Eating Disorders
“A Hidden Killer”

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Brazilian Model, Battling Anorexia Dies, 11/14/06

Cause of death = “generalized infection”

21-year-old
88 pounds, 5’8”
BMI = 13.4

Banana Republic and Nicole Miller to introduce "sub zero" sizes
“You cannot be too rich or too thin.”

Wallace Simpson
DSM V Classification of Eating Disorders

• Anorexia nervosa (AN)
  – Restricting subtype
  – Binge/ Purge subtype
• Bulimia nervosa (BN)
• Binge Eating Disorder (BED)
• ARFED

NOTE: OBESITY is not classified as an eating disorder.
(OSFED)

Examples:

• Atypical Anorexia Nervosa
• Bulimia Nervosa (low frequency or limited duration)
• Binge-eating disorder (low frequency or limited duration)
• Purging disorder
• Night eating syndrome
Anorexia Nervosa - Introduction

• Anorexia is a life threatening psychiatric illness. Highest mortality rate among psychiatric illnesses.

• Usually begins in adolescence but can present clinically from ages 8 – 80.

• Incidence in pre pubertal onset cases increasing

• Anorexia is a chronic ego syntonic illness (the patient does not see this as an illness but rather as a part of self)
Diagnostic Criteria for AN

- Loss of weight to less than 85% of healthy norms or failure to grow leading to body weight less than 85% of normal
- Intense fear of gaining weight
- Disturbed attitude toward weight and shape
- Amenorrhea for 3 months (In DSM-V no longer criteria for diagnosis)
DSM V criteria for AN

• 2 Types of AN
  – Restricting Type
    • Person does not engage in binge-eating or purging behavior
  – Binge-Eating/Purging Type
    • Person engages in binge-eating and purging behavior (self-induced vomiting, use of laxative, diuretics, enemas)
The etiology of eating disorders is multifactorial.

Treatment must be focused on all three areas.

- Biology/Genetics
- Psychologic traits/Temperament
- Social factors
Understanding the cause, one at a time....

Biology/Genetics
A.N. – Cause
Genetics

• Family studies – 7 to 12 fold increase in prevalence of A.N. and B.N. in relatives of eating disorders compared to control families.

• High heritability in twin studies - The concordance for AN in monozygotic twins is approximately 10X greater than for dizygotic twins

• There is likely a genetic contribution to temperamental / personality vulnerabilities
A.N. – Cause
Biochemical - Serotonin

- Increased serotonergic activity (with post synaptic up regulation) has been linked to the onset, persistence and recurrence of AN
  - Activation of serotonin in rodents reduces food consumption
  - High serotonin levels associated with low impulsivity, rigidity, perfectionism
  - Blockade or decrease in serotonin causes an increase in food consumption
- Diet regulation is a way to modulate the 5 – HT pathway
  - Starvation leads to decreased dietary tryptophan, a precursor to 5 – HT.
  - In starvation, serotonin production is decreased.
A.N. – Cause
Genetic – Biologic vulnerabilities

• Overactive dopamine receptors in the “reward center” (nucleus accumbens). Supports an addiction model for treatment interventions

• Hypothalamic – pituitary – gonadal axis abnormalities?
  – Uncertain which comes first.
  – 20% of anorexics lose their periods before they have lost ANY weight
  – Suggests a brain/endocrine role.

• Ongoing research regarding the role of other biologic contributors.
Next,

Biologic/Genetic

Psychologic/ Temperament
A.N – Cause
Psychological Vulnerabilities

• Children with AN tend to be:
  – Anxious (most common premorbid psychiatric dx)
  – Perfectionistic
  – History of being well behaved
  – Conscientious
  – High achieving
  – Popular
  – Successful
  – Difficulty expressing negative emotions
  – Low self esteem, poor self image
A.N. Cause - Psychological

Functional roles:
- Attempt to Prolong Childhood
- Escape Responsibilities of Adulthood
- Provide escape from upsetting life events or developmental issues
- Societal pressure to be thin
- "Feels special"
- "Nothing tastes as good as thin feels"
Last,

Biologic/Genetic

Psychologic/Temperament

Social/Cultural
Societal Influences - Over The Years

1965

2005
A.N. – Cause
Social / Media Influences

Fashion and entertainment industries send message
thin = success

• An average U.S. child sees more than 30,000 TV commercial each year (TV-Turnoff Network, 2005).
• Survey done in April 2002, 32% of female TV network characters are underweight, while only 5% of females in the U.S. audience are underweight.
This is an ILLNESS not a choice.

For vulnerable people, the main thing to understand is that **It works**!
The thrill of weight loss and control of food feels good!
Anxiety is reduced as control is increased.
Clinical Diagnosis- Anorexia Nervosa

History

- Denial of illness
- Denial of significance of weight loss
- Excessive exercise
- Fatigue, headaches
- Abdominal discomfort
- Hair loss
- Cold intolerance
- Fracture with minimal trauma
- Amenorrhea
- Intense fear of obesity despite very low body weight
- Insomnia
Physical Complications of Starvation
The Top Six

- Bradycardia
- Hypotension
- Hypothermia
- Osteoporosis
- Constipation
- Amenorrhea
**Clinical presentation - physical signs and symptoms of AN**

- Wasting
- Cardiovascular – Orthostatic, bradycardia, mitral valve prolapse, diminished exercise capacity
- Skin - yellow (carotenodermia), lanugo, dry skin, pruritus', thinning hair, brittle nails
- GI - constipation, delayed gastric emptying/bloating
- Endocrine and metabolic - Amenorrhea, osteoporosis, hypothermia
Behavioral signs and symptoms related to starvation

- depression
- preoccupation with food
- food hoarding
- slow eating
- binge eating
- mood labiality/irritability
- apathy
- decreased libido
- sleep disturbance
- social withdrawal

This can LOOK just like MDD – affects cognitive functioning, motivation for recovery, ability to participate in treatment, etc.
Detection of Anorexia Nervosa

- Ask yourself - Could this patient have A.N.?
- Patients are often seen in Primary Care setting for nonspecific symptoms - fatigue, stomach upset, constipation, stress fractures, depression
- Family members may bring in patient. The patient may be in your office under protest, feeling coerced. They may enter prepared to do battle. They do not want to gain weight.
Screening Questions

• What did you eat yesterday?
• Do you ever binge eat (eat more than you want) or use diuretics, laxatives or diet pills?
• Do you think you are thin? How do you feel about your hips/thighs/legs.
• If suspicious of A.N., ask about previous weight, weight loss pattern, menstrual history, daytime hyperactivity, insomnia, and exercise habits
• When problem is identified, quantify the severity by clinical features and by % IBW and BMI
SCOFF questions

- Do you make yourself sick 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 pounds) in a 3 month period?
- Do you believe yourself to be fat when others say you are too thin?
- Would you say that food dominates your life?

Each “yes” = 1 point; a score of 2 points indicates a likely diagnosis of AN.
Complications of Self Induced Vomiting

- Electrolyte disturbance (low K+, high CO2)
- Catastrophic GI trauma (rare)
- Myopathy, Cardiomyopathy (Ipecac)
- Dental complications
- Parotid hypertrophy
Medical Complications –

Osteoporosis = the one serious sequelae that may not be reversible

• Common and associated with high fracture risk
• Mechanisms thought to be related to:
  – Amenorrhea
  – Malnutrition
  – Excessive exercise
  – High cortisol levels
  – Psychogenic stress

• Primary treatment is nutritional rehab/weight restoration
  – Second line treatment = Vitamin and Calcium
  – Estrogen supplementation is not effective
  – Consider bisphosphonates, nasal calcitonin for cases of frank osteoporosis or severe osteopenia
Treatment

• Weight gain is the only definitive treatment.
• Initial feedback:
  – Give clear prescription to stop losing weight.
  – Give specific calorie intake prescription and/or refer to dietician
  – Educate patient how psychiatric, medical and nutritional components of her disease have worked together to get her where she is and treatment will consist of care from providers in all three areas.
• Much better prognosis if treatment is instituted before patient becomes severely underweight.
• Psychotherapy is much more effective after weight is restored.
For more help and information:

The Lindner Center of HOPE
Harold C. Schott Foundation Eating Disorder Program

(513) 536-HOPE