

Eating Disorders in Children and Adolescents

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Overview

- How are Eating Disorders Different in Children and adolescents?
- Why are Eating Disorders Different in Children and Adolescents?
- How do Differences in Children and Adolescents with Eating Disorders Change Treatment?

--How are Eating Disorders Different in Children and adolescents?

Anorexia Nervosa

- Weight loss below 85% expected
 - *Rapid weight loss no matter to what level has especially deleterious impact on growing children affecting bone health and growth*
 - *Timing of pubertal maturation varies making projecting growth curves challenging (failure to gain weight during a period of growth)*

Anorexia Nervosa

- Intense fear of weight gain
- Body image distortion, over-emphasis on body weight for self-esteem, or denial of the seriousness of malnutrition
 - *Failure to endorse these fears and distortions despite behavioral manifestations of this are common. This requires abstract reasoning, ability to label emotions, perspective taking*
 - *We usually turn to “denial” to make a case*

Anorexia Nervosa

- Amenorrhea (3 consecutive missed cycles)
 - *Variation in menstruation onset, instability of cycles in early adolescence (25% in first year), not applicable to males with AN*

Bulimia Nervosa

Overvaluation of weight and shape on self-worth

- *Similar problems with abstract reasoning, perspective taking, emotional awareness as in AN*

Binge eating and purging

- *Availability of foods, opportunities for binge eating are not under child's control; opportunities for purging and ability to purge may also be limited*

Duration of 3 months at least two episodes per week

-- *Harder to be secretive and not be discovered.*

This means that INTENT may be more important than duration of frequency for behaviors

Atypical Eating Disorders

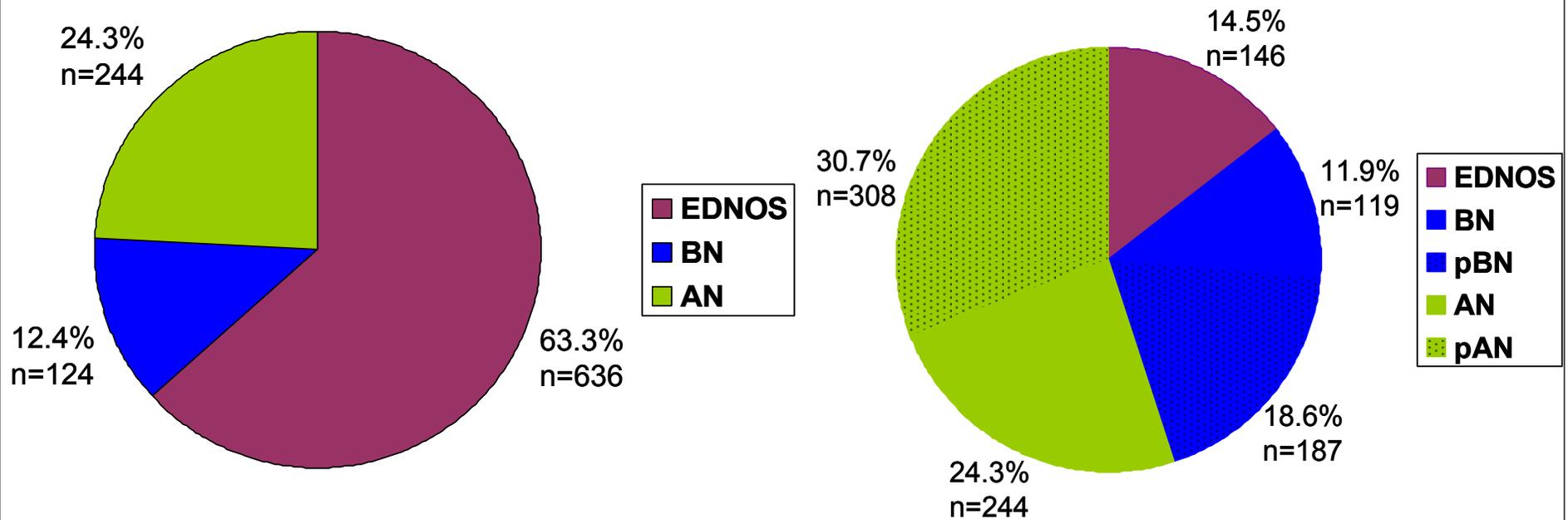
- Selective Eating
 - *Extreme faddy/picky eating that persists into middle childhood*
 - *Highly limited range of foods*
 - *Extreme reluctance to try new foods*
 - *May be primary or secondary to “trauma” e.g., choking, gagging, vomiting*
 - *May be associated with general avoidance of novelty and shyness*
 - *May be linked to AN*
 - *Impaired functioning in social and family milieu, nutritional problems*

Food Related Phobias

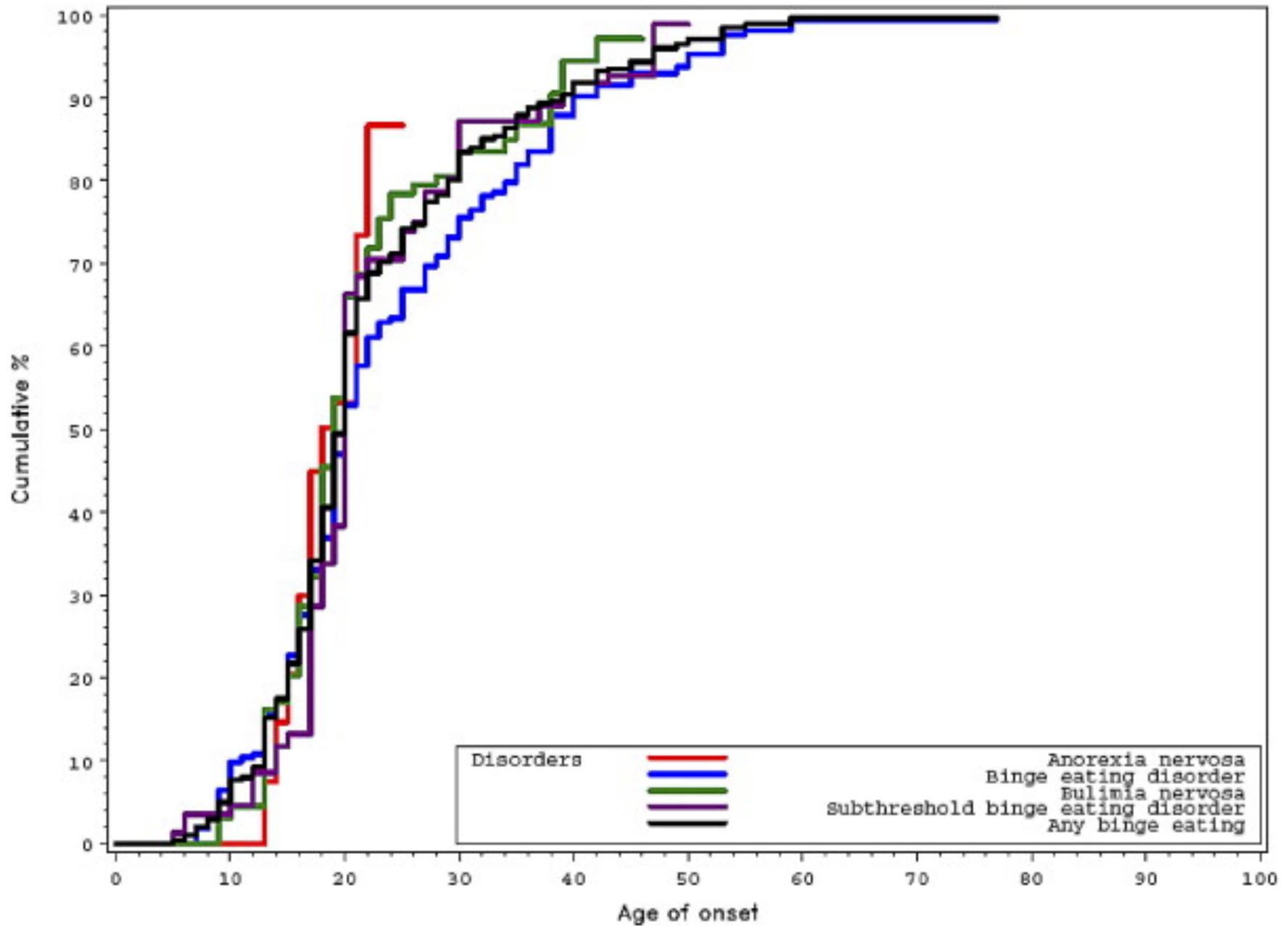
- *Common in middle childhood*
- *Fear of eating because they will vomit, have diarrhea, allergic reactions, health fears*
- *Display phobic behaviors in relation to feared outcome that they can describe (unlike Selective Eating)*



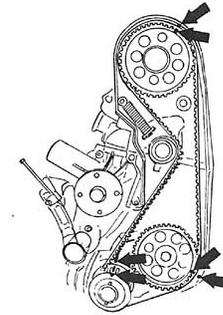
Implications of Diagnostic Uncertainty in Eating Disorders in Children and Adolescents



--Why are Eating Disorders Different in Children and Adolescents?



Timing of Presentation



Timing marks for the camshaft, intermediate shaft and crankshaft sprockets

- *Earlier identification—parents, pediatricians, mental health professionals provide oversight that increases likelihood of referral*
- *Symptoms may be less evolved both behaviorally and cognitively (e.g., weight loss less in AN)*
- *Symptoms less intense (e.g., shorter duration and frequency)*

Social/Cultural Factors

- *Influence of media on body shape and health norms (the thin ideal)*
- *Adolescent sensitivity to cultural beauty/appearance norms*
- *Resistance/accommodation to assault on women's bodies by fashion dictates*
- *cultural values of discipline, perfection, asceticism*

Psychological/Developmental

- *Developmental--fear and avoidance of adolescent challenge*
- *Behavioral--psychological, social, and physiological reinforcement of restrictive eating and weight loss*
- *Family—concerned and anxious parents inadvertently lead to increased struggles with independence*

General Biological Factors

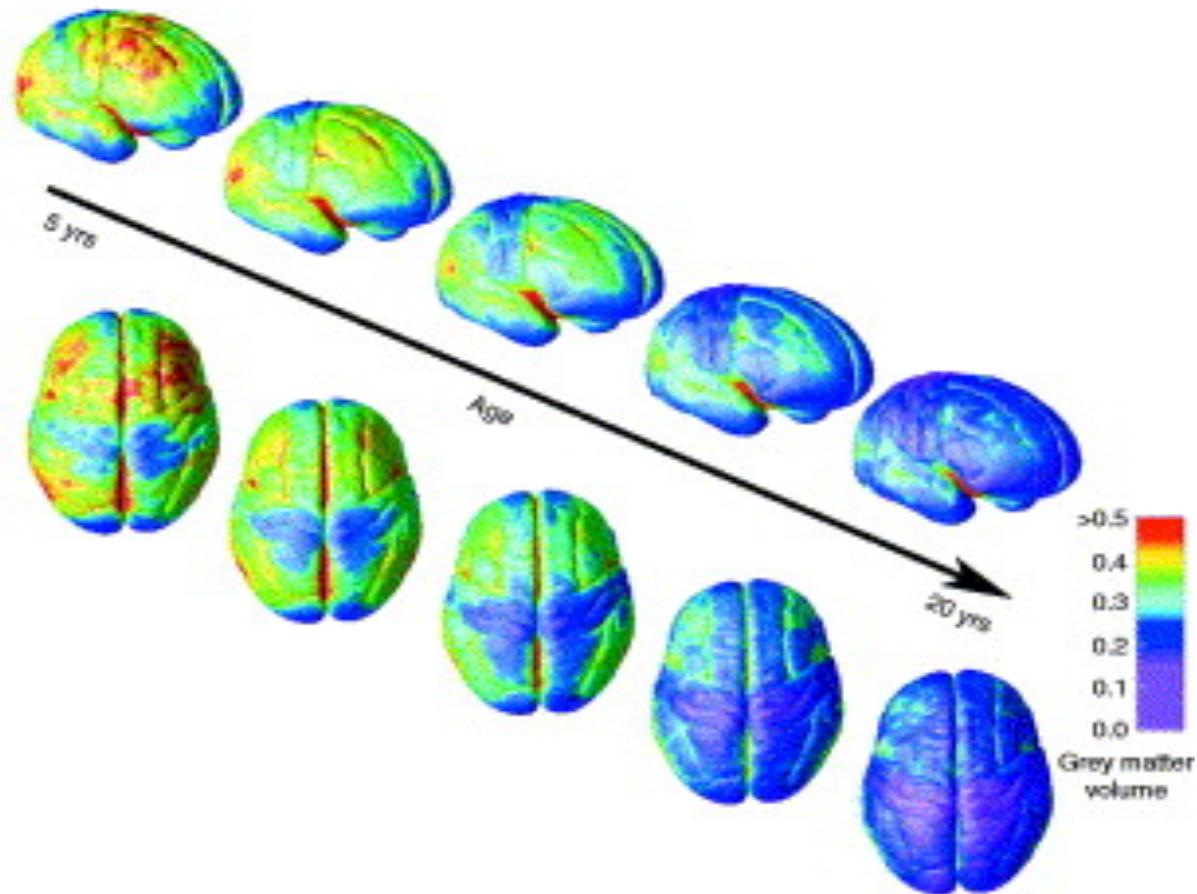
- *Many neurobiological changes are associated with eating dysregulation and starvation*
- *Genetic studies suggest a significant role for heritability, but what is heritable is less clear (e.g., neurotransmitter abnormalities, personality, temperament, propensity for eating dysregulation)*
- *Imaging studies suggest acute and persistent changes in both AN and BN, possibly involving the temporal-parietal areas*
- *Neurotransmitter studies suggest a role for a variety of neurotransmitters, especially serotonin and dopamine*

Executive Functioning

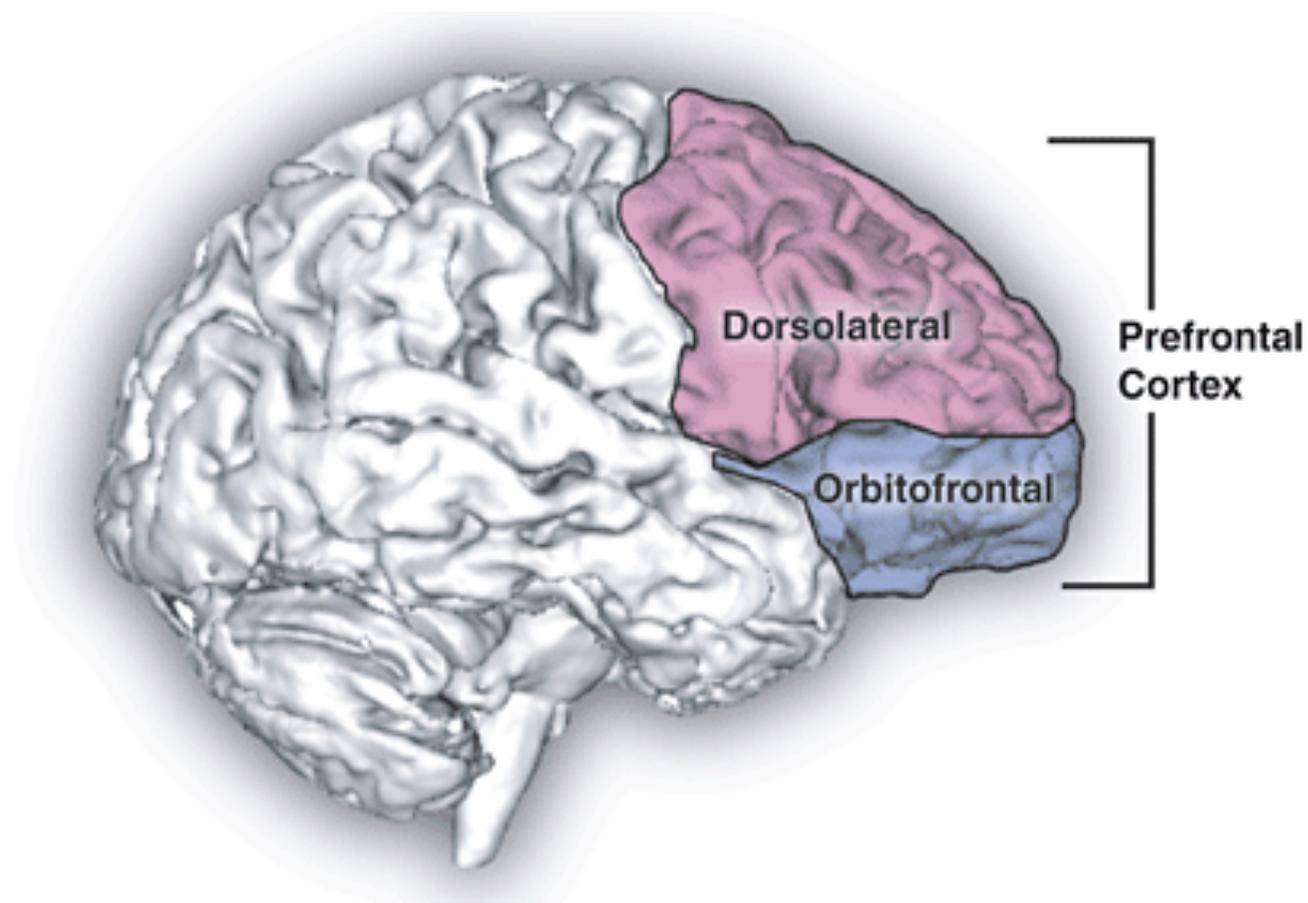
--*Brain Development*

--*Cognitive Style*

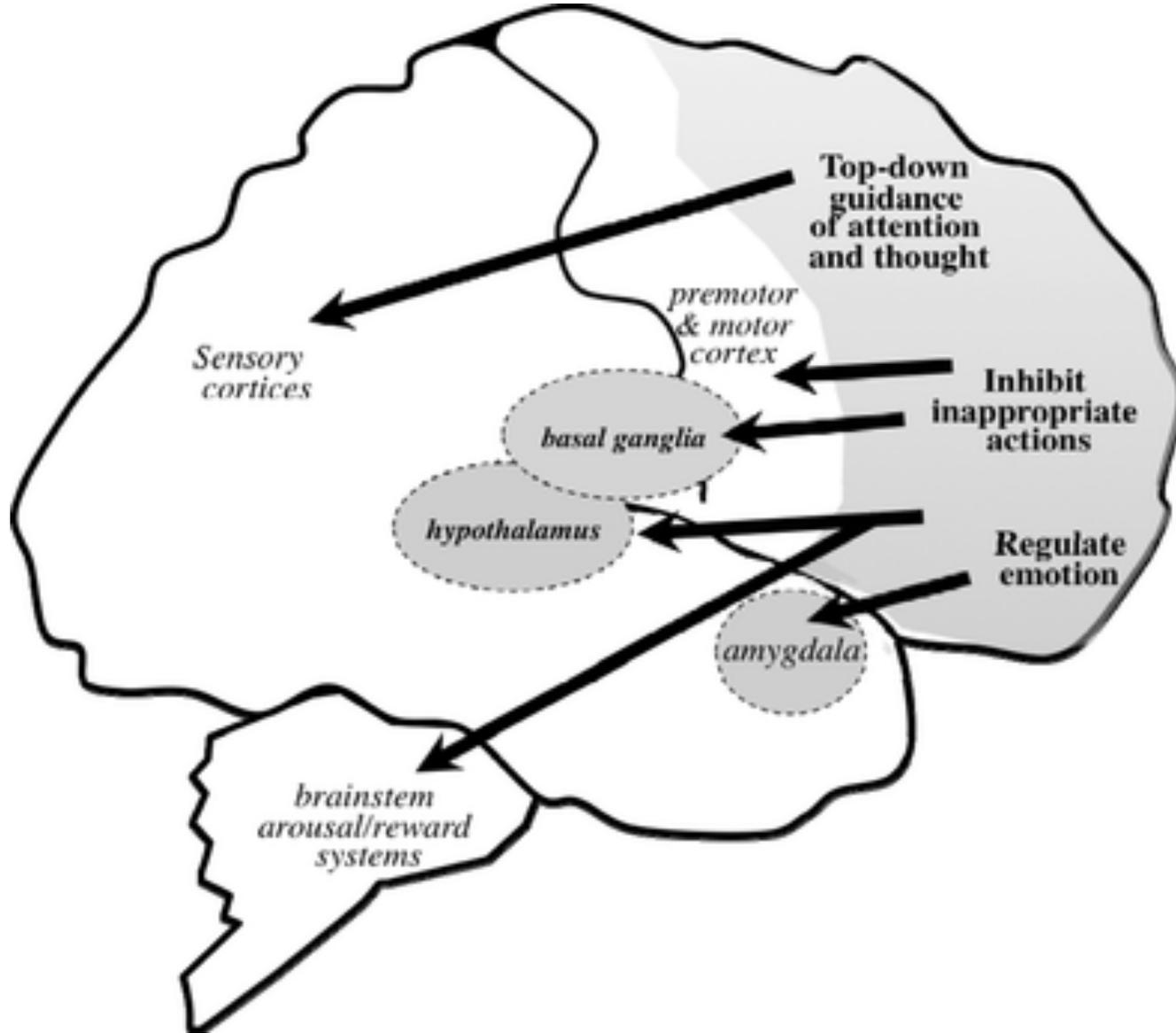
Right lateral and top views of the dynamic sequence of gray matter maturation over the cortical surface. The side bar shows a color representation in units of gray matter volume. The supramarginal gyrus is the last area of parietal cortex to develop, between the third brain from the left (approximately 13 years of age) and the fourth (approximately 16 years of age). Reprinted with permission from [9]. Copyright (2004) National Academy of Sciences, USA



Unit Anatomy: Prefrontal Cortex— Executive Functioning



en.wikipedia.org/wiki/File:Prefrontal_cortex.png



psycnet.apa.org/journals/bne/125/3/282.html

Neuropsychology and Eating Disorders

- The frontal lobe is generally implicated
 - Dorsolateral Prefrontal Cortex (dlPFC)
 - Mental flexibility, organization, planning and concept formation
 - Medial Prefrontal Cortex (mPFC)
 - Initiating and maintenance of behavior
 - Orbitofrontal Cortex (OFC)
 - Behavioral inhibition, learning from reinforcement



Neurocognitive Features of Eating Disorders

- Studies have suggested two broad domains of neurocognitive inefficiencies in eating disorders
 - *Weak central coherence*
 - *Difficulties in set-shifting*

Weak Central Coherence

- Characterized by an overly detailed-focused cognitive style
 - *Focus on details obscures the bigger picture*
 - *Leads to poorer recall of both “big picture” and details*
 - *Impairs integration and organization of information*
 - *Can lead to a focus on one aspect of a given situation or global set of information*

Can you spot the face in the coffee beans?

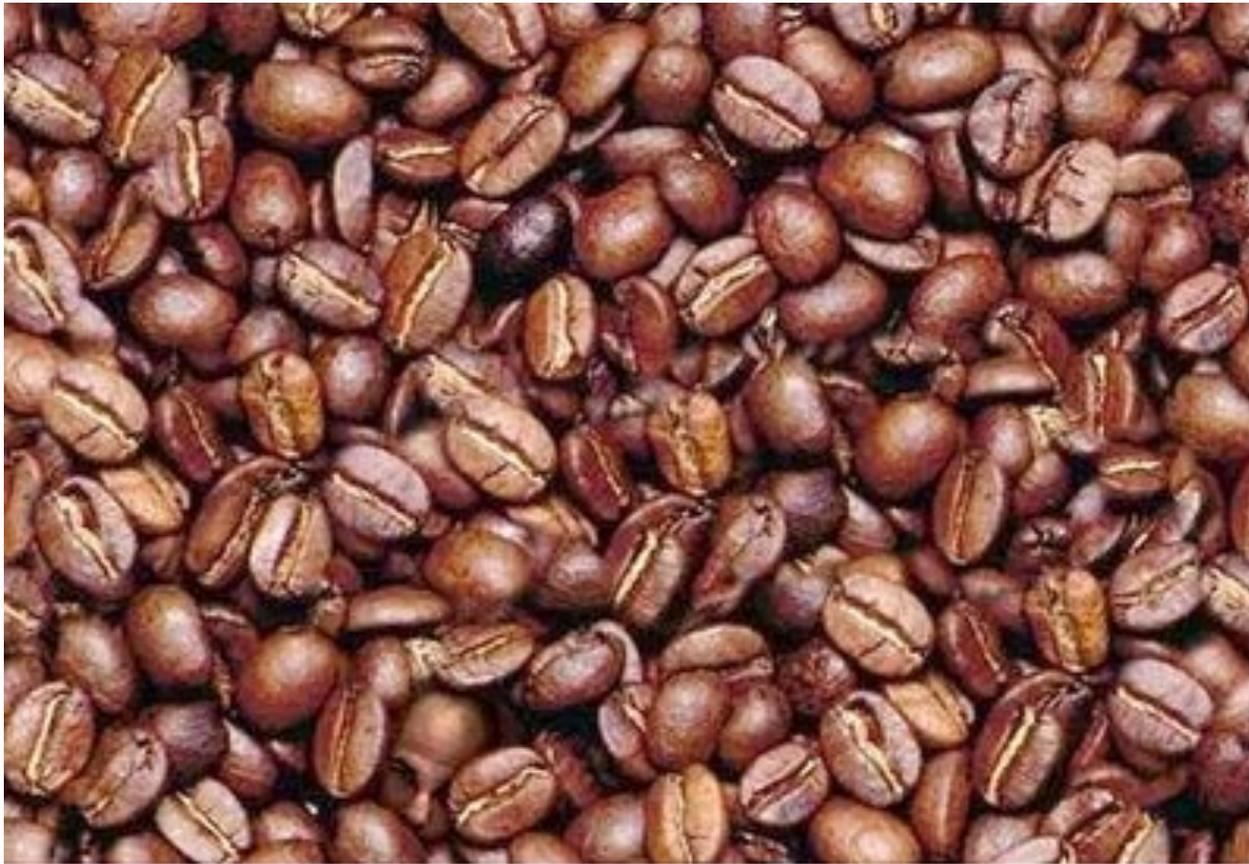
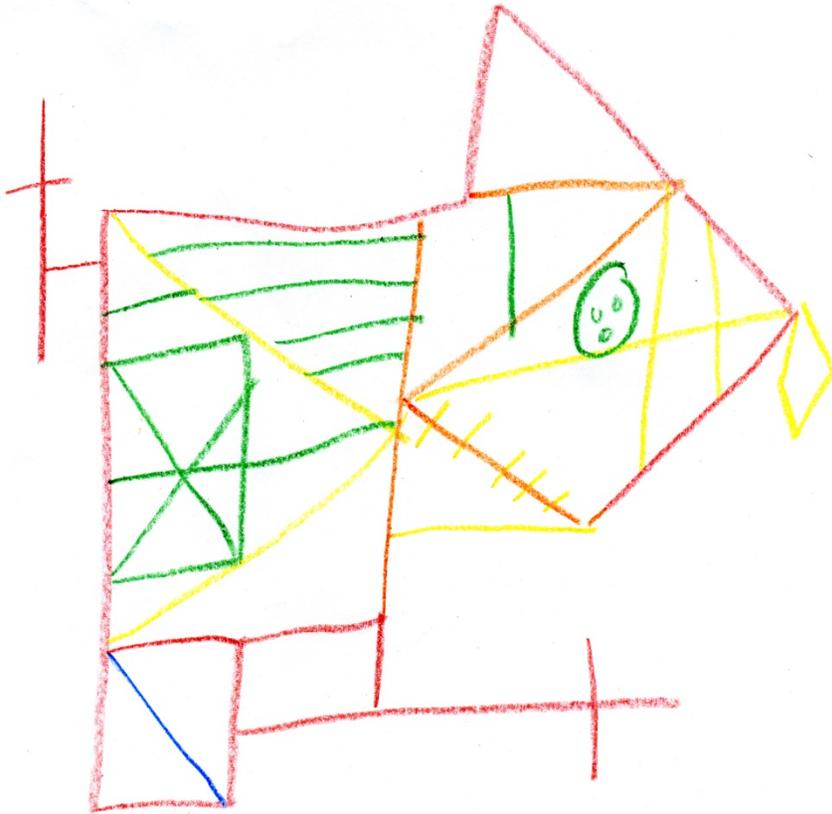
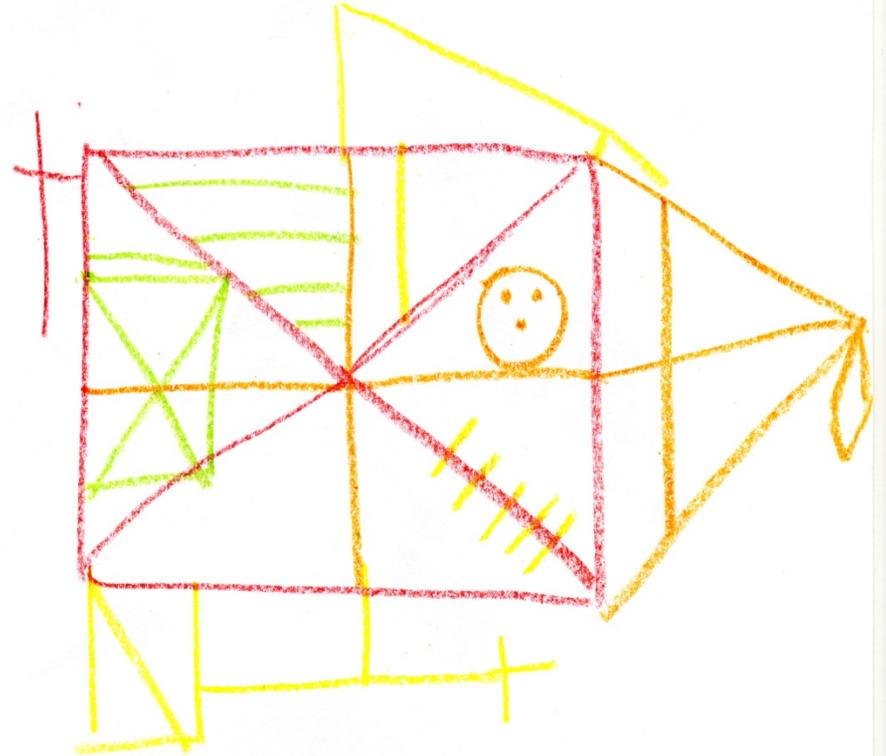


Image taken from Mighty Optical Illusions

Rey-Osterrieth



Low weight AN subject



Low weight medical subject

Set-shifting

- Refers to the ability to think flexibly
 - *To move between thoughts, ideas, concepts*
 - *Related to complex problem-solving*
 - *Related to aspects of future planning and managing ambiguity*
- Difficulties in set-shifting can lead to
 - *Behavioral and cognitive rigidity (“black and white” thinking)*
 - *Perseverative and perfectionistic behaviors*
 - *Difficulties in managing fluid / dynamic situations, such as social communication*

Illusions



How about this one?



How do Differences in Children and Adolescents with Eating Disorders Change Treatment?

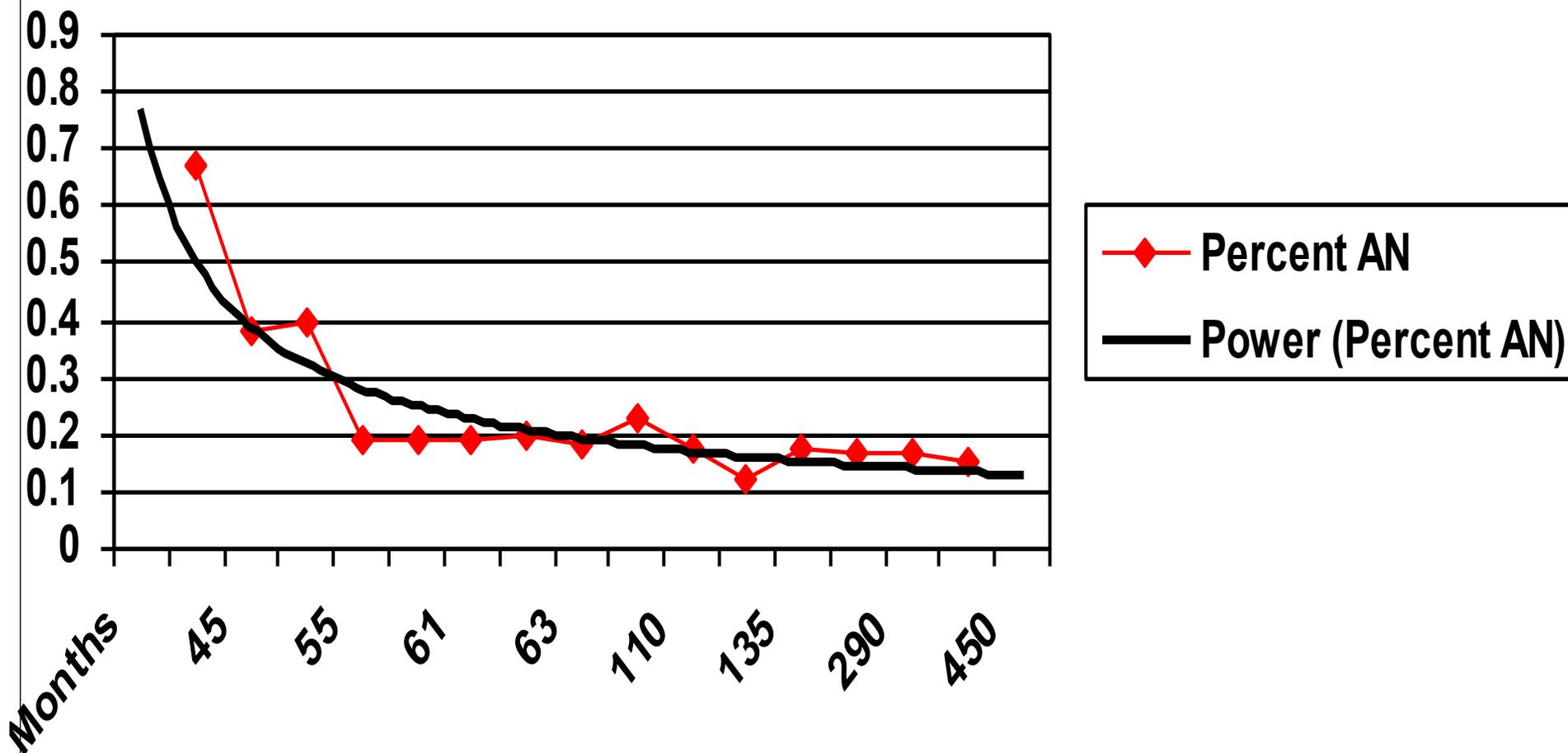
Overall Implications

- Who Gets Treatment
- Treatment Timing and Goals
- Treatment Approach
- Treatment Outcome

Who Gets Treatment

- Children and adolescents who do not meet full diagnostic criteria need treatment
- Referral should not be delayed until children and adolescent meet “adult” criteria for an eating disorder

Timing of Treatment: Limited Window of Opportunity



Outcomes in Anorexia Nervosa

- Psychological/Social/Medical
 - Developmental--school failure, social isolation, increased ambivalent dependence on family
 - Increased rates of depression, anxiety disorders, and substance use/abuse
 - Suicide accounts for one-half of mortality rate
 - Decreased marriage rates/fewer children
 - Medical problems and increased mortality

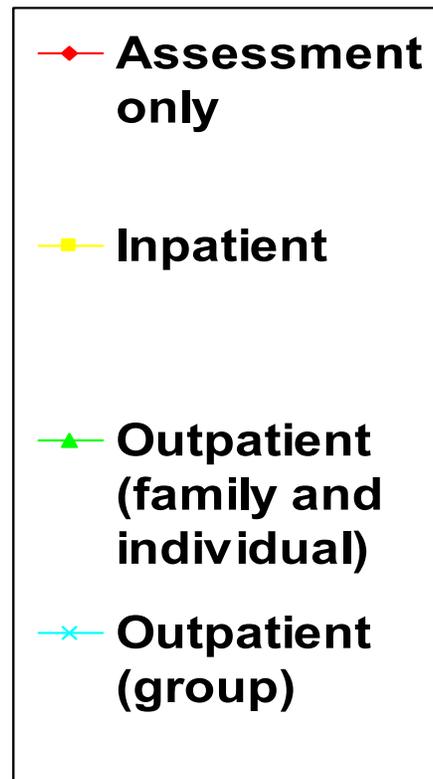
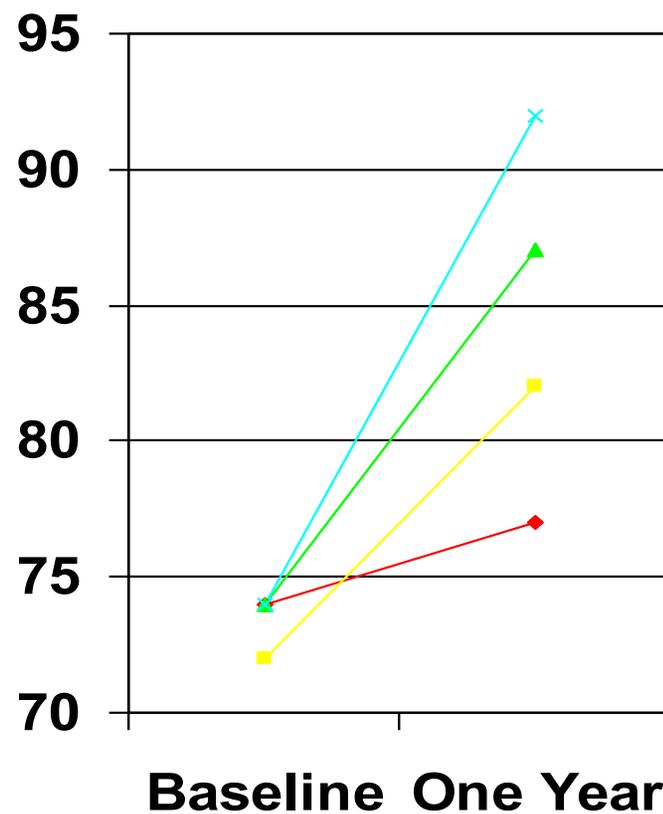
Outcomes in Bulimia Nervosa

- Medical: Hypokalemia, esophogeal tears, gastric disturbances, dehydration, orthostasis, cardiac arrhythmias, amenorrhea, osteopenia, death
- Psychiatric: depression, personality disorders, substance abuse disorders, anxiety disorders

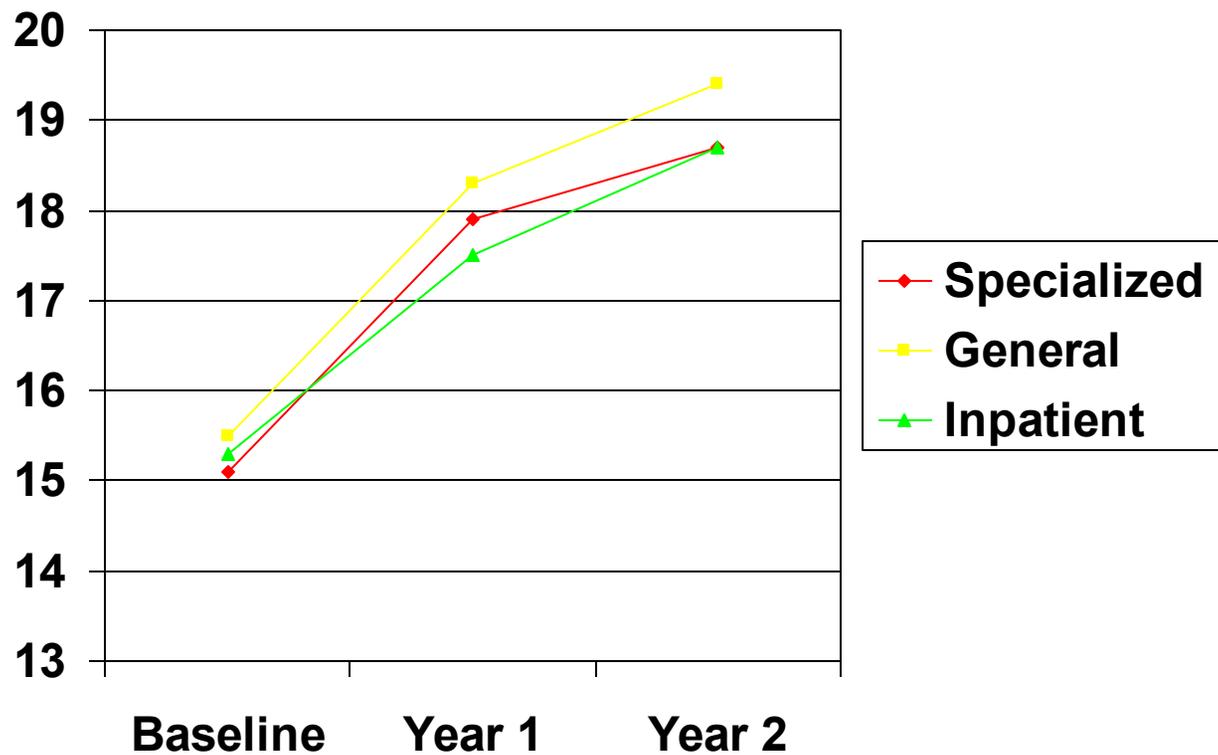
Treatment Approaches

- Use of hospitalization
- Use of Individual Therapy
- Use of Family Therapy
- Use of Medications
- Use of Cognitive Remediation?

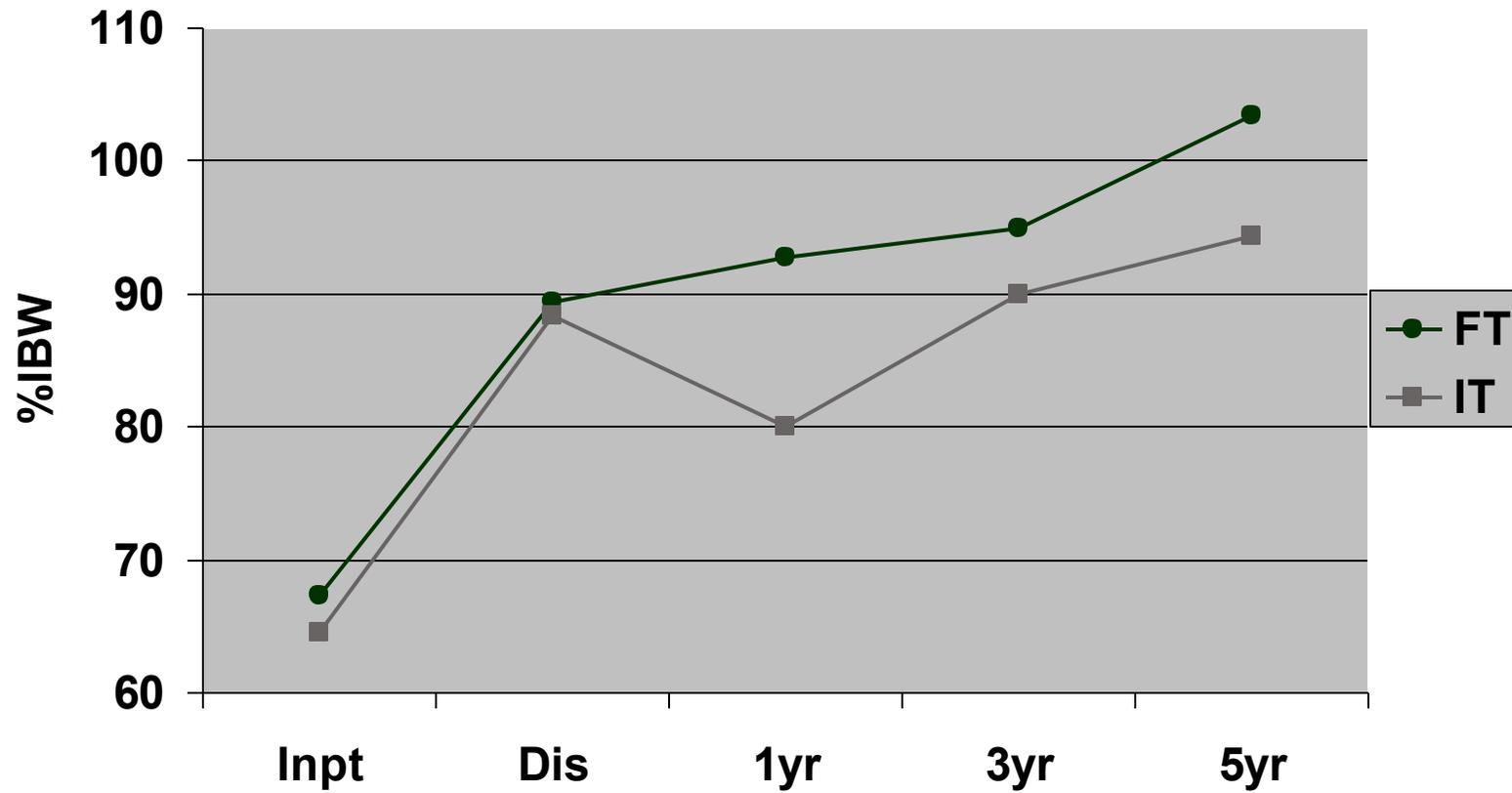
Hospital Treatment (Crisp et al 1991)



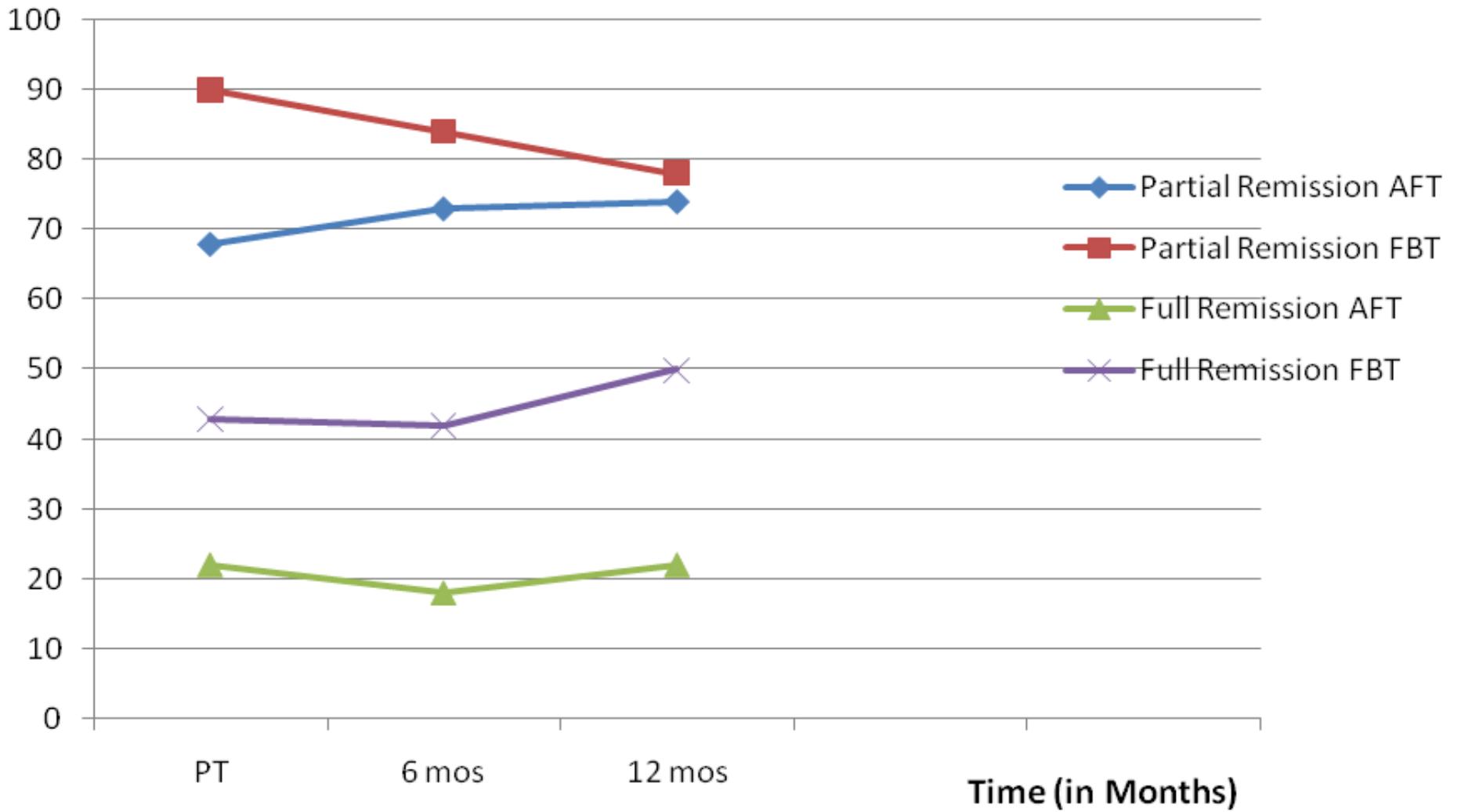
Hospital Treatment (Gowers et al 2007)



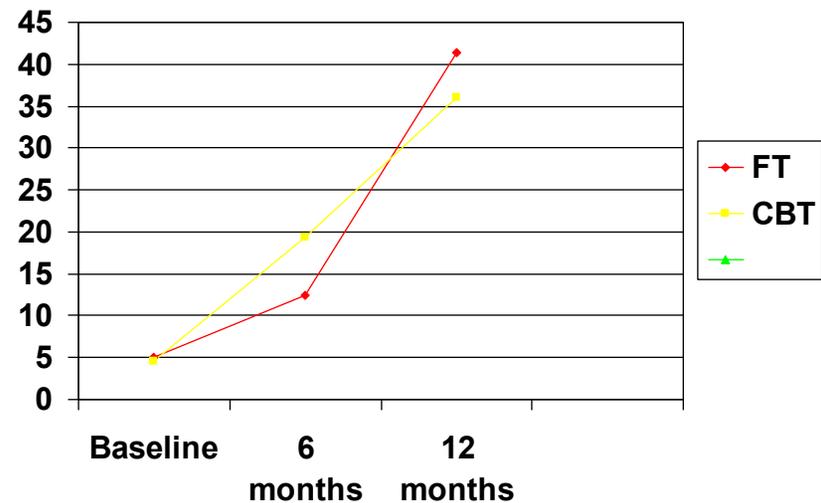
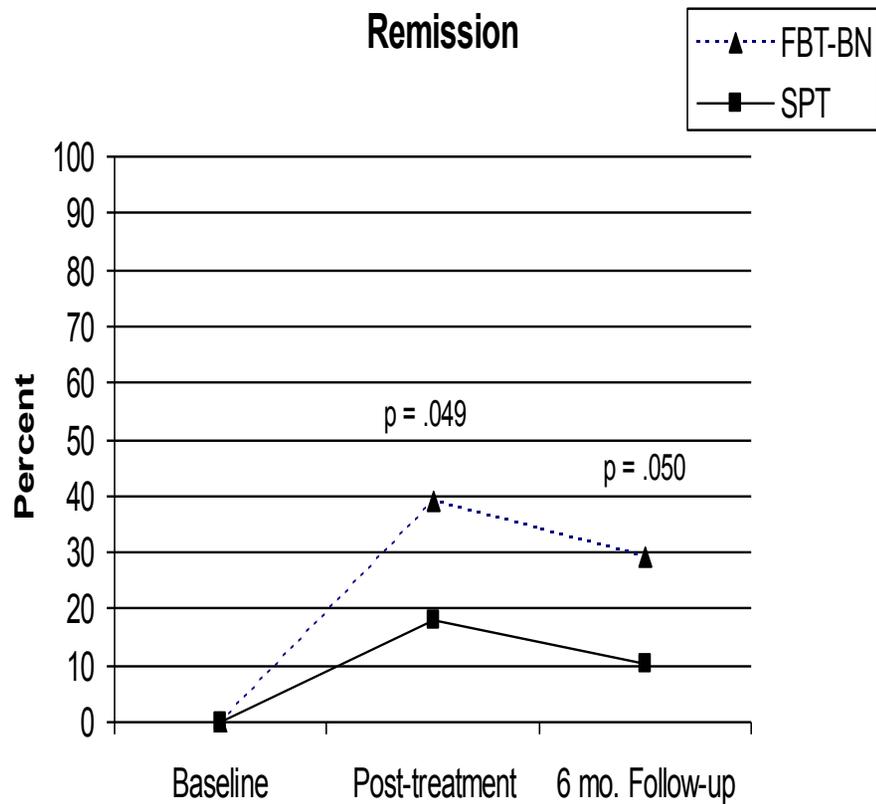
Treatment should be on individual psychological issues: Family studies (Russell et al, 1987; Eisler et al., 1997)



Percent



RCTs for Adolescent BN



Medications Treatment

- *There are case reports on the use of olanzapine in treating children and adolescents with AN at low body weights report improvement in compliance and weight gain, decreases in agitation, and anxiety*
- *One RCT compared risperidone vs usual care. Medication was tolerated. No differences in outcome*
- *No RCTs using antidepressant treatment for AN; one case series in adolescent BN showed tolerability*

Cognitive Style and Anorexia Nervosa- Rationale For Cognitive Remediation Therapy

- *Cognitive rigidity supports the rule-bound approach to dieting, exercise, and performance metrics common in AN; this contrasts with the impulsive style of BN subjects*
- *Over focus on detail supports cognitive rigidity through obsessive review and analysis*
- *Weak central coherence supports denial of major global problems that result from AN (medical, work and social problems)*

Concluding Observations: Toward a New Treatment Paradigm for Children and Adolescents with Eating Disorders?

- *Don't wait, treat early*
- *Treat in outpatient setting, avoid hospitals possible (not always possible)*
- *Involve parents, use family therapy*
- *Treat to full symptomatic resolution*
- *Don't put too much hope on medications, but treat co-morbid disorders*
- *Have appropriate medical and other ancillary support, but don't overdo it*