The Secret in the Couch and other Tales of Eating Disorders in Adolescence

Casey Cottrill, MD, MPH
Medical Director of Eating Disorder Clinic

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Disclosures

I have no commercial relationships to disclose.

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Goals and Objectives

Goals
- Explore Feeding and Eating Disorders and Treatment for Adolescents

Objectives
- Recognize & correctly identify eating disorder diagnoses
- Describe the medical complications associated with each eating disorder diagnosis
- Formulate initial steps to maintain medical stability and initiate treatment linkage

Abbreviations Used

- Anorexia Nervosa = AN
- Bulimia Nervosa = BN
- Binge Eating Disorder = BED
- Avoidant Restrictive Food Intake Disorder = ARFID

Introduction

Eating Disorders are complex disorders that require multifaceted and multidisciplinary care at all stages of treatment

Limited Research

Due to stigma associated, recognition of the eating disorder and engagement in treatment is often difficult and may be delayed

Prevalence

20 million women and 10 million men will have an eating disorder at some point in their lives in the US.

Lifetime prevalence:

- AN: 0.9% of women and 0.3% of men
- BN: 1.5% of women and 0.5% of men
- BED: 3.5% of women and 2.0% of men

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Pediatric Prevalence and Significance

In youth:

- 5.2% of the girls met DSM-5 criteria for AN, BN, or BED.

Eating disorders have the highest mortality rate of any psychiatric illness

Up to 20% of individuals with chronic AN will die as a result of their illness

Anorexia Nervosa

Restriction of intake, leading to significantly low body weight in the context of age, sex, developmental trajectory and physical health.

* Elimination of amenorrhea

Intense fear of weight gain with persistent behavior interfering with weight gain & significantly low weight.

Disturbance in the way one's body weight or shape is experienced, and persistent lack of recognition of seriousness of current low body weight.

Anorexia Nervosa

Restricting type – in the past 3 months, no binge/purge, only restriction, excessive exercise

Binge Eating type – recurrent episodes of binge/purging (laxatives, vomiting, diuretics, enemas)

Mild	Moderate	Severe	Extreme
BMI > 17	BMI = 16	BMI = 15	BMI < 15

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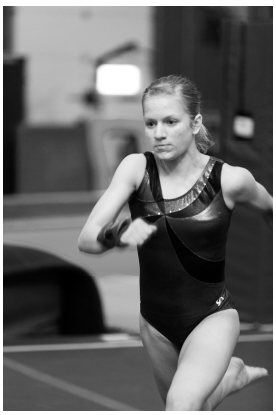
Anorexia Nervosa Case Study

Sarah is a 15 year old female, gymnast, gets straight A's in school and presents to your clinic for her yearly physical.



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Sarah

Her Mom reports that Sarah is “a perfectionist”

About 6 months ago she decided to “be healthier”

Increasing intake of fruits and vegetables

Over time she starting avoiding sugar, diary, & bread and has stopped going out to eat

Parents have noticed Sarah staring at herself in the mirror and frequently pinching at her stomach

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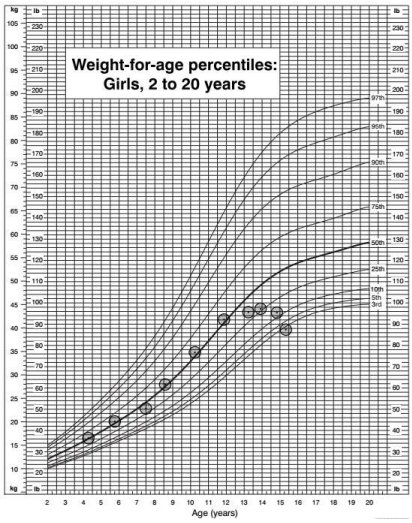
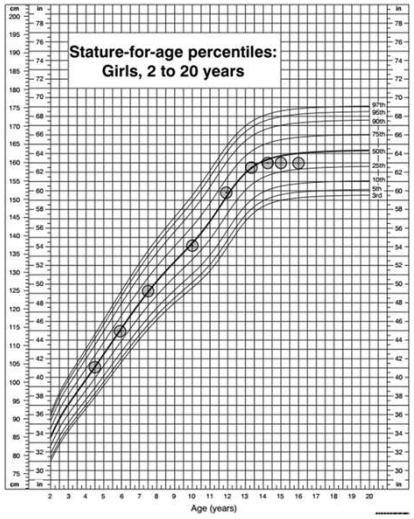
Sarah’s Growth Chart





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Bulimia Nervosa

Recurrent episodes of binge eating with both:

1. Eating a larger amount than what most would eat
2. Lack of control over eating

Inappropriate compensatory behaviors to prevent weight gain

Compensatory behaviors occur once per week for 3 months

Self-evaluation is unduly influenced by body shape/weight

Does not exclusively occur in episodes of AN

Mild	Moderate	Severe	Extreme
1-3	4-7	8-13	Over 14

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Bulimia Nervosa Case Study

Emma is a 16 year old female with worsening mood in the past 6 months. Mother is concerned and has heard disturbing sounds when Emma is in the bathroom. Mom is also concerned that Emma might be hurting herself.

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Emma

Emma says she is upset & stressed with mother's second divorce. Her grades have declined.

She cuts on her wrists to "release the sadness" and cuts on her stomach to "get rid of the fat."

Emma reports purging 1x/day for 3 months to lose weight because none of her friends are "big" like her.

She skips breakfast and several times per week she eats large amounts after school and then purges.

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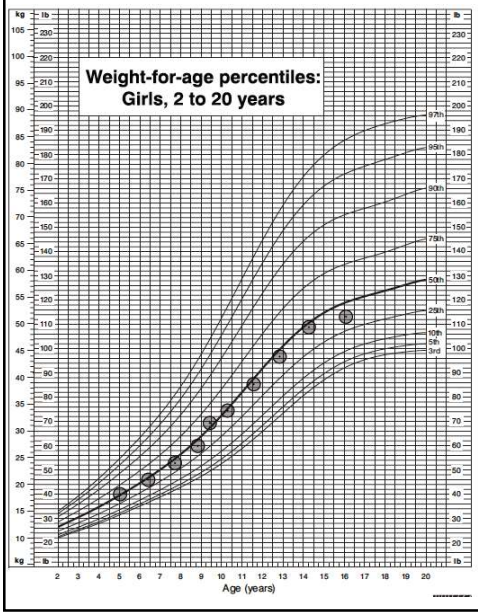
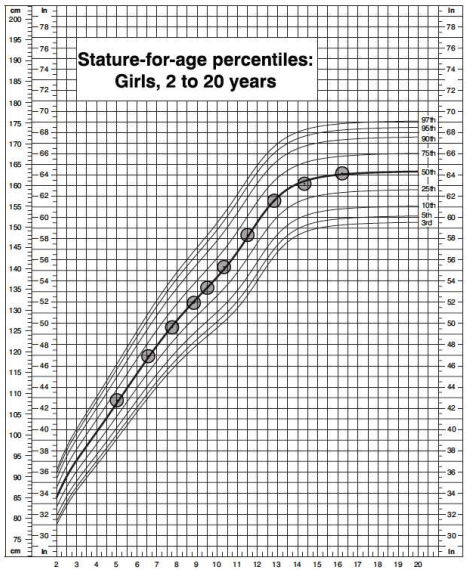
Emma's Growth Chart





Binge Eating Disorder

Recurrent episodes of binge eating

1. Eating a larger amount than most people would eat
2. Lack of control over eating

Binge episodes associated with 3 or more of:

1. Eating much more rapidly
2. Feeling uncomfortably full
3. Eating large amounts when not feeling hungry
4. Eating alone because of embarrassment about how much eaten
5. Feeling disgusted, depressed or guilty afterwards

Binge Eating Disorder

Marked distress

Once per week for 3 months

Not associated with inappropriate compensatory behavior

Mild	Moderate	Severe	Extreme
1-3	4-7	8-13	Over 14

Binge Eating Case Study

Kenna is a 17 year old female who presents to your clinic wanting to lose weight.

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Kenna

Kenna reluctantly endorses overeating and loss of control nightly. States she feels great guilt and regret, always starts the day wanting to "eat as little as possible" to make up for last night's eating.

Does not eat breakfast, eats vegetables for lunch, after school eats a small snack, dinner with the family and when others are asleep, she eats a box of cereal with milk, half of a box of Oreos, and a pint of ice cream.

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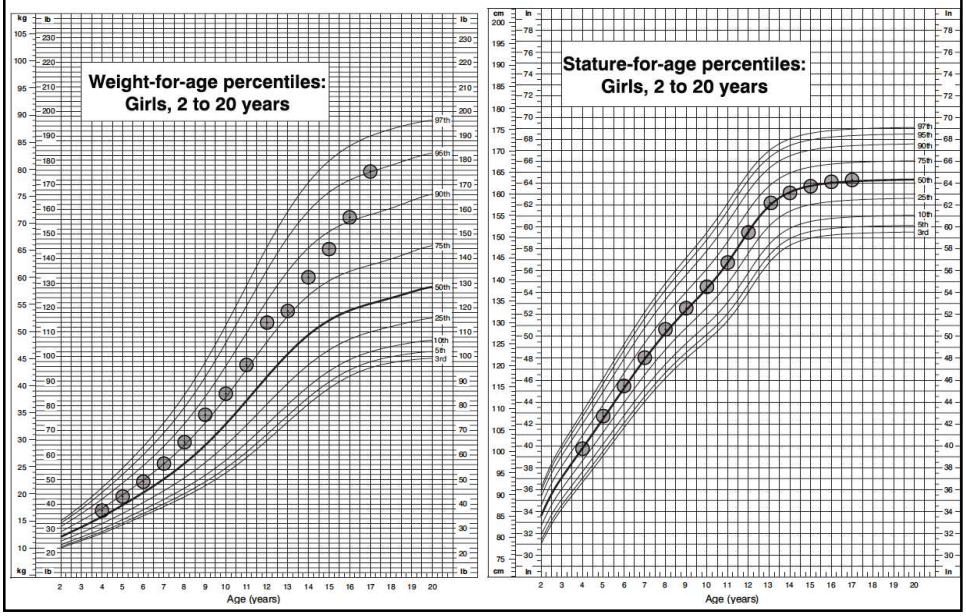
Kenna's Growth Chart



Avoidant Restrictive Food Intake Disorder

Failure to meet nutritional/energy needs as associated with one or more of the following:

1. Significant weight loss
2. Significant nutritional deficiency
3. Dependence on enteral feeds or nutritional supplements
4. Marked interference with psychosocial functioning

Not better explained by lack of food or cultural factors

Does not occur exclusively during course of AN, BN, or as part of another medical or mental disorder

Avoidant Restrictive Food Intake Disorder Case Study

Ben is a 11 year old male with a history of anxiety who had a choking episode six months ago. Parents are concerned he is eating less and less.

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Ben

Ben says he was at the fair and choked on a peanut.

Since that time, he stopped eating nuts, then stopped eating hard foods, then only would drink liquids or pudding.

He says he is really afraid of choking again, worries about it all of the time.

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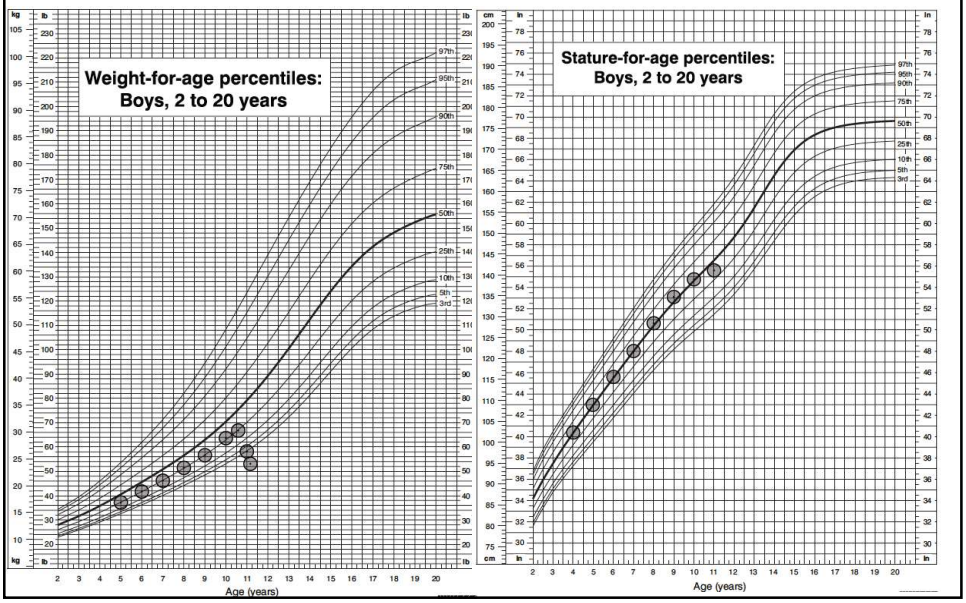
Ben's Growth Chart



Otherwise Specified Feeding or Eating Disorder

Symptoms characteristic of a feeding and eating disorder that causes clinically significant distress or impairment predominate but do not meet the full criteria for any of the previous disorders.

- Atypical Anorexia Nervosa
- Bulimia Nervosa (of low frequency and/or duration)
- Binge-eating disorder (of low frequency and/or duration)
- Purging disorder

Medical Complications

Directly tied to the eating disorder behaviors rather than specific diagnosis

Loosely there are 3 categories of concern:

- Malnutrition Concerns
- Purging Concerns
- Bingeing Concerns

Medical Complications

Malnutrition Concerns

- Direct result of starvation & weight loss
- Most common with AN Restricting Type, ARFID, & OS-FED

Medical Complications

Purging Concerns

- Directly correlated with method & frequency of purging behaviors
- Most common in AN Binge-Purge Subtype, BN, & OS-FED

Medical Complications

Bingeing Concerns

- Related to the metabolic concerns of obesity
- Most common with BED

Most of these are reversible

Malnutrition Concerns

- **Cardiovascular**
  - **Bradycardia**
  - **Hypotension**
  - **Sudden Death**
  - **Mitral Valve Prolapse**
  - **Pericardial Effusion**

Malnutrition Concerns

Cardiovascular	Endocrine/Metabolic
Bradycardia	Amenorrhea
Hypotension	Osteopenia & Osteoporosis
Sudden Death	Thyroid Testing Abnormalities
Mitral Valve Prolapse	Hypoglycemia
Pericardial Effusion	Electrolyte Abnormalities

Malnutrition Concerns

Cardiovascular Bradycardia Hypotension Sudden Death Mitral Valve Prolapse Pericardial Effusion	**Endocrine/Metabolic** Amenorrhea Osteopenia & Osteoporosis Thyroid Testing Abnormalities Hypoglycemia Electrolyte Abnormalities
Dermatologic Alopecia Lanugo Pruritis Acrocyanosis	

Malnutrition Concerns

Cardiovascular Bradycardia Hypotension Sudden Death Mitral Valve Prolapse Pericardial Effusion	**Endocrine/Metabolic** Amenorrhea Osteopenia & Osteoporosis Thyroid Testing Abnormalities Hypoglycemia Electrolyte Abnormalities
Dermatologic Alopecia Lanugo Pruritis Acrocyanosis	**Gastrointestinal** Constipation & Variety of GI sensations Delayed gastric emptying Elevated Transaminases Dysphagia Superior Mesenteric Artery Syndrome

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Hematologic Neutropenia Anemia Thrombocytopenia	

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Neurologic Cerebral atrophy	

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Neurologic Cerebral atrophy	**Ophthalmic** Lagopthalmos

Purging Concerns

Cardiovascular
- **Arrhythmia**
- **Diet Pill Toxicity**
- **Palpitations**
- **Emitene Cardiomyopathy**

Purging Concerns

Cardiovascular	**Endocrine**
Arrhythmia	**Irregular Menses**
Diet Pill Toxicity	
Palpitations	
Emitene Cardiomyopathy	

Purging Concerns

Cardiovascular **Arrhythmia** **Diet Pill Toxicity** **Palpitations** **Emitene Cardiomyopathy**	**Endocrine** **Irregular Menses**
Dermatologic/Other **Russel's Sign** **Dental erosions**	

Purging Concerns

Cardiovascular **Arrhythmia** **Diet Pill Toxicity** **Palpitations** **Emitene Cardiomyopathy**	**Endocrine** **Irregular Menses**
Dermatologic/Other **Russel's Sign** **Dental erosions**	**Gastrointestinal** **Mallory-Weiss tear** **Gastroesophageal reflux** **Constipation & Variety of GI sensations** **Rectal Prolapse**

Purging Concerns

Cardiovascular Arrhythmia Diet Pill Toxicity Palpitations Emitene Cardiomyopathy	**Endocrine** Irregular Menses
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Metabolic Hypokalemia Dehydration Sodium abnormalities Metabolic alkalosis Non-Anion Gap acidosis Pseudobartter's Syndrome	

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Bingeing Concerns

Cardiovascular
- **Hypertension**
- **Coronary Artery Disease**
- **Stroke**

Bingeing Concerns

Cardiovascular	**Endocrine/Metabolic**
Hypertension	**Obesity**
Coronary Artery Disease	**Irregular Menses**
Stroke	**Type 2 Diabetes Mellitus**

Bingeing Concerns

Cardiovascular **Hypertension** **Coronary Artery Disease** **Stroke**	**Endocrine/Metabolic** **Obesity** **Irregular Menses** **Type 2 Diabetes Mellitus**
Sleep Disorders **Obstructive Sleep Apnea**	

Bingeing Concerns

Cardiovascular **Hypertension** **Coronary Artery Disease** **Stroke**	**Endocrine/Metabolic** **Obesity** **Irregular Menses** **Type 2 Diabetes Mellitus**
Sleep Disorders **Obstructive Sleep Apnea**	**Gastrointestinal** **Gall bladder disease** **Non-Alcoholic Steatohepatitis (NASH)**

Primary Care Provider Role

"Recognizer" of the disorder

Explain medical seriousness of eating disorders

Assist with medical stability assessment & weight monitoring

Empower the parents in decision making

Referral resource for families & therapists

Consultant for therapist and families

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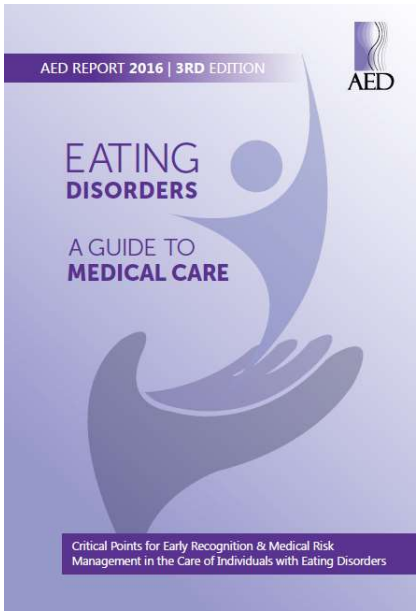

https://www.aedweb.org/index.php/education/eating-disorder-information/eating-disorder-information-13

The guide offers:

- Presenting signs & symptoms
- Medical Concerns
- Goals of treatment
- Timely interventions
- Tips on ongoing management

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Medical Evaluation

Comprehensive medical history & exam

Weight history

- Amount/rate of weight loss
- Highest, lowest, goal/target weights

NO SPECIFIC BMI = EATING DISORDER OR MALNUTRITION

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ASPEN Malnutrition Guidelines

Indicators for Pediatric Malnutrition: 2 years – 18 years

Indicator	Mild	Moderate	Severe
BMI for Age Z-score	-1 to -1.9	-2 to -2.9	-3 or less
Height Z-score	-	-	-3 or less
MUAC Z-score (up to 5y, WHO)	-1 to -1.9	-2 to -2.9	-3 or less
Weight Loss	5% usual body weight	7.5% usual body weight	10% usual body weight
Decline in BMI Z-score	Decline of 1 Z-score	Decline of 2 Z-scores	Decline of 3 Z-scores
Inadequate Nutrient Intake	51-75% of energy/protein needs	26-50% of energy/protein needs	≤ 25% of energy/protein needs

Reference: CDC, excluding Mid-Upper Arm Circumference (MUAC)

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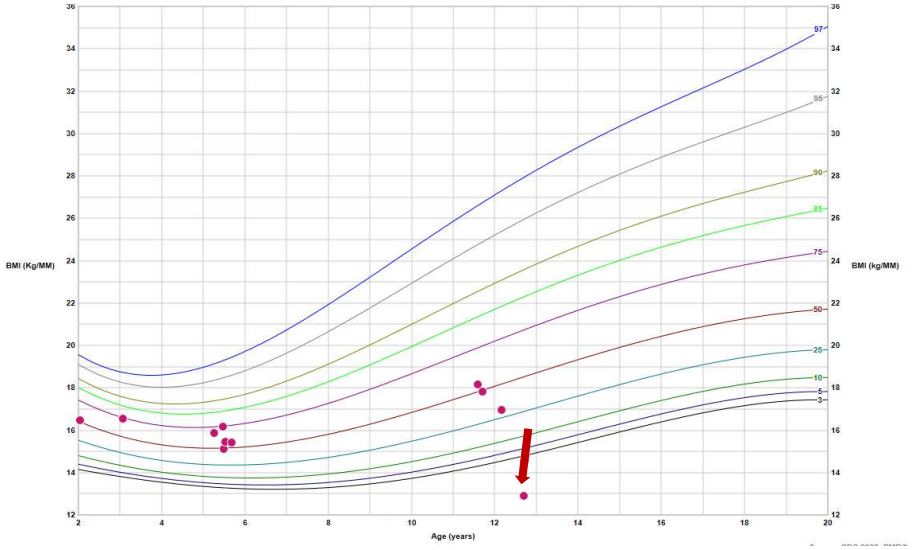

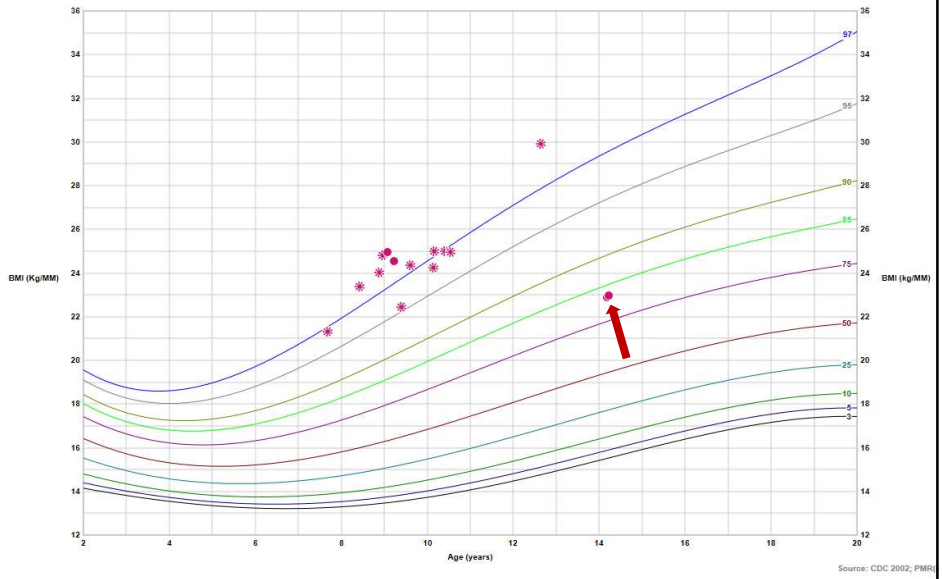

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Medical Evaluation

Complete physical exam
Standing & Recumbent Pulse & BP
Oral temperature
Height, weight (post-void, gown only), BMI
Clues to purging
Full skin examination
Clues to other illnesses

Medical Evaluation

CBC
Chem 10
    Electrolytes, BUN/Cr, Glucose, Ca, Mg, Phos
Total Protein, Albumin, AST, ALT
Amylase, Lipase
Thyroid Function Testing
ESR
Gonadotropins (amenorrhea work-up)

Medical Evaluation

EKG

- Bradycardia, pulse <60bpm
- Long QTc (>444-455) → arrhythmia

Bone Density Evaluation (DEXA Scan)

- If amenorrhea > 6 months

Hospitalization

Most common admission diagnoses:

- Bradycardia
- Hypokalemia
- Acute Food/Liquid Refusal

Hospital Management

FOOD IS YOUR MEDICINE

Goal of 1-2 pounds weight gain/week or weight stabilization

Eating is not negotiable

Basal caloric needs + 500-1000calories/day

Refeeding Syndrome

Shift of fluid & electrolytes when beginning to refeed a malnourished patient

Clinical findings can be non-specific

Cardiac/Respiratory Failure

Potentially fatal

RARE

Refeeding Syndrome Risk Factors

Chronic malnourishment
Little to no energy intake for > 10 days
Anorexia Nervosa
Rapid weight loss
Diuretic, laxative, insulin abuse
Alcohol abuse
Abnormal electrolytes prior to renourishment

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Refeeding Syndrome

Starvation/Malnutrition

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Refeeding Syndrome

Starvation/Malnutrition

Glycogenolysis, gluconeogensis and protein catabolism

Refeeding Syndrome

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Renourishment Begins
Switch from catabolism to anabolism

Refeeding Syndrome

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Insulin Secretion

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Insulin Secretion

↑ Glucose uptake
↑ Uptake of K^+, Mg^{2+}, PO_4
↑ Protein & Glycogen Synthesis

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Hypokalemia
Hypomagnesemia
Hypophosphatemia
Salt & Water retention/edema

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Refeeding Syndrome

Awareness & Prevention

Refeeding *only* on inpatient unit for at-risk patients

Advancing nutrition *slowly*

Monitoring electrolytes while elevated risk continues through 2 weeks

Correcting electrolyte imbalances while refeeding

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NCH Eating Disorder Clinic

Mission: To provide multidisciplinary, family centered care for youth with needs across the eating disorders continuum in an environment that is dedicated to education and academic development.

Vision: Be a leader in pediatric eating disorder care by contributing to the treatment of every child, support for every family, and education within the community.

Multidisciplinary Assessment

- Behavioral Health Therapist
- Dietitian
- Medical Provider

Multidisciplinary Assessment

- 3-4 hours in length
- Assessing current maladaptive thoughts, behaviors, and activity patterns
- Assessing previous growth, malnutrition, and need for weight restoration
- Making a level of care recommendation

Level of Care Recommendation

Residential Care (out of state)

Inpatient Medical Hospitalization

Partial Hospitalization (PHP)

Intensive Outpatient (IOP)

Outpatient Management

Care elsewhere or no care needed

Treatment

Family Based Treatment (FBT)

Principles of FBT:

- Parents are not to blame
- Parents are vital to therapeutic success
- Parents are responsible for weight restoration
- Separate the child from the illness
- Non-authoritarian approach

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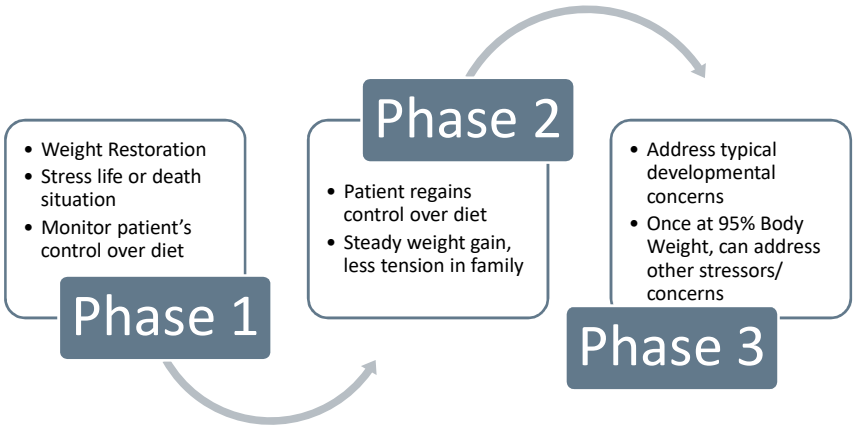
Family Based Treatment



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Eating Disorders Team

- Therapists
- Dietitians
- Adolescent Medicine Physicians/NP
- Nurses
- Psychiatrist/PA
- Occupational Therapists
- Massage Therapist
- Chef
- Teacher
- Front Desk Staff
- Parents and Family

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Partial Hospitalization Program

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	
8:00-8:30	Arrival and Vitals 8:00 -8:30*	Home Breakfast	Home Breakfast	Arrival and Vitals 8:00 -8:30*	Arrival and Vitals 8:00 -8:30*	All MEALS AND SNACKS AT HOME	All MEALS AND SNACKS AT HOME	8:00-8:30
8:30-9:00	Breakfast			Breakfast	Breakfast			8:30-9:00
9:00-9:30	School			School and snack/*Family Rounds*	School			9:00-9:30
9:30-10:00								9:30-10:00
10:00-10:30	Daily Check-in				Daily Check-in			10:00-10:30
10:30-11:00	Snack	Home Snack	Home Snack		Snack			10:30-11:00
11:00-12:00	Therapy Group	Arrival and Vitals	Arrival and Vitals	Therapy Group	Therapy Group			11:00-12:00
		Daily Check-in	Daily Check-in					
12:00-1:00	Lunch and Distress Tolerance*	Lunch and Distress Tolerance*	Lunch and Distress Tolerance*	Lunch and Distress Tolerance*	Lunch and Distress Tolerance*			12:00-1:00
1:00-1:30	Therapy Group	School	School	Therapy Group	Therapy Group			1:00-1:30
1:30-2:00								1:30-2:00
2:00-2:30	Therapy Group	Nutrition Exposure Therapy Group	Therapy Group	Therapy Group	Check-out with Caregivers			2:00-2:30
2:30-3:00					Home Snack			2:30-2:45
3:00-3:30	Snack	Snack	Snack	Snack				2:45-3:15
3:30-4:15	Occupational Therapy 3:30-4:15	Occupational Therapy 3:30 -4:15	Occupational Therapy 3:30 -4:15	Occupational Therapy 3:30-4:15				3:15-4:00
4:15-4:30	Check-out with Caregivers	Nutrition Group with caregivers	Meal Coaching/ support group for caregivers / Body Image	Check-out with Caregivers				4:00-4:30
4:30-4:45								4:30-4:45
4:45-5:00								4:45 -5:00
5:00-5:30	Home Dinner	Dinner with Caregivers	Dinner with Caregivers	Home Dinner	Home Dinner			5:00-530
5:30-6:00								5:30-6:00
6:00-7:00		Psycho-education with Caregivers / Psycho-education with patients	Psycho-education with patients and Caregivers					6:00-7:00
7:00-7:30	Home Snack	Check out with Caregivers	Check out with Caregivers	Home Snack	Home Snack			7:00-7:30

Synopsis of Schedule: PHP

Monday-Friday

Approximately 8 hours/day

Medical management: 1/week

Psychiatry management: 1/week

Massage therapy: 2/week

Occupational therapy: 5/week

School: 5 hours/week

Synopsis of Schedule: PHP

Psychotherapy sessions offered during programming hours with mixture of individual, group, family sessions

- Individual therapy 2/week
- Family therapy 1/week

Dietitian Appointments 1/week + Group nutrition education

Intensive Outpatient Program

	5-8pm Monday	5-8pm Tuesday	Wednesday	5-8pm Thursday	Friday	Saturday	Sunday
	Family Night			**Family Night**			
5:00pm	Check in – Big Group Room	OT	OFF	OT/Nutrition Group for patients—TBD / Education for Family—Big Group Room	OFF	OFF	OFF
5:30pm	Nutrition Group with Families—Big Group Room						
6:00pm	*Theme Night* Dinner with Families—Big Group Room	Dinner - Kitchen		Dinner with Families—Big Group Room			
6:30pm	Family Group—Big Group Room	Self-Esteem Group— Big Group Room		CBT Group with Families — Big Group Room			
7:00pm							
7:30pm	Check-Out w/ Families—Big Group Room	Check-Out with Families—Big Group Room		Check-Out with Families—Big Group Room			
8:00pm							

Synopsis of Schedule: IOP

Monday, Tuesday, Thursday

Approximately 3 hours/day

Medical management: every 2-3 weeks

Occupational therapy: 2 times per week

Psychiatric management: every 2 weeks

Group & individualized Dietitian Appointments

NATIONWIDE CHILDREN'S
When your child needs a hospital, everything matters.

Synopsis of Schedule: IOP

Psychotherapy sessions offered during programming hours with mixture of individual, group, family sessions

- Individual therapy 1/week
- Family therapy 1/week

Synopsis of Schedule: Outpatient

Individual & Family Therapy:

- 1/week to 1/month

Dietitian Appointments:

- 1/week to 1/month

Medical management:

- 1/month to 3 months

Psychiatry management: as needed

Where are we located?

Downtown Close To Home Center at 500 E. Main St.

500 East Main Street
3rd floor
Columbus, OH 43215

(614) 355-6300

Get Directions

NATIONWIDE CHILDREN'S
When your child needs a hospital, everything matters.™

Referrals

Referral to the Eating Disorder Program providers/parents can all our Behavioral Health Resource Coordinator, Abigail Jones

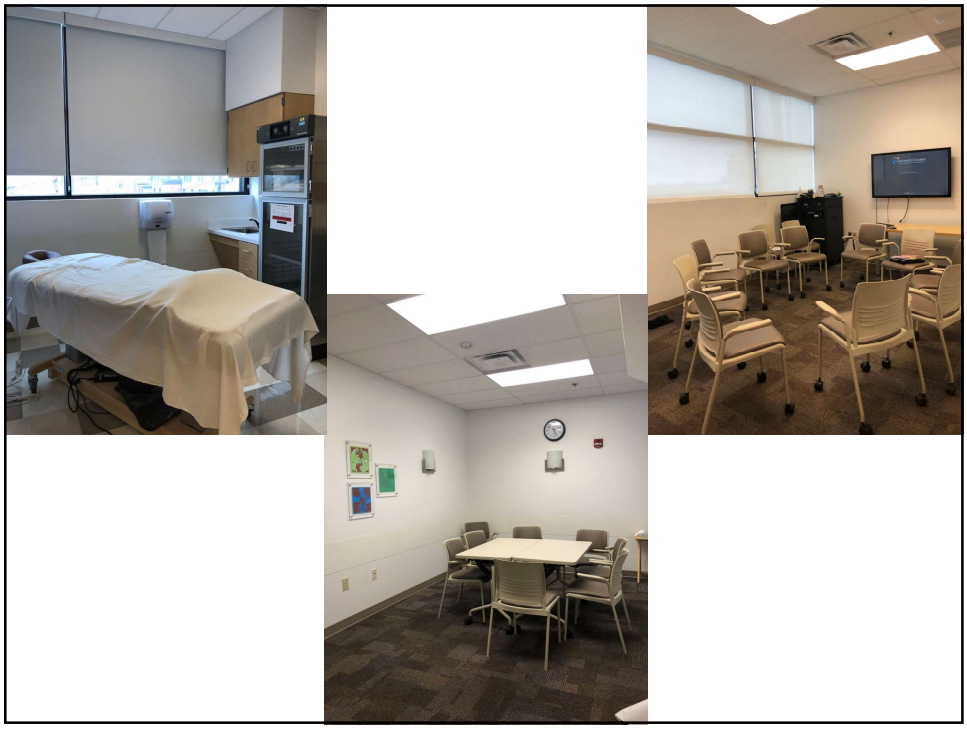
(614) 355-8656

Questions or urgent concerns from physicians call the Physician Direct Connect Line and ask for Adolescent Medicine

(614) 355-0221

NATIONWIDE CHILDREN'S
When your child needs a hospital, everything matters.™

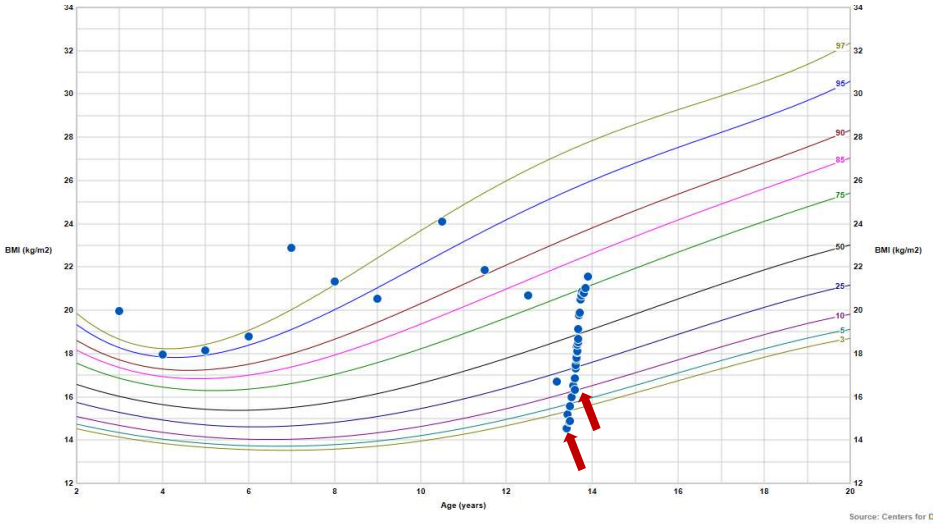

CHANGE
AND YOU



As promised……

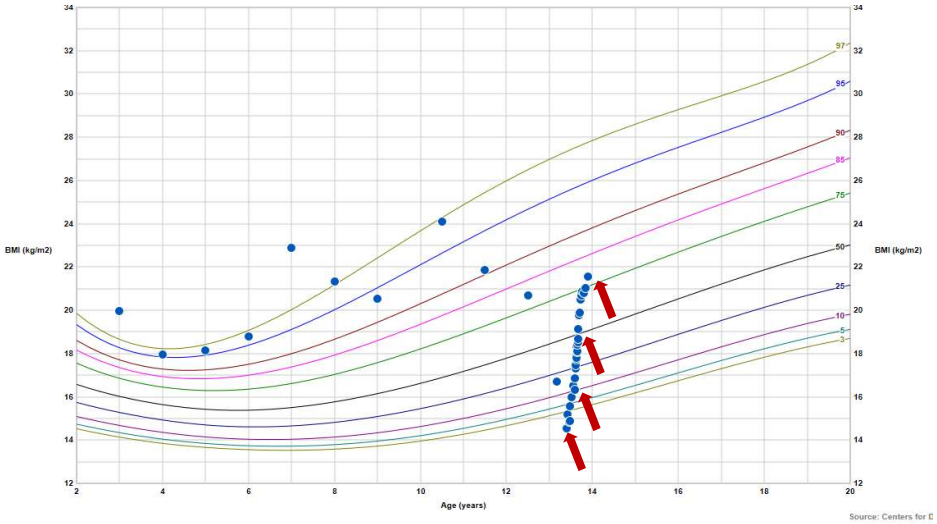
The Secret in the Couch

Matt


BMI (kg/m2)
Age (years)
97
95
90
85
75
50
25
10
5
3


DATE:
USE BY:
GALLON SIZE
CONTENTS

Matt


BMI (kg/m2)
Age (years)
97
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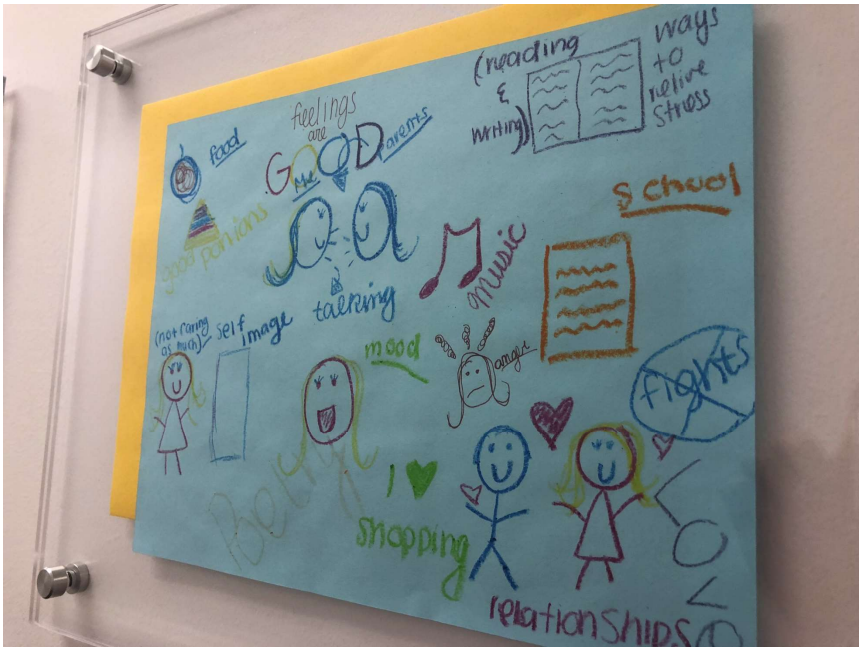
King of the Butter
Chipotle
Bedridden
Hershey's - Dietary Fats in General
You can do it!
"Safe Food"
Mom Dept.
START HERE



THANK YOU FOR YOUR ATTENTION.
QUESTIONS?

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