Chapter 23

NUTRITION IN EATING DISORDERS
Objectives

- Define the four major eating disorders
- Discuss general characteristics of patients with AN, BN, BED and EDNOS
- Discuss Clinical Characteristics and Medical Complications of AN and BM
- Discuss treatment options- team approach
  - Psych
  - Nutrition
- Define refeeding syndrome
Eating Disorders

The Nutrition Care Process and Model

Screening & Referral System
- Identify risk factors
- Use appropriate tools and methods
- Involve interdisciplinary collaboration

Practice Settings
- Code of Ethics
- Dietetics Knowledge

Nutrition Care Process: Assessment & Re-assessment
- Obtain/collect timely & appropriate data
- Analyze/interpret with evidence-based standards
- Document

Nutrition Diagnosis
- Identify & label problem
- Determine cause/ contributing risk factors
- Cluster signs & symptoms/ defining characteristics
- Document

Relationship Between Patient/Client/Consumer & Dietetics Professional

Nutrition Intervention
- Plan nutrition intervention
- Formulate goals & determine a plan of action
- Implement nutrition intervention: Care is delivered & actions are carried out
- Document

Nutrition Monitoring & Evaluation
- Monitor progress
- Measure outcome indicators
- Evaluate outcomes
- Document

Outcomes Management System
- Monitor the success of the Nutrition Care Process implementation
- Evaluate the impact with aggregate data
- Identify and analyze causes of less than optimal performance and outcomes
- Refine the use of the Nutrition Care Process

Eating Disorders

- Debilitating psychiatric illnesses characterized by a persistent disturbance of eating habits or weight control behaviors
- Anorexia nervosa
- Bulimia nervosa
- Eating disorder not otherwise specified (EDNOS)
- Binge-eating disorder (BED)

DSM IV Criteria for diagnosis
• Standard classification of mental disorders used by mental health professionals in the United States and contains a listing of diagnostic criteria for every psychiatric disorder recognized by the U.S. healthcare system.

• Used in both clinical settings (inpatient, outpatient, partial hospital, consultation-liaison, clinic, private practice, and primary care) as well as with community populations.
Anorexia

- A refusal to maintain body weight at or above a minimally normal weight for the age and height of the individual (e.g. weight loss leading to maintenance of body weight that is < 85% of that expected, or failure to have expected weight gain during a period of growth, leading to body weight < 85% of that expected).

- An intense fear of gaining weight or becoming fat, even though the individual is underweight.

- Disturbance in the way in which one’s body weight or shape is experienced, undue influence of body weight or shape upon self-evaluation, or denial of the seriousness of the current low body weight.

- In postmenarcheal women, amenorrhoea, i.e. the absence of at least three consecutive menstrual cycles. (A woman is considered to have amenorrhoea if her periods occur only after administration of hormones, e.g. oestrogen.)
DSM V

- Anorexia Nervosa
- The criteria have several minor but important changes
- No longer includes the word “refusal” in terms of weight maintenance since that implies intention on the part of the patient and can be difficult to assess.
- The DSM-IV Criterion D requiring amenorrhea, or the absence of at least three menstrual cycles, will be deleted. This criterion cannot be applied to males, pre-menarcheval females, females taking oral contraceptives and post-menopausal females. In some cases, individuals exhibit all other symptoms and signs of anorexia nervosa but still report some menstrual activity.
Anorexia Nervosa

- A disease characterized by:
  - Refusal to maintain a minimally normal body weight
  - Body image distortion
  - Amenorrhea in postmenarchal females

- May be one of two subtypes
  - Restricting
  - Binge eating and purging

Prevalence:
- 0.3% to 3.7% of women; rate is about one-tenth in men
- Initial presentation is usually during adolescence or young adulthood
- Genetic, environmental, and psychosocial factors
- 5% to 25% of patients die
Anorexia nervosa
- Cachectic and prepubescent body
- Lanugo: dry and brittle hair
- Cold intolerance, cyanosis of the extremities
- PEM and cardiovascular complications
  - Reduction in LBM
  - Bradycardia & systolic dysfunction, cardiac arrhythmias, hypotension
- GI complications
  - Delayed gastric emptying & constipation
- Osteopenia – bone density not fully recoverable
- Effects on growth and development in children and adolescents
- Dehydration & electrolyte imbalances
- Thiamin, phos, mg, selenium deficiencies
- Generally consume less than 1000kcal/day
  - Restricting fat/cho
  - Vegetarianism/veganism/GF
Psychological Features of Anorexia Nervosa

- Perfectionism and compulsivity
- Harm avoidance
- Feelings of ineffectiveness
- Inflexible thinking
- Overly restrained emotional expression
- Limited social spontaneity
- Coexists with major depression, dysthymia, anxiety disorders, obsessive-compulsive disorder, personality disorders, and substance abuse
  - 50-75% with depression
  - > 40% with OCD
The criteria for bulimia nervosa were recently revised in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-IV*; American Psychiatric Association, 1994). The criteria are as follows:

A. Recurrent episodes of binge eating. An episode of binge eating is characterized by both of the following:
   1. eating in a discreet period of time (e.g., within any 2-hour period), an amount that is definitely larger than most people would eat during a similar time and under similar circumstances.
   2. a sense of lack of control over eating during the episode (e.g., a feeling that one cannot stop eating or control what or how much one is eating).
B. Recurrent inappropriate compensatory behavior in order to prevent weight gain, such as self-induced vomiting; misuse of laxatives, diuretics, enemas, or other medications; fasting; or excessive exercise.
C. The binge eating and inappropriate compensatory behaviors both occur, on average, at least twice a week for 3 months.
D. Self-evaluation is unduly influenced by body shape and weight.
DSM V

- DSM-5 criteria reduce the frequency of binge eating and compensatory behaviors that people with bulimia nervosa must exhibit, to once a week from twice weekly as specified in DSM-IV.
Bulimia Nervosa

- Characterized by repeated episodes of binge eating followed by inappropriate compensatory behaviors to prevent weight gain
  - Purging type BN
    - Self-induced vomiting, laxatives misuse, diuretic misuse, compulsive exercise, or fasting
  - Nonpurging-type BN
    - Excessive exercise to compensate for binge
- To meet DSM IV behaviors seen 2x/wk x3 mo.
  - Frequency of these to change in DSM V
- 1% to 3% of adult women
- Binge = consumption of an unusually large amount of food in a discrete period
  - Usually 2 hours
  - Often range from 1000-2000 kcals
- Psychiatric comorbidities
Clinical Characteristics and Medical Complications- BN

- Usually normal weight and secretive behavior
- Signs of self-induced vomiting (Russell’s sign)
- Parotid gland enlargement
- Results of chronic vomiting can include esophagus and stomach damage
  - Hypokalemia – also from excessive laxative use
  - Dehydration – also from excessive laxative use
  - Alkalosis
  - Subconjunctival hemorrhage
- Erosion of dental enamel from gastric acid
- Effects of laxative and diuretic abuse include electrolyte imbalance and cardiac arrhythmia
- Cardia arrhythmias 2/2 electrolyte acid-base balance
Physical Signs and Symptoms of Anorexia Nervosa and Bulimia Nervosa

BULIMIA NERVOSA
- Dizziness, confusion
- Dry, brittle hair
- Lanugo-type hair
- Low blood pressure, pulse, ECG voltage
- Orthostasis
- Cachexia
- Biochemical changes
  - ↓WBC
  - ↓Glucose
  - ↑Cholesterol
  - ↑Carotene
- Stool retention
- Acrocyanosis
- Loss of menses
- Muscle wasting
- Diminishing DTRs
- Osteoporosis
- Dry skin
- Edema
- Growth retardation
- Hypothermia

ANOREXIA NERVOSA
- Salivary gland enlargement
- Enamel erosion
- Esophagitis
- Arrhythmias
- Normal weight or underweight or overweight
- Callus
- Biochemical changes
  - ↓K
  - ↑CO₂
  - ↑Amylase
- Diarrhea
- Edema
- Binge eating and purging
- Weight loss and malnutrition
Eating Disorder Not Otherwise Specified

A diagnostic category for eating disorders that meet most, but not all, criteria for either anorexia nervosa or bulimia nervosa.

Examples of how an individual may have a profound eating problem and not have anorexia nervosa or bulimia nervosa.

- A female patient could meet all of the diagnostic criteria for anorexia nervosa except she is still having her periods.
- A person could meet all of the diagnostic criteria for anorexia nervosa are met except that, despite significant weight loss the individual's current weight is in the normal range.
- A person could meet all of the diagnostic criteria for bulimia nervosa are met except that the binge eating and inappropriate compensatory mechanisms occur at a frequency of less than twice a week or for duration of less than 3 months.
- The person could use inappropriate compensatory behavior by an individual of normal body weight after eating small amounts of food (e.g., self-induced vomiting after the consumption of two cookies). This variant is often called purging disorder.
Characterized by binge-eating episodes at least twice a week for a 6-month period
No inappropriate compensatory behaviors after a binge unlike BN
Occurs in late adolescence
Emotional distress and feeling of powerlessness
Most are overweight
  15% – 50% on weight-control programs
Night eating syndrome and sleep disorders
Onset usually seen in late adolescence to early 20s
Higher prevalence of major depression, substance abuse & personality disorders
Treatment Approach

- Multidisciplinary: psychiatric or psychological, medical, nutritional
- Treatment includes inpatient hospitalization, residential treatment, day hospitalization, intensive outpatient treatment, and outpatient treatment
- 24 hour care – inpatient & residential
- Day programs – 6-8 hrs of care x 5-7 days/wk
- Outpatient – least intensive

*Practice Guideline for the Treatment of Patients with Eating Disorders*

http://www.guideline.gov/content.aspx?id=9318
Psychotherapeutic Treatment

- Goals
  - Help patients understand and cooperate with nutritional and physical rehabilitation
  - Help patients understand and change behaviors and dysfunctional attitudes
  - Improve interpersonal and social functioning
  - Address psychopathology and psychological conflicts

- Psychotherapy, cognitive-behavioral therapy, family or marital therapy
  - Highly structured, used to alter attitudes/inaccurate thoughts, changing behaviors

- Treatment usually 1 year or more

- Compared with anorexia, bulimia patients are generally more open to intervention

- Depression, separation anxiety, and generalized anxiety must also be treated
Nutrition Assessment

Diet history
- Over- and underreporting
- Calories retained from binges
- Specific dietary practices and chaotic eating
- Nutritional adequacy
- BN – harder to assess; wkly recall

Eating behavior
- Food aversions
- Unusual or ritualistic behaviors
- Trigger foods
- Time, location, duration

Laboratory assessments
- BP
- Electrolytes
- High chol in AN
- Abnormal lipid levels in BN
- Low serum glucose

Vitamin and mineral deficiencies
- Hypercarotenemia, iron deficiency anemia, osteopenia, and osteoporosis

Fluid and electrolyte balance
- Significant problems with vomiting and laxative and diuretic abuse
- Hypokalemia & dehydration

Energy expenditure
- Low REE in anorexia; unpredictable in bulimia
- Decreased LBM
- Refeeding normalizes REE in AN

Anthropometric assessment
- Skin folds, BIA, body weight
- Long-term monitoring
- Severe PEM
- Weight assessed regularly – may affect hydration, glycogen, metabolic factors in AN
Medical Nutrition Therapy and Counseling: Anorexia Nervosa

- Correct biological and psychological components of malnutrition
- Restore body weight
- Normalize eating patterns
- Normalize hunger or satiety cues
- Hospitalize when patient is medically unstable, severely malnourished, or growth retarded
- Institutional protocols: patient participation in menu planning and meal planning approaches
Medical Nutrition Therapy and Counseling: Anorexia Nervosa

- Outpatient: RD’s counseling skills are important
- Reasonable weight-gain goals: 2 to 3 lb/week for inpatient; 0.5 to 1 lb/week for outpatient
- Progressive increase in caloric prescription: +100 to 200 kcal every 2 to 3 days
- CHO 50-55%, Protein 15-20% & Fat 30%
- Aggressive refeeding of severely malnourished anorexia patients (<70% standard body weight); care to avoid refeeding syndrome
  - Monitor ph, mg, ca, k
- May need 3000 to 4000 kcal/day to achieve goal weight
- Intake of macronutrients and micronutrients
- Use of snacks and supplements
Refeeding syndrome

• Potentially fatal shifts in fluids and electrolytes that may occur in malnourished patients receiving nutrition (whether enterally or parenterally).

• These shifts result from hormonal and metabolic changes and may cause serious clinical complications. The hallmark biochemical feature of refeeding syndrome is hypophosphataemia.

• Syndrome is complex and may also feature abnormal sodium and fluid balance; changes in glucose, protein, and fat metabolism; thiamine deficiency; hypokalaemia; and hypomagnesaemia.
Reasonable plan of controlled eating
Outpatient counseling
Interrupt binge-and-purge cycle, restore normal eating behavior, and stabilize body weight
Assessment of energy needs
Macronutrient and micronutrient intake
Restoration of hunger and satiety cues
Cognitive-behavioral therapy
Stages of readiness to change
Intake based on IBW
  - If hypometabolic 1500-1600 kcal/day
  - Avoid wt. reduction diets until patterns stabilized
CHO 50-55%, Pro 15-20%, Fat 30%
Medical Nutrition Therapy and Counseling: Binge-Eating Disorder

- Treatment strategies
  - Nutrition counseling and dietary management
  - Individual and group psychotherapy
  - Medication

- Goals: self-acceptance, improved body image, increased physical activity, better overall nutrition
Nutrition Education

- Pt.’s are the “experts”
- Education materials thoroughly assessed for language
- Individualize
- Frequent follow up/re-educating
Prognosis

- Relapse in anorexia: up to 50% of patients require rehospitalization
- Enduring morbid food and weight preoccupation
- Outcomes are better in younger patients
- High mortality rates associated with anorexia
- Relapse in bulimia
For Thursday 11/17/16

- Whole class, read:
  Refeeding syndrome: what it is, and how to prevent and treat it

- A-K
  Refeeding hypophosphatemia: a potentially fatal danger in the intensive care unit

- L-Y
  Cardiac Arrest and Delirium: Presentations of the Refeeding Syndrome in Severely Malnourished Adolescents With Anorexia Nervosa