

**The Medical Side of  
Eating Disorders....  
in Children and Adolescents**

Rebecka Peebles, M.D.

Medical Director and Director of Research & Quality,

Eating Disorder Services

The Children's Hospital of Philadelphia

The Craig Dalsimer Division of Adolescent Medicine

Perelman School of Medicine at the University of

Pennsylvania

# Outline

- Epidemiologic considerations
- Developmental issues involved
- Presentation
- Assessment
- Medical considerations
- Treatment
- Turning 18
- *How can we as medical providers help?*

5 million Americans have  
eating disorders

90% are children and adolescents

# The Universal Face of ED



- Anorexia is the 3rd most common chronic illness among adolescents
- 80% of 13-year-olds have attempted to lose weight
- 30% girls and 15% boys - disordered eating severe enough to need evaluation
- 9% girls and 4% boys vomited daily

# Acuity vs Chronicity

- Perception of eating disorders as chronic
- Younger patients are also more “young” in their disease
- Older patients have often been more chronic
- Older patients sometimes are those *who didn't get effective/aggressive triage and intervention when younger*

# Younger patients

- More likely to be male
- Have lost weight faster
- Less likely to purge or do other “graduated” behaviors
- Some studies show increase in compulsive exercise in younger patients
- Prognosis good!!!

# Why?

- Biologic
- Genetic
- Psychological
- Family
- Environmental
- Media/Cultural
- Not parents!!

# Unique Influences

Challenges integrating  
messages online and in  
media

Websites

School influences:  
“health” or “nutrition”  
classes, BMI screening

The Obesity Epidemic

In treatment, role  
modeling



# Mandatory BMI Reporting

- State legislation requiring schools to track and report students' body mass index (BMI)
- Earlier intervention for overweight children
- No research proving that mandatory BMI reporting laws increase eating disorder symptoms in students
  - Has not been studied or tracked
- ...But also no conclusive research stating it helps obesity

# Developmental Issues Involved

# Adolescence - Major Events

- Skeletal growth
- Alterations in body composition
- Pubertal development
- Altered endocrine/CNS activity
- Concrete - abstract cognition
- Autonomy

# Major Goals of Puberty

- 20-25% skeletal growth
- 40-50% adult weight; body fat
  - 15-27% girls, 5-12/14 boys
  - Changes in body fat/muscle composition
- Reproductive ability
- Cardiovascular development

# Goals of Psychosocial Development

- Early, Middle, Late spanning 10-24
- Cognitive
  - Abstract thinking
- Psychosocial
  - Body image
  - Sexuality
  - Independence

# Presentation

# Thoughts on diagnostic criteria

The “atypical” patient is typical!

# Anorexia Nervosa: DSM IV Criteria

- Body weight <85% expected weight
- Intense fear of weight gain
- Inaccurate perception of own body size, weight or shape
- Amenorrhea

## Younger patients may not....

- Be low in weight for height
- Express fear of weight gain or body image distortions
- Have completed puberty

# Bulimia Nervosa: DSM IV Criteria

- Binge Eating  $\geq 2$  times/wk for 3 mos
- Purging or other compensatory weight-loss measures  $\geq 2$  times/wk for 3 mos
- Self-image unduly influenced by body weight or shape
- Absence of anorexia nervosa

# Younger patients may not....

- Acknowledge binge eating
- Understand hunger/satiety cues
- Have thought of purging
- Be able to acquire laxatives or diet pills

# Eating Disorder NOS

- Wide spectrum of eating disturbances
- 60% in most pediatric series
- No weight requirements
- Not “subclinical”
- EDNOS patients had serious sequelae
- EDNOS patients who had lost 25% or more of premorbid weight were equal in severity to AN
- Reconceptualizing pAN and pBN

# Other Considerations at Presentation

- Weight may look “normal”
- Puberty may be early or not have started at all
- Only sign may be stunted linear growth
- Often not able to express cognitions
- “Atypicals” present younger: cannot often determine “label” in beginning of care

# Mistakes Common

- A severely ill young patient may look and act differently
- We don't want them to get severely ill
- Pathologizing parents
- Act quickly and decisively – urgency in pediatric patients can decrease likelihood of chronicity in older patients

# Obesity and Eating Disorders

# Case

- 2 girls: same age, ethnicity
- Both are 65 inches tall
- Both have lost 40 lbs in the last 3 months via restriction, diet pills, purging, and excessive exercise
- Girl A: 125 → 85 lbs    Girl B: 260 → 220 lbs

# Case

## Girl A

- Screened for disordered eating immediately
- Referred for treatment after presentation
- 4 months of disease

## Girl B

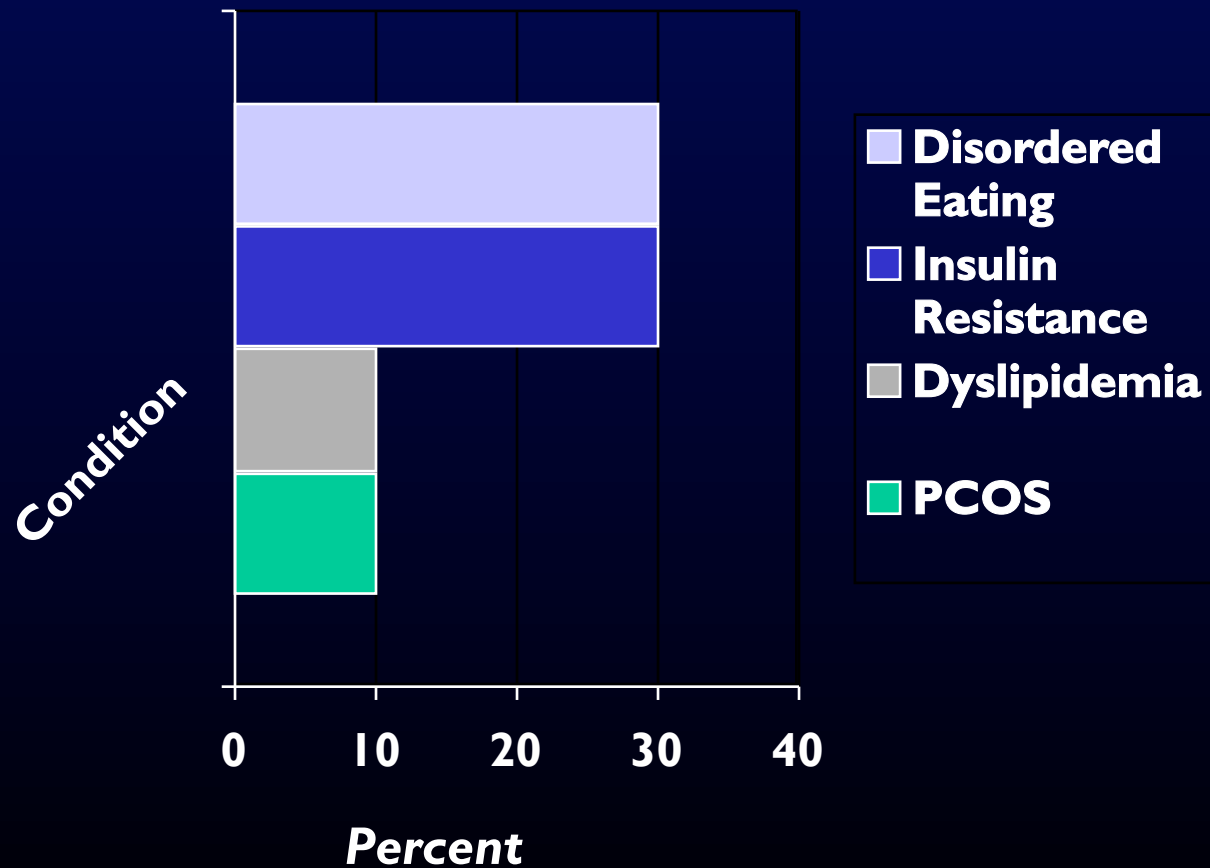
- Congratulated for successfully losing weight
- Mother expresses concern about eating/exercise
- No screening for disordered eating until 130 lbs
- No referral until 110 lbs, 16 months of disease
- Which overweight children are susceptible?

# Prior Overweight in ED

Subjects who were at risk or overweight at their maximum weight were also significantly more likely to:

- Weigh more at presentation (98% vs 84% IBW,  $p < .001$ )
- Have lost a higher percentage of their body weight prior to presentation (29% vs. 17%,  $p < .001$ )
- Be younger at their age of maximum weight (14.2 vs. 15.1 years,  $p < .05$ )
- Be male
- Purge

# Common Comorbidities



# Assessment

# Suggested Screening Questions

Have you been doing anything to change your weight?

SCOFF (2 or more = 100% sensitive/88% specific):

- Have you ever made yourself throw up to lose weight?
- Have you ever eaten a lot of food at once, in a way that you felt out of control and couldn't stop?
- Have you recently lost more than 14 lbs in 3 months?
- Do you think you're fat when others don't?
- Do you feel that food has taken over your life?

Are you able to go a day without exercise?

Have you ever taken laxatives or diet pills?

# Early eating problems

- Selective eating
- “Picky” eating
- Food hoarding
- Swallowing/vomiting phobias

# Interview

- Time alone with patient as appropriate, but not exclusive
- Parental history important
- Actions, not words – predictive value of resistance

# Considerations

- Do not be afraid of a tough discussion
- Do not be afraid of the disease
- Explain physical considerations and link to mental
- Assess for strengths throughout
- Do not wait to treat the most likely diagnosis, even if medical workup is ongoing
- Most patients need to eat!

# Avoiding Medical Complications

# So What?

- Suicide
- Sudden cardiac death
- Renal insufficiency
- Short stature
- Osteoporosis
- Liver damage
- Delayed GI transit
- Cerebral atrophy (irreversible?)

# General

- Eating disorders affect most body systems
- Most damage is reversible
  - Often depends on duration and severity of illness
  - Reversal can take years
- Everyone has different risks and complications
  - Need a thorough admission examination

# Differential diagnosis of EDs

- Pregnancy
- Malignancy, CNS tumors-prolactinoma
- IBD, Thyroid disease, occult diabetes
- Excessive exercise
- Celiac Disease
- HIV, TB
- Wilson's disease, porphyria
- Psych: OCD, depression

# Somatic Complaints

- GI considerations
  - Reflux
  - Abdominal pain
  - Constipation
- Chest pain

# FULL Weight Restoration

- Attention to linear growth
- Attention to skeletal health
- Help with cognitions
- Reversal of all organ damage

# Treatment

## Younger patients require intense and aggressive treatment

"Because of the potentially irreversible effects of an eating disorder on physical and emotional growth and development in adolescents, because of the risk of death, and because of the evidence suggesting improved outcome with early treatment, the threshold for intervention in adolescents should be lower than in adults."

Society for Adolescent Medicine (1995)

# Goals of Treatment: Setting a High Bar

- Weight normalization
- Normalization of eating patterns
- Return of menses/pubertal resumption
- Linear growth if expected
- Normalization of thoughts/cognitions
- Prevention of short-term and long-term medical complications

# Goal Weights

- Median body weight for height/age/gender
  - CDC BMI-for-age curves
- Linear growth history
  - Growth goals during puberty
- Genetic potential
  - Mid parental height, birthweight
- Prior growth curves (if normal prior)
- Beware of factitious menarche

# Nutritional Needs

- Not a “little adult”
- Caloric needs typically surprising
  - Can need 3000-6000 kcal/day to gain weight
- Continue to be hypermetabolic for up to 2 years
- Usually do not reduce at weight goal; increases in activity and muscle mass requires continuation of caloric goals

# Shifting Paradigms

- Old paradigm:
  - EDs are a result of control/boundary issues
  - “Parentectomies” are helpful
  - Insight can be gained in the midst of disease and is necessary before improvement can occur
- Newer paradigms:
  - Many EDs are a result of biologic/genetic vulnerability
  - Parents/family members are our best allies
  - Nutrition first, insight later: psychological progress is unlikely to occur until nutritional rehabilitation has begun

# Research support for FBT

- Randomized controlled trials indicate **70-80% of adolescents with anorexia do well**, when treated early with weight restoration, normalization of eating-related thoughts and behaviors, and psychosocial functioning (LeGrange et al, 1992; Eisler et al, 2000; Lock et al, 2005, 2010)
- FBT helps adolescents with BN as well (LeGrange and Lock, 2007, LeGrange and Schmidt, 2005)

# Basic Principles

- Agnostic
- Parent-empowered
- Focus on restoring healthy eating
- Separate illness from child
- Therapist as consultant

# When NOT to involve parents

- When children will not be going home, ever
- Abuse
- Loss of mental faculties in parents
- Refusal on parents' part

# How Pediatricians Can Help

- Thorough medical assessment and ongoing care
- Assessing strengths and working with those
- Avoiding judgment and countertransference
- Knowing yourself
- Partner with parents
- Informed consent during treatment

# How Can Pediatricians Support FBT?

- Make sure to get history from patient and parents
- Try to have appointments involving family and send message that you're listening to all parties
- Be clear that you believe parents can do this
- Make sure that parents are aware of all recommendations surrounding ED care
- Be clear that normal adolescent autonomy can still be achieved in time

**“Don’t give up too soon, as the family is the best resource for recovery.”**

(Lock et al. 2001. Treatment Manual for Anorexia Nervosa: A Family-based Approach. NY: The Guilford Press. p. 21.)

# Pharmacotherapy

- Few have been shown helpful, although SSRIs and atypicals widely prescribed
- AN: no real advantage
- Indicated with comorbid conditions, if they predate onset of ED
- Have been shown to help with bingeing and purging - not necessarily more than CBT alone
- Prozac only officially studied SSRI for ED's (with BN)
- Off label use

# When to Hospitalize

- Medical instability
  - HR < 50, BP < 90/50, orthostasis, temp < 36.3
- < 75% IBW - may need NG feeds
- Electrolytes: K < 3.2 or Phos < 3.0
- Syncope, arrhythmia, QTc > 450
- Hematemesis - severe
- Suicide risk, psychosis
- Lack of progress with intensive outpatient therapy

# Considerations for Inpatient

- Allowing parental involvement
- Shift from insight-oriented work or expectations of insight
- Separate ages
- Try not to be too directive with parents – heavy direction actually undermines them and makes them feel that they are not the “experts”
- Acknowledge message of inpatient stays – only use when necessary

# Be Mindful of Our Own Behavior

- Be good eating role models
  - Don't discuss/advocate diets or meal skipping
  - No “good foods” or “bad foods”
  - Avoid discussions about shape or size that imply shame, discomfort, “ideals” not attained
  - Avoid discussions of guilt-induced exercise
- Stop complaining about weight
- Compliment children on non-physical attributes
- Model firm, not rigid, limit-setting

# Turning 18

- Dance of working with patient and family
- Caregiving should be a journey – does not change with a legal age of majority
- Parenting decisions vs decisions re: eating disorders
- Celebration

THANK YOU!

Questions??