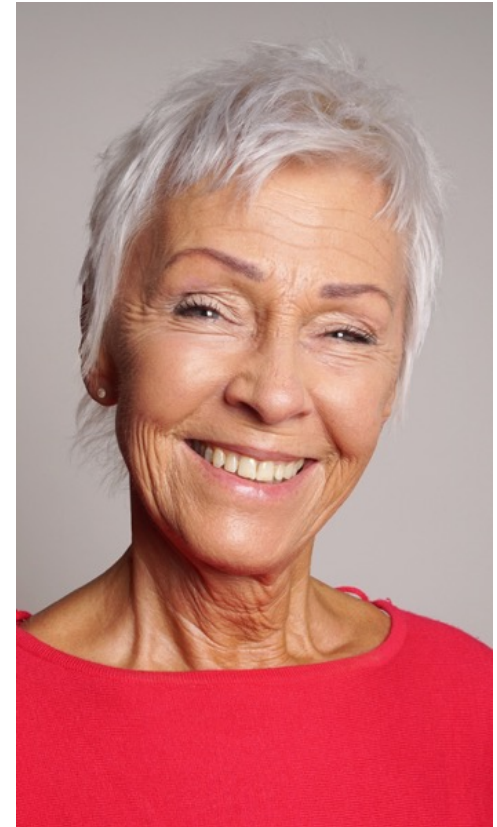
# Older patients

- The Gender and Body Image Study confirmed high prevalence of chronic use of weight loss strategies, body dysmorphias, and close connection between emotional distress and body perceptions in women over 50 years old.
  - ED prevalence in women over 40 estimated 3%, and in males 1-2%
  - Fully 25% of patients at my former program were over 40 at time of admission, over 40% were over 30 years old
  - Gagne DA, Von Holle A, Brownley KA, Runfola CD, Hofmeier S, Branch KE, Bulik CM. Eating disorder symptoms and weight and shape concerns in a large web-based convenience sample of women ages 50 and above: results of the Gender and Body Image (GABI) study. *Int J Eat Disord.* 2012 November; 45(7): 832–844. doi: 10.1002/eat.22030.
- 



# Better practices

- Thoroughly evaluate and treat signs and symptoms of malnutrition, and invite a discussion of goals/values.
- Validate the commonness of eating disorders worsening/relapsing at times of transition
- Refer to therapist/RD and communicate closely about team messaging around expectations
- Go slowly, respect wishes to remain outpatient but establish boundaries needed to safely do that
- Make relationship contingent upon staying well enough, not getting “sick enough”
- Refer to a higher level of care if/when needed and if patient agrees to try it, as things have changed since she was last in treatment





# Weight-inclusive treatment



# Case: Size stigma

- Ella is a 36 year-old Native cisgender high school teacher
- Her weight rose in college, and she started a series of diets that resulted in some weight loss, always followed by more weight gain
- She has always enjoyed dancing, and she continues to dance several nights a week





# Case (Continued)

- Ella has developed a pattern of waking up determined to “turn her weight around,” barely eating all day, and then at least three times a week she’s so ravenous by evening that she buys fast food on the way home and devours it rapidly, feeling uncomfortable physically and emotionally afterwards
- She’s avoided doctors as much as possible because they always sternly advise her about her “obesity” and recommend food restraint and exercise, even when she’s just in the office for a strep throat swab
- In the doctor’s office, the furniture has arms that make it awkward to sit comfortably, the BP cuff and gown never fit properly, and BMI charts glare at her from the dreaded scale





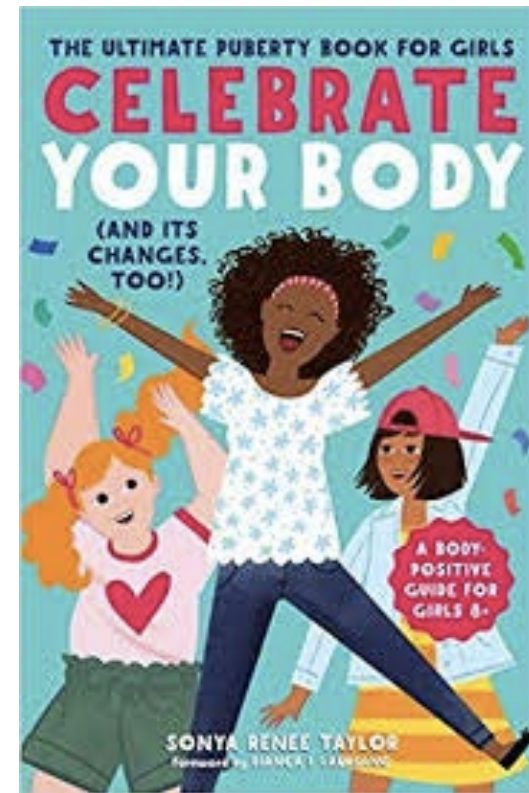
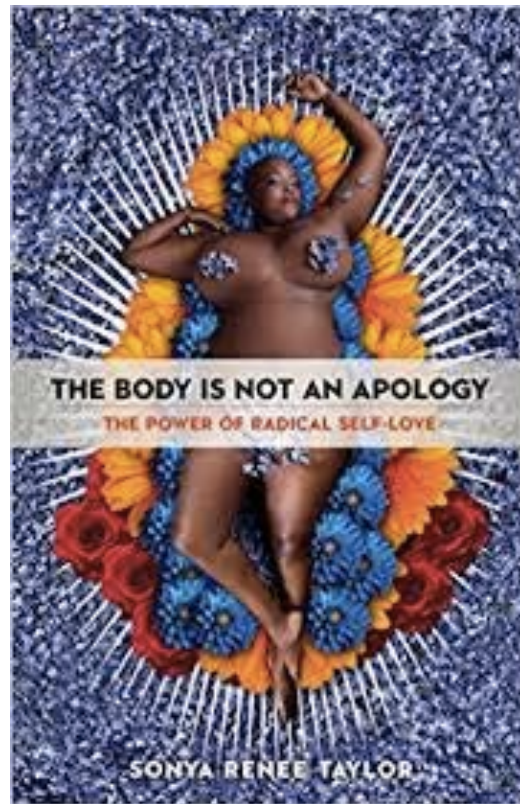


# Harm

- Not all who are in larger bodies have binge eating disorder (BED), and not all those with BED are in larger bodies
  - Many in larger bodies avoid seeing doctors because of shame/weight-focused discourse
- Mensinger JL, Tylka TL, Calamari ME. Mechanisms underlying weight status and healthcare avoidance in women: a study of weight stigma, body-related shame and guilt, and healthcare stress. *Body Image*. 2018 March 22; 25:139–147. doi: 10.1016/j.bodyim.2018.03.001.
- Phelan SM, Burgess DJ, Yeazel MW, Hellerstedt WL, Griffin JM, van Ryn M. Impact of weight bias and stigma on quality of care and outcomes for patients with obesity. *Obes Rev*. 2015 April; 16(4):319–326. doi: 10.1111/obr.12266.
- Puhl RM, Luedicke J, Grilo CM. Obesity bias in training: attitudes, beliefs, and observations among advanced trainees in professional health disciplines. *Obesity (Silver Spring)*. 2014 April; 22(4):1008–1015. doi: 10.1002/oby.20637.
- Phelan SM, Dovidio JF, Puhl RM, Burgess DJ, Nelson DB, Yeazel MW, Hardeman R, Perry S, van Ryn M. Implicit and explicit weight bias in a national sample of 4,732 medical students: the medical student CHANGES study. *Obesity (Silver Spring)*. 2014 April; 22(4):1201–1208. doi: 10.1002/oby.20687.



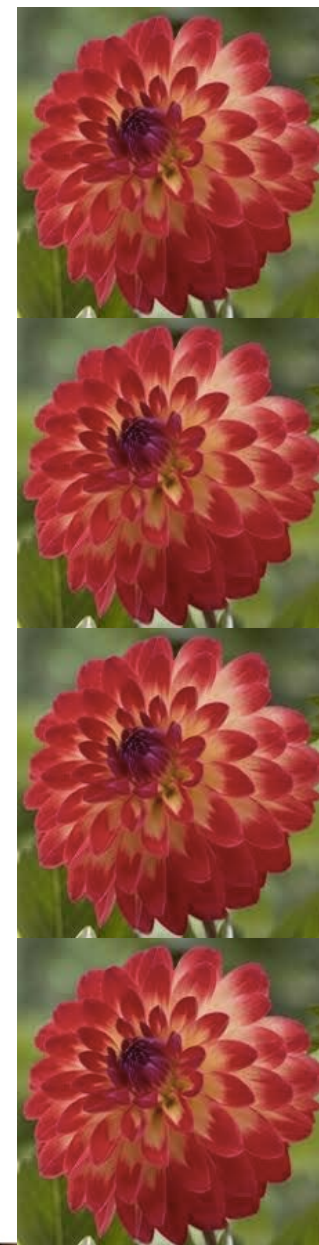
# The transformative model





# The transformative model

- Health At Every Size (HAES)<sup>®</sup> advocates for:
  - Accepting and respecting the natural diversity of body sizes and shapes
  - Eating in a flexible manner that values pleasure and honors internal hunger cues
  - Moving for joy and to become more physically vital, according to ability and desire
  - Advocating for respectful health care and supporting health policies that acknowledge the importance of social justice themes






Brilliant “Poodle Science” Video from  
ASDAH (Association for Size Diversity  
and Health)

- <https://www.youtube.com/watch?v=H89QQfXtc-k>





So, what is “weight-inclusive medical care?”

Holding awareness that higher weight can contribute to the development of certain medical problems, as can trauma, stress, poverty, and all modes of otherization...

...and never recommending weight loss or change of body as a primary treatment

(Hasn't really been working anyway, right?)





# Weight-inclusive medical care

Except when monitoring nutritional rehabilitation,  
not checking or discussing a patient's weight  
except insomuch as to provide a safe space for  
them to have feelings about it

Not perpetrating diet culture on patients or allying  
medical recommendations with society's weight  
biases





# Weight-inclusive medical care

Ultimately, if a patient does develop any of the medical issues associated with higher weight (and potentially all the other stressors), the primary care provider concurrently treats those medical problems if the patient wishes, because that's what we are trained to do





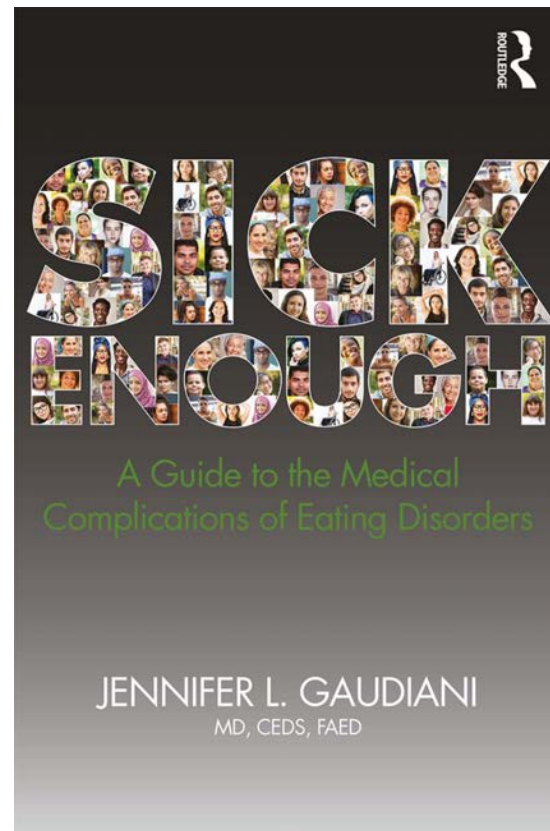
# Ella

- Make office space safe for her: no posters on the walls celebrating thin people, no BMI charts, appropriate furniture, BP cuff, and gown
- Listen without assumptions, ask about food, movement, experience of her body in the world
- Diagnose binge eating disorder and identify it's the most common eating disorder, and acknowledge societal stigma
- Introduce HAES, weight-inclusivity, the plan never to check a weight, and a focus on her achieving her stated goals/values rather than any change in body size or shape
- Refer to a physical therapist for her knees (with core strengthening, they get better)
- Encourage ongoing dance and refer to HAES-informed therapist/RD or online resources





# My book



Available on Amazon



# Self-care





# Questions?

[DrG@gaudianclinic.com](mailto:DrG@gaudianclinic.com)

(720) 515-2140

[www.gaudianclinic.com](http://www.gaudianclinic.com)

To learn more about the Alaska Eating Disorders Alliance and to access local resources, contact:

Alaska Eating Disorders Alliance  
[www.akeatingdisordersalliance.org](http://www.akeatingdisordersalliance.org)  
(907) 308-8400

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