


Everything You Wanted to Know About ARFID...But Were Afraid to Ask!

Workshop
 March 18, 2015
 2:15-3:45 pm

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Disclosures

- Research Funding
 - National Institute of Health (DK)
 - Canadian Institute of Health Research (DK)
 - Thrasher Foundation (DK)
- Other
 - Lippincott (DK)
 - Pfizer (DK)
- Drs. Ornstein and Kreipe—nothing to disclose

Objectives

- At the conclusion of this workshop, participants will be able to:
 - Understand the reasons behind the changes in the DSM-5, with a focus on ARFID.
 - Identify adolescents and young adults with clinically significant eating problems that meet the DSM-5 criteria for ARFID.
 - Understand the development, course, and clinical expression of ARFID.
 - Distinguish ARFID from other medical and psychiatric disorders.



Brent

- 11.5 year old boy with disruptive behavior at school related to presumed peanut allergy and gluten sensitivity.
- He checks what other children are eating to avoid peanut- or gluten- containing foods.
- “Freaked out” when boy sitting next to him on school bus opened a package of peanut butter crackers
- Other kids started making fun of him.
- Parents demand that all traces of peanuts and gluten be removed from his school environment.



Brent

- History of Present illness
 - Weight dropped from 60th to 40th percentile over past 4 months.
- Past Medical History
 - Height 20th percentile
 - Eczema and asthma in childhood, now resolved.
- Family History
 - Mother with depression
 - Dad with anxiety
 - Both obese
- School nurse & counselor call asking for advice.



DSM-IV to DSM-5

- The goal in developing the 5th Edition of the Diagnostic and Statistical Manual (DSM-5) was
 - provides a common language to communicate about mental disorders
 - to produce an evidence-based manual that was useful to clinicians in helping them accurately and consistently diagnose mental disorders
 - to provide a basis for research criteria



DSM-5 and Feeding and Eating Disorders

- Changes to DSM-5
 - Conceptual
 - Structural
 - Diagnostic
 - Let's look at *Feeding and Eating Disorders...*



DSM-IV to DSM-5: Conceptual

- The goal of the DSM-5 Eating Disorder Working Group
 - To make feeding and eating disorders recognizable to non-psychiatrists to facilitate better diagnosis by clinicians
 - Adopt a lifespan approach
 - Appreciate that symptoms of eating disorders vary according to age and stage of development
 - Some types of feeding disturbances seen in young children persist into later childhood, adolescence and adulthood
 - Allow for updates and integrating new findings



DSM-5 ~~NOT~~ DSM V

- Allow for updates and integrating new findings
- Different approach to future revisions
- DSM-5.1

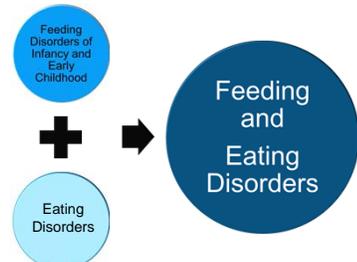
DSM-IV to DSM-5: Structural

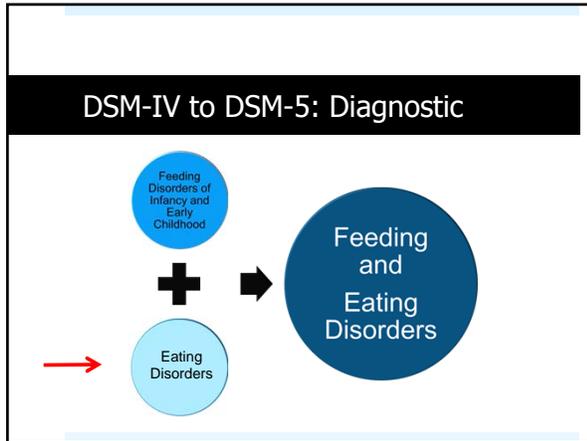
- Multiaxial system diagnosis discontinued
 - Axis I: Clinical disorders
 - Axis II: Personality disorders, Mental retardation
 - Axis III: General medical
 - Axis IV: Psychosocial and environmental problems
 - Axis V: Global assessment of functioning
- Incompatible with the rest of medicine
- Not consistent with WHO and ICD guidelines

DSM-IV to DSM-5: Structural

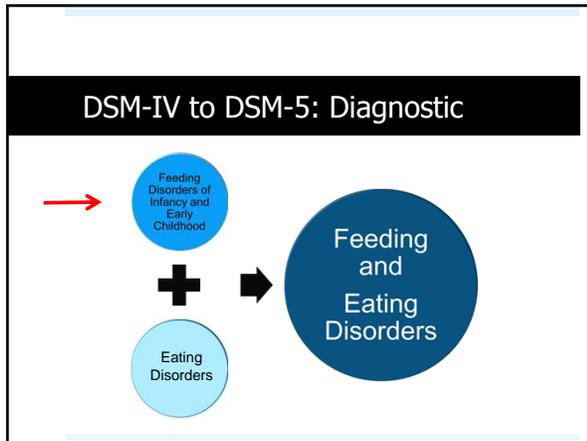
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DSM-IV to DSM-5: Diagnostic

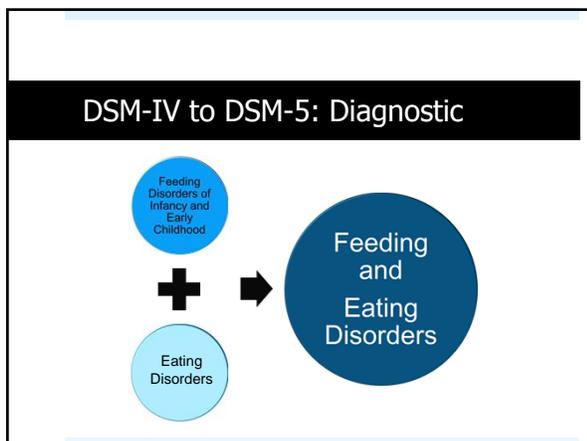




- DSM-IV to DSM-5: Diagnostic**
- Eating disorder diagnostic challenges
 - > 50% of children and adolescents do not meet full criteria
 - "*Refusal*" to maintain weight" implies pejorative motivation
 - Eating disorder criteria were not developmentally sensitive
 - Children should not maintain/lose a small amount of weight
 - Children and young adolescents do not experience their body in same way adults do
 - Amenorrhea irrelevant for boys or pre-menarchal girls.



- DSM-IV to DSM-5: Diagnostic**
- Feeding disorder of infancy and early childhood diagnostic challenges
 - Rarely used
 - Limited information available on the characteristics, course and outcome of these children
 - This diagnostic criteria was not exclusively seen in young people < 6 years



DSM – IV Criteria	DSM-5 Criteria
Anorexia nervosa - suggested weight cutoffs + amenorrhea ≥ 3 months	Anorexia Nervosa (AN) – amenorrhea & numeric weight cutoffs eliminated; developmental considerations incorporated.
Bulimia Nervosa-binging and purging ≥ 2x/week for ≥ 3 mos.	Bulimia Nervosa (BN) – binging and purging 1x/wk for ≥ 3 mos.
Eating Disorder Not Otherwise Specified included Binge Eating Disorder (BED) in Appendix-binging ≥ 2x week for ≥ 6 mos	Binge Eating Disorder (BED) - binging 1x/ week for 3 mos.

DSM – IV Criteria	DSM-5 Criteria
Eating Disorder Not Otherwise Specified	Eating Disorders Not Otherwise Specified eliminated Avoidant/Restrictive Food Intake Disorder (ARFID) Other Specified Feeding and Eating Disorders <ul style="list-style-type: none"> •Atypical AN (not underweight) •Purging disorder •Sub-threshold BN (<1x/wk or <3 mos) •Sub-threshold BED (<1x/wk or <3 mos) •Night eating syndrome Unspecified Feeding and Eating Disorders
Feeding Disorders of Infancy or Early Childhood	Feeding Disorders of Infancy or Early Childhood eliminated Avoidant/Restrictive Food Intake Disorder (ARFID) Pica Rumination



Avoidant/Restrictive Food Intake Disorder (ARFID)

- Eating or feeding disturbance as manifested by persistent failure to meet appropriate nutritional and/or energy needs leading to one or more of the following:
 - Significant weight loss (or failure to achieve expected weight gain or faltering growth in children)
 - Significant nutritional deficiency
 - Dependence on enteral feeding or oral nutritional supplements
 - Marked interference with psychosocial functioning

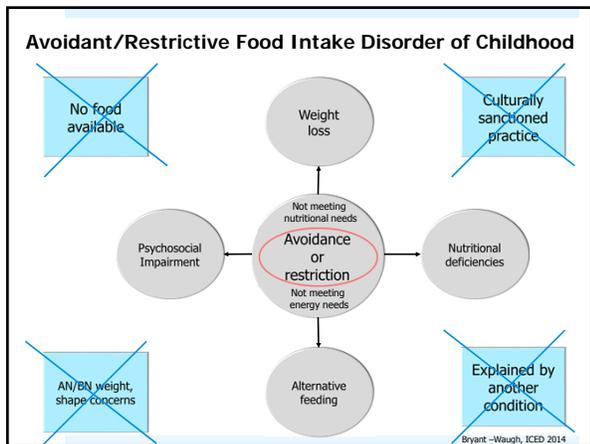


Avoidant/Restrictive Food Intake Disorder (ARFID)

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Avoidant/Restrictive Food Intake Disorder (ARFID) – what it is not

- ARFID is NOT the result of lack of available food or an associated culturally sanctioned practice.
- ARFID is NOT associated with any abnormalities in the way in which one perceives their body weight or shape.
- ARFID is NOT explained by another medical or mental disorder, so that if you treat that, the eating problem will go away.



Context for development of ARFID

- ARFID replaces and extends FDoIEC + EDNOS
- Aim is to improve clinical utility by
 - adding more detail from well described presentations
 - widening criteria to be applicable across the age range to better reflect clinical reality

ARFID and Pediatricians (Katzman et al, 2014)

- Canadian Pediatrics Surveillance Program (CPSP) one-time short survey
- Distributed to CPSP participants (2490 pediatricians) to
 - Provide more information on current knowledge/understanding of diagnosis (diagnostic criteria)



ARFID and Pediatricians (Katzman et al, 2014)

- 657/2490 (26.4%) pediatricians responded
- 418/657 (63%) were unfamiliar with ARFID
- 239/657 (36%) suspected a diagnosis of ARFID
 - 72/239 (30%) inappropriately applied the exclusion, resulting in misdiagnosis



ARFID and Pediatricians (Katzman et al, 2014)

- Still a relatively new diagnosis (2 years old)
- Many clinicians (pediatricians) are
 - unfamiliar with the new diagnostic category *or*
 - specific diagnostic criteria that define ARFID
- Challenges in identification
- More education needed on feeding and eating disorders in the new DSM-5
 - this will ultimately facilitate early recognition and immediate treatment of children and adolescents

ARFID unleashed...

- How does ARFID seem to be performing as new diagnostic category?
- Evidence is accumulating....

Recent studies on ARFID – Tertiary Care Centers

- Multicenter North American studies (Ornstein et al., 2013; Fisher et al., 2014; Forman et al., 2014)
 - Tertiary care adolescent medicine eating disorder programs
 - New patient presenting for assessment
 - 12 to 14% prevalence of ARFID
- Canadian study (Norris et al., 2013)
 - Tertiary care adolescent medicine eating disorder program
 - 11-year retrospective chart review
 - 5% prevalence of ARFID

Recent studies on ARFID – Day Hospital

- Eating disorder day hospital program (Nicely et al., 2014)
 - US tertiary care center
 - 8-17 years old
 - 4-year retrospective chart review
 - 23% prevalence of ARFID

Recent studies on ARFID – GI Network

- Pediatric GI healthcare network (Eddy et al., 2014)
 - Retrospective chart review of 2231 consecutive new referrals to 19 Pediatric GI clinics in Boston
 - 1.5% prevalence
 - 2.4% additional cases meeting ≥ 1 criteria but with insufficient info to confer or exclude diagnosis

Recent studies on ARFID – Community

- Swiss study (Kurz et al., 2014)
 - Screening of community sample of 1444 8- to 13-year olds using self-report
 - New screening instrument Eating Disturbances in Youth-Questionnaire (EDY-Q)
 - 3.2% prevalence of ARFID features

Demographics (Fisher et al., 2014)

CHARACTERISTICS	NUMBERS (%)
Total number of patients	719
ARFID n, (%)	98 (13.6%)
Mean age (years)	12.9
Gender (Females) n, (%)	70 (71.3%)
Subcategories	
Restrictive eaters/picky	28 (28.7%)
Generalized anxiety	21 (21.4%)
Gastrointestinal symptoms	19 (19.4%)
Choking/vomiting episode	13 (13.1%)
Food allergy	4 (4.1%)
Other	13 (13.1%)

Characteristics (Fisher et al., 2014)

	ARFID N=98	Anorexia Nervosa N=98	Bulimia Nervosa N=66	P value
Age	12.9 \pm 2.5	15.6 \pm 1.9	16.5 \pm 1.3	p < .001
% Medium BMI	86.5 \pm 15.1	81.0 \pm 9.2	107.5 \pm 16	p < .001
Lowest Wt (lbs)	76.9 \pm 26.2	91.0 \pm 16.1	117.3 \pm 21.0	p < .001
Highest Wt (lbs)	89.7 \pm 33.1	118.7 \pm 28.3	142.9 \pm 27.2	p < .001
Length of illness (mos)	33.3 \pm 41.3	14.4 \pm 12.2	23.5 \pm 17.1	p < .001

Comorbidities (Fisher et al., 2014)

	ARFID n=98 (%)	Anorexia Nervosa n=98 (%)	Bulimia Nervosa n=66 (%)	P value
Medical Condition/Symptom				
Yes, related	34.6	8.2	4.6	p < .001
Yes, unrelated	16.3	2.0	6.1	
None	49.1	89.8	89.3	
Mood Disorder				
MDD/Dysthymia	7.2	19.4	23.1	p < .001
Other	11.3	11.2	35.4	
None	81.5	69.4	41.5	
Anxiety Disorder				
GAD	28.6	14.3	7.6	p < .001
OCD	6.1	8.2	1.5	
Other	23.5	13.3	24.2	
None	41.8	64.2	66.7	

Medical/Developmental Issues (Fisher et al., 2014)

	ARFID n=98 (%)	Anorexia Nervosa n=98 (%)	Bulimia Nervosa n=66 (%)	P value
Sensory issues	20.4	1	0	P<.001
History of choking	14.3	1	0	P<.01
Swallowing Difficulties	10.2	1	0	P<.01
Secondary gain	7.1	1	0	P<.05
Cognitive Impairment	6.1	0	0	P<.01
Food allergy	6.1	1	0	P<.05
Autism spectrum	5.1	0	0	P<.05

Patient characteristics (Nicely et al., 2014)

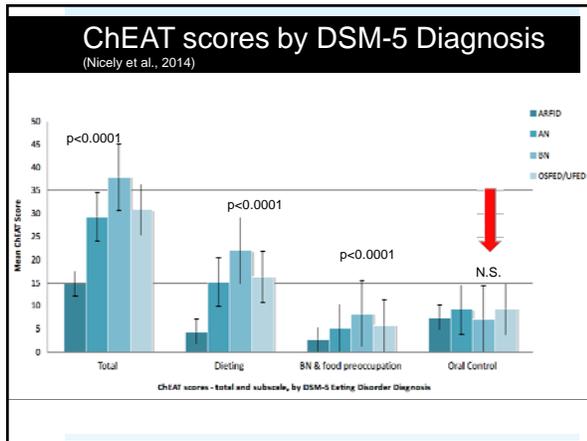
	ARFID (N=39)	AN (N=93)	BN (N=20)	OSFED/UFED (N=21)	p
Age (yrs)	11.1 ± 1.7	14.0 ± 1.5	14.9 ± 1.1	14.2 ± 1.7	< 0.0001
% Male	20.5	4.3	0	9.5	0.008
%MBW	87.1 ± 13.0	82.6 ± 9.2	108.1 ± 19.5	93.2 ± 6.8	< 0.0001
%BW lost	10.5 ± 8.4	18.5 ± 10.2	6.4 ± 6.5	14.8 ± 12.2	< 0.0001
Duration of illness (mos)	9.8 ± 13.2	8.6 ± 7.9	15.9 ± 11.9	9.8 ± 4.9	N.S.

No significant difference between ARFID and AN with respect to %MBW

Symptoms and Features (Nicely et al., 2014)

	ARFID (N=39)	AN (N=93)	BN (N=20)	OSFED/UFED (N=21)	p
Weight loss	95	100	75	100	< 0.0001
Self-induced vomiting	0	6	95	38	< 0.0001
Nutrition supplements	46	20	0	0	< 0.0001
Fear of choking/vomiting	44	1	0	0	< 0.0001
Sensory issues	26	1	0	0	< 0.0001
Body image concerns	21	87	95	90	< 0.0001
Cognitive distortions	44	90	90	95	< 0.0001
Excessive exercise	15	68	65	52	< 0.0001
Food allergy	21	5	10	5	N.S.
Recent medical specialist consult	46	19	20	33	N.S.

All numbers represent percentages



Psychiatric comorbidities (Nicely et al., 2014)

Co-morbid psychiatric disorder	ARFID (N=39)	AN (N=93)	BN (N=20)	OSFED/UFED (N=21)	p
Mood disorder	33	48	80	76	< 0.0001
Anxiety disorder	72	37	25	14	< 0.0001
Autism spectrum disorder	13	0	0	0	0.005
Attention Deficit Disorder	4	0	1	1	N.S.
Learning Disorder	10	2	2	0	< 0.0001
Cognitive impairment	26	2	10	0	< 0.0001

All numbers represent percentages

- ### General Conclusions
- Younger age
 - Higher percentage of males than other EDs
 - Equally as underweight as those with AN
 - Co-morbid anxiety more common while co-morbid depression less common
- 

- ### Avoidant/Restrictive Food Intake Disorder
- 3 Recognized Subtypes
 - individuals who do not eat enough/show little interest in feeding
 - individuals who only accept a limited diet in relation to sensory features
 - individuals whose food refusal is related to aversive experience, e.g. choking, vomiting
- 

Key areas to assess when considering ARFID

- Current food intake
- Oral supplement or tube feed dependency
- Persistence of problem
- Social/emotional functioning
- Weight and height (BMI percentile)
- Signs of nutritional deficiency
- Lack of interest in food
- Sensory-based avoidance
- Fear/aversion

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Current food intake

- Ascertain whether this represents an adequate age-appropriate amount
 - is the diet sufficient in terms of overall energy intake?
- Ascertain whether this includes an adequate age-appropriate range
 - does it include major food groups and essential micronutrients?

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Oral supplements/tube feeding

- Is the individual taking oral nutritional supplements?
 - What kinds?
- Is the individual fed via gastrostomy/ nasogastric tube or other form of enteral feeding?
- Is there dependence on these other methods to ensure sufficient intake?

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Persistence of problem

- How long have there been eating difficulties characterized by avoidance or restriction?
- This is to ascertain whether this is a persistent problem rather than a transient one.

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Social and emotional functioning

- Is there evidence of any associated significant distress?
- Is there evidence of associated impairment to the individual's social and emotional development or functioning?
- In the case of children or younger adolescents, this can include disruptions to normal family function that negatively affect the child.

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Weight and height

- Measurement of weight and height
- Plot measurements and compare to previous documented or reported weight and height / weight and height percentiles
- Allows assessment of whether growth is faltering
- Allows determination of presence of weight loss, or static weight when should be increasing

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Nutritional deficiency

- Does the individual present with clinical or laboratory signs and symptoms of nutritional deficiency or malnutrition?
- Markers might include lethargy secondary to iron deficiency anemia, delayed bone age as a consequence of chronic restricted intake

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Lack of interest

- Is the avoidance or restriction associated with a lack of interest in food?
- Is the avoidance or restriction associated with an apparent failure to recognize hunger?

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Sensory based avoidance

- Is the avoidance or restriction based on sensory aspects of food?
 - Texture
 - Taste
 - Appearance – including colour
 - Smell
 - Temperature

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Presence of fear/ aversion

- Does the avoidance or restriction follow an aversive experience associated with intense distress or discomfort?
- This might include a choking incident, an episode of vomiting or diarrhea, or a medical procedure such as barium swallow

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Treatment...where are we at?



Treatment of ARFID

- No published data
- Some groups are using FBT
- Some are using exposure therapy
- We don't know what is effective at this time, but...

Day program with family-centered approach

- Parents and families incorporated into treatment and re-feeding process
- Attend a therapeutic meal daily
- Provide psycho-education on eating disorders and management of eating disordered behavior
- Attend all sub-specialty appointments
- Participate in a support group, multi-family meal-planning group and family therapy sessions
- In charge of the meal plan while at home and are given behavioral training and assistance with developing contingencies

Exposure-response prevention

- Behavioral intervention typically used for anxiety and phobias
 - When applied to eating disorders, patients are repeatedly exposed to feared foods
 - Response prevention refers to blocking compulsive behaviors such as vomiting, exercise or restriction
- Hildebrandt et al. (2010) concluded that interventions in family based treatment mimic those used in exposure and response prevention.
- Steinglass et al. (2011) proposed that ERP may be a new and beneficial approach to prevention relapse in individuals with AN

Weight Improvement Across Treatment

	ARFID	AN	BN	FEDNEC
PRE %MBW	87.1 ± 13.0	82.6 ± 9.2	108.1 ± 19.5	93.2 ± 6.8
POST % MBW	96.2 ± 9.6	94.6 ± 6.9	108.0 ± 16.3	98.9 ± 5.9

Significant improvements in %MBW gained within groups ($p < .0001$), but not between groups (ARFID vs. those with other eating disorders).

Length of Stay

Children with ARFID spent fewer weeks in program than those with other EDs (7.4 vs. 11.0, $p < 0.0001$)

Treatment Course

- No significant differences between percentage of patients with ARFID requiring subsequent inpatient admission (15.8%) vs. those with other eating disorders (22.7%); $p = 0.362$

Total ChEAT Score Across Treatment

Within subjects: scores on ChEAT improved for all subjects across treatment ($p < 0.0001$)

Tyler

- PMHx
 - Always a picky eater
 - As an infant had difficult going from smooth textured infant foods to variety of textures – resulted in gagging
 - As an a toddler textures resolved but only ate PB&J sandwiches, chocolate chip cookies and pizza, chicken fingers and fries from very specific restaurant location, drinks milk
 - Worries about taste of foods
 - Concerns about mouth feel
- No fear of gaining weight, no body image concerns
- Losing weight would be a "bad thing"
- No rules or rituals around food
- Went to summer camp last summer and refused to eat camp food
 - Complained of "stomach aches"
 - Could only eat bread and water X 17 days



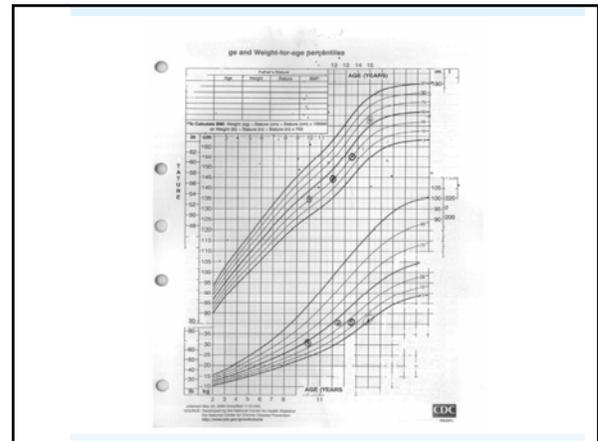
Tyler

- Diet History
 - 2100-2500 kcal/day as per mom's food records
 - Eats with family and is always last to finish
- Exercise History
 - Gym class 2 X per week for 45 minutes
 - Hockey 2 X per week 60 minutes
 - Football or soccer at recess
- PMHx- non-contributory
- Family History – non-contributory
- Social History
 - lives at home with both parents
 - does well in school; has lots of friends
 - denies substance use; denies trauma history
 - Not sexually active; interested in girls.



Tyler

- Current Weight = 41.0 kg (10-25%)
- Height = 155 cm (25%)
- Expected body weight = 47kg
- Growth Curve

Sophia

- 10 year old girl with 8 lbs weight loss and difficulty eating solid food due to fear of choking over past 3 months
- Onset of symptoms coincide with the death of her paternal GF due to Alzheimer's
 - He was unable to eat at end-of-life
- Younger sister had a h/o choking episode a year ago



Sophia

- HPI
 - Slightly picky eater prior to this but no major concerns
 - h/o anxiety over the years
 - Trouble sleeping in her own bed at night
 - Seeing a therapist for 2 years
 - No fear of weight gain or becoming fat; no body image issues
 - Chews food for an extensive period of time before swallowing
- Diet history
 - liquids including Boost supplements
 - ice cream, overcooked noodles, inside of grilled cheese sandwich
- Exercise history
 - plays softball and lacrosse
 - decreased energy currently



Sophia

- PMH
 - Noncontributory
- FH
 - Father with anxiety disorder
 - Sister with asthma
 - Maternal aunts and uncles with schizophrenia, bipolar disorder, and severe autism/MR
- Social History
 - Lives with mother, father, and 2 sisters
 - 5th grade in the gifted program
 - very intense about school



Sophia

- Growth parameters
 - Height 141.4 cm (50th percentile)
 - Weight 28.1 kg (61.8 lbs) (10th percentile)
 - BMI 14.1 (3rd percentile)
 - 83% of MBW of 74.5 lbs
 - Prior weight of 70 lbs ~10 months ago (so was probably higher)



Sophia

- Treated in PHP for 3 mos
- ERP plus a combination of sertraline and mirtazapine
- Discharge weight 37.5 kg (82.7 lbs)
- Eating a variety of solid foods, no longer using nutritional supplements, completing meals in a normal amount of time



Take Home Points

- Appreciate the major changes to DSM-5
- Understand changes and impact of Feeding and Eating Disorders
- Recognize the core clinical features of ARFID

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