ADHD and Anxiety

Soaring with ADHD
CHADD Annual International Conference on ADHD

2:00 pm, November 15, 2014
Hyatt Regency O'Hare, Chicago, IL
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Conflict of Interest

• Sunovion – consultation
• Eli Lilly – research funding, consultation, advisory board and speaker’s bureau
• Lulu Publishing - royalties from book sales
Spectrum of Anxiety Disorders in DSM-5

- Anxiety Disorders
  - Generalized Anxiety Disorder
  - Social Anxiety Disorder (Social Phobia)
  - Separation Anxiety Disorder
  - Specific Phobia
  - Panic Disorder
  - Agoraphobia
  - Selective Mutism
  - Substance/Medication-Induced Anxiety Disorder
  - Anxiety Disorder Due to Another Medical Condition

- Obsessive-Compulsive and Related Disorders
  - Obsessive-Compulsive Disorder
  - Body Dysmorphic Disorder
  - Hoarding Disorder
  - Trichotillomania (Hair-Pulling Disorder)
  - Excoriation (Skin-Picking) Disorder
  - Substance/Medication-Induced OCD
  - OCD Due to Another Medical Condition

- Trauma- and Stressor-Related Disorders
  - Posttraumatic Stress Disorder
  - Reactive Attachment Disorder
  - Disinhibited Social Engagement Disorder
  - Acute Stress Disorder
  - Adjustment Disorders

Generalized Anxiety Disorder (GAD)

- Persistent, excessive, and unrealistic worry about everyday things.
  - Exaggerated worry and tension
  - Expectation of the worst, even when there is no apparent reason for concern.
  - Anticipate disaster, catastrophize normal
  - Over-concern about money, health, family, work, weather, future events
- Symptoms present most days for at least 6 months.
- 3% of adult population – almost 7 million people
- Women 2:1 men

Source: DSM-5
# GAD – ADHD Differentiators

<table>
<thead>
<tr>
<th>GAD Symptoms</th>
<th>Similar Traits in ADHD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Superficial Similarities</strong></td>
<td></td>
</tr>
<tr>
<td>Delays starting tasks due to <em>perfectionism</em></td>
<td>Delays starting tasks due to <em>motivational deficit</em></td>
</tr>
<tr>
<td>Distracted by <em>fear-based rumination</em></td>
<td>Distracted by <em>anything, everything</em></td>
</tr>
<tr>
<td>Fidgeting, driven by a motor</td>
<td>Fidgeting, driven by a motor</td>
</tr>
<tr>
<td><strong>Key Differentiators</strong></td>
<td></td>
</tr>
<tr>
<td>Reticence, over-processing</td>
<td>Impulsivity, under-processing</td>
</tr>
<tr>
<td>Completes work to decrease anxiety</td>
<td>Delays work to increase anxiety</td>
</tr>
</tbody>
</table>
Social Anxiety Disorder (Social Phobia)

• Extreme fear of being scrutinized and judged by others in social or performance situations
• Affects 15 million US adults
• Onset in childhood or adolescence
  • Mean age 13
  • Diagnostic delay averages 10+ years
• Childhood symptoms: clinging behavior, tantrums, and even mutism
• Symptoms interfere with daily routines, occupational/academic performance, or social life

Source: DSM-5
Social Anxiety Disorder (Social Phobia)

• **Emotional/behavioral symptoms:**
  - Intense fear of interacting with strangers
  - Fear of situations in which one may be judged
  - Worrying about embarrassing or humiliating oneself
  - Fear that others will notice anxious appearance
  - Anxiety that disrupts daily routine, work, school or other activities
  - Avoiding doing things or speaking to people out of fear of embarrassment
  - Avoiding situations where one might be the center of attention
  - Difficulty making eye contact
  - Difficulty talking

• **Physical signs and symptoms:**
  - Blushing
  - Sweating
  - Trembling or shaking
  - Fast heartbeat
  - Upset stomach
  - Nausea
  - Shaky voice
  - Muscle tension
  - Confusion
  - Diarrhea
  - Cold, clammy hands
Social Anxiety Disorder (Social Phobia)

- Distinct from “shyness”
  - 50 percent of youth self-identify as “shy”
  - 12 percent of shy youth meet criteria for social phobia

### Social Anxiety – ADHD Differentiators

<table>
<thead>
<tr>
<th>SAD Symptoms</th>
<th>Similar Traits in ADHD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Superficial Similarities</strong></td>
<td></td>
</tr>
<tr>
<td>Avoidance arises from <em>fear of embarrassment</em></td>
<td>Avoidance develops as a <em>response to past failures</em>.</td>
</tr>
<tr>
<td>Difficulty making eye contact</td>
<td>Difficulty making eye contact.</td>
</tr>
<tr>
<td>Difficulty in conversation from <em>embarrassment</em></td>
<td>Difficulty in conversation from <em>inattention</em>.</td>
</tr>
<tr>
<td>Delayed task initiation for <em>fear of embarrassment</em></td>
<td>Delayed task initiation due to <em>impaired motivation</em>.</td>
</tr>
</tbody>
</table>
Panic Disorder

- A discrete period of intense fear or discomfort, in which 4 (or more) of the accompanying symptoms are present.
- Suicide risk and ER use increases 20% with each additional symptom beyond 4
- Recall bias—symptom counts of recalled episodes higher than monitored episodes
- Comorbidities
  - Social phobia (OR = 4.4)
  - Specific phobia (OR = 3.4)
  - Obsessive–compulsive disorder (OR = 9.5)
  - Generalized anxiety disorder (OR = 16.4)
  - Posttraumatic stress disorder (OR = 3.9)
  - Mood disorder 30-36% (OR = 2.8)
  - Substance use disorder 21%
- Women: men = 2:1
- DSM-5
  - Panic attack became a specifier for all anxiety disorders
  - Panic disorder and agoraphobia became two separate disorders
- Symptoms
  - 97% Palpitations, pounding heart, or accelerated heart rate
  - 96% Feeling dizzy, unsteady, lightheaded, faint
  - Sweating
  - Trembling or shaking
  - Sensations of shortness of breath or smothering
  - Feeling of choking
  - Chest pain or discomfort
  - Nausea or abdominal distress
  - Derealization (feelings of unreality) or depersonalization (being detached from oneself)
  - Fear of losing control or going crazy
  - Fear of dying
  - Paresthesias (numbness or tingling sensations)
  - Chills or heat sensations

Obsessive-Compulsive Disorder

• Obsessive-compulsive disorder (OCD) is characterized by distressing, intrusive obsessive thoughts and/or repetitive compulsive physical or mental acts.
  • Obsessions
    • Recurrent and persistent thoughts, urges, or images that are experienced, at some time during the disturbance, as intrusive and unwanted, and cause marked anxiety and distress
    • Persistence despite attempts to suppress or ignore such thoughts, impulses, or images or to neutralize them with some other thought or action
  • Compulsions
    • Repetitive behaviors or mental acts in response to an obsession or according to rules that must be applied rigidly
    • The behaviors or mental acts are aimed at preventing or reducing distress or preventing some dreaded event or situation.
    • These behaviors or mental acts either are not connected in a way that could realistically neutralize or prevent whatever they are meant to address, or they are clearly excessive

Source: DSM-5
Obsessive-Compulsive Disorder

- Common obsessions:
  - Contamination
  - Safety
  - Doubting one's memory or perception
  - Scrupulosity (need to do the right thing, fear of committing a transgression, often religious)
  - Need for order or symmetry
  - Unwanted, intrusive sexual, aggressive thought

- Common compulsions:
  - Cleaning, washing
  - Checking (e.g., door locks, stove, iron, safety of children)
  - Counting, repeating actions a certain number of times or until it "feels right"
  - Arranging objects
  - Touching or tapping objects
  - Hoarding
  - Praying, repeating words silently
  - Confessing, seeking reassurance
  - List making

Source: DSM-5
Obsessive-Compulsive Disorder

- Lifetime prevalence of 2.5%
- PET scan and fMRI studies:
  - Increased gray matter in cortical–striatal–thalamic–cortical (CSTC) circuits
  - Increases in blood flow and metabolic activity
    - Orbitofrontal and anterior cingulate cortices
    - Limbic structures—caudate, thalamus
  - Trend toward right-sided predominance
  - Over-activity tends to normalize following successful treatment whether SSRIs, CBT, surgery

Baxter LR Jr, et al. Caudate glucose metabolic rate changes with both drug and behavior therapy for OCD. *Arch Gen Psychiatry*. Sep 1992;49(9):681-9
Obsessive-Compulsive Disorder

- Severity—life impact
  - 43% have severe or extreme symptoms
  - 36% unable to work, 14% receive disability
  - Comorbidity
    - 74% mood disorder
    - 52% anxiety disorder
    - 25% substance use disorder
  - Chronic disorder—usually life-long

- Treatment
  - CBT, exposure and ritual prevention
  - SSRIs 35% symptom reduction
  - 20+% refractory to intense therapy
  - Experimental: Deep-brain stimulation, gamma-knife internal capsulotomy, ketamine

# OCD – ADHD Differentiators

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<thead>
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<th>OCD Symptoms</th>
<th>Similar Traits in ADHD</th>
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</thead>
<tbody>
<tr>
<td><strong>Superficial Similarities</strong></td>
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</tr>
<tr>
<td>Inattention <em>due to heightened arousal</em></td>
<td>Inattention <em>due to distraction, default mode</em></td>
</tr>
<tr>
<td>Obsessions <em>unwanted, unpleasant</em></td>
<td>Obsessions <em>over goals, desires</em></td>
</tr>
<tr>
<td>Persistent expressions of children exhausts parents</td>
<td>Persistent expressions of children exhausts parents</td>
</tr>
<tr>
<td><strong>Key Differentiators</strong></td>
<td></td>
</tr>
<tr>
<td>Obsessions stable over months-years</td>
<td>Obsessions disappear with new interest</td>
</tr>
<tr>
<td>Obsessions arise from fears, “incompleteness”</td>
<td>Obsessions arise from distractions, hyper-focus</td>
</tr>
<tr>
<td>Compulsions briefly decrease intense anxiety</td>
<td>Compulsions serve to combat forgetfulness</td>
</tr>
<tr>
<td>Compulsions unrealistic, excessive, ineffective</td>
<td>Compulsions largely realistic, effective</td>
</tr>
</tbody>
</table>

Post-Traumatic Stress Disorder

• Criterion A: stressor
  • The person was exposed to: death, threatened death, actual or threatened serious injury, or actual or threatened sexual violence, as follows: **(one required)**
    • Direct exposure.
    • Witnessing, in person.
    • Indirectly, by learning that a close relative or close friend was exposed to trauma. If the event involved actual or threatened death, it must have been violent or accidental.
    • Repeated or extreme indirect exposure to aversive details of the event(s), usually in the course of professional duties (e.g., first responders, collecting body parts; professionals repeatedly exposed to details of child abuse).

• Criterion B: intrusion symptoms
  • The traumatic event is persistently re-experienced in the following way(s): **(one required)**
    • Recurrent, involuntary, and intrusive memories.
    • Traumatic nightmares.
    • Dissociative reactions (e.g., flashbacks)
    • Intense or prolonged distress after exposure to traumatic reminders.
    • Marked physiologic reactivity after exposure to trauma-related stimuli.

• Criterion C: avoidance
  • Persistent effortful avoidance of distressing trauma-related stimuli after the event: **(one required)**
    • Trauma-related thoughts or feelings.
    • Trauma-related external reminders (e.g., people, places, conversations, activities, objects, or situations).

Source: DSM-5
Post-Traumatic Stress Disorder

• Criterion D: negative alterations in cognitions and mood
  • Negative alterations in cognitions and mood that began or worsened after the traumatic event: (two required)
    • Inability to recall key features of the traumatic event
    • Persistent (usually distorted) negative beliefs and expectations about oneself or the world
    • Persistent distorted blame of self or others for causing the traumatic event or for resulting consequences.
    • Persistent negative trauma-related emotions (e.g., fear, horror, anger, guilt, or shame).
    • Markedly diminished interest in (pre-traumatic) significant activities.
    • Feeling alienated from others (e.g., detachment or estrangement).
    • Constricted affect: persistent inability to experience positive emotions.

• Criterion E: alterations in arousal and reactivity
  • Trauma-related alterations in arousal and reactivity that began or worsened after the traumatic event: (two required)
    • Irritable or aggressive behavior
    • Self-destructive or reckless behavior
    • Hypervigilance
    • Exaggerated startle response
    • Problems in concentration
    • Sleep disturbance

Source: DSM-5
Post-Traumatic Stress Disorder

• The lifetime prevalence of PTSD:
  • ADHD 10%
  • Controls 1.6%

• Comorbid PTSD complicates underlying ADHD:
  • Higher lifetime rates of:
    • Major depressive disorder
    • Oppositional defiant disorder
    • Social phobia
    • Agoraphobia
    • Generalized anxiety disorder
  • worse quality of life ratings for all domains

Post-Traumatic Stress Disorder

Comorbidity Rates—ADHD in Anxiety Pts.

- 2012 study VanAmeringen:
  - Referrals to McMaster's University anxiety clinic
  - 264 consecutive adult patients
  - Lifetime prevalence of ADHD was 37.5%
    - 48.5% male
    - 51.5% female

Comorbidity Rates—Anxiety in ADHD Pts.

• Children with ADHD (Elia, 2008 Philadelphia)
  • Oppositional Defiant Disorder – 40%
  • Anxiety Disorders – 32%
  • Dysthymia, Minor Depression – 22%

• Adults study (Kessler, 2006 National Comorbidity Survey Replication)
  • Controls (no ADHD) – 19% had anxiety disorder
  • Adult ADHD—47% had anxiety disorder
    • GAD – 8%
    • PTSD – 12%
    • Social phobia – 29%
    • OCD – 3%

Does ADHD Cause Anxiety?

“Anyone would feel anxious who lives this way, wouldn’t they?”
Does Anxiety Cause ADHD?

Excess Anxiety

Cognitive Overload

Feel Overwhelmed

Inattention
Fidgeting
Over-talkative
Poor Previewing
“Freezing”: Unable to Engage Tasks
Perfectionism:
Unable to Disengage Tasks
Motivational Decline
Performance Decline
A Third Possibility

AnAxDiHeDty
ADHD & Anxiety Co-development

• ADHD impairs access to cognitive self-motivational circuits
  • Timeliness, efficiency, productivity, prudence, amity, brevity
  • High-availability, nimble, scalable, tunable toolset
• Passive, primitive-emotional motivators access unimpaired
  • Fear of harm, pain-avoidance, self-protection, hunger, sex-drive
  • Powerful, intermittently available, slow-wave-form
• Despite transience, emotional motivators are more reliable
• Cultivation of emotional energy is learned accommodation
  • Defenses against negative emotions neglected, poorly learned
ADHD Neurobiology

* ADHD adults fail to utilize the most efficient pathway to process information in an attention-based task.

ADHD & Anxiety Co-development

People with ADHD learn to cultivate deep wells of anxiety and shame in order to execute, produce and accomplish and to appear to display cognitive skill

*******

“Masquerading as a normal person day after day is exhausting”
Does Comorbid Anxiety Worsen ADHD?

- ADHD with comorbid anxiety (Schatz, 2006)
  - Working memory deficits worse when anxiety present
  - (Impulsivity/inhibition were less impaired)

- Anxiety in Children With ADHD (Sciberras, 2014)
  - Children with $\geq 2$ anxiety comorbidities ($n = 143$; 39%) fared worse than children without anxiety ($n = 132$; 36%). :
    - Poorer QoL (effect size: $-0.8$) and
    - More behavioral difficulties (effect size: 0.4)
    - More problems with daily functioning (effect size: 0.3)

Does Comorbid Anxiety *Mitigate* ADHD?

- **Differential effects study (Ferrin, 2014)**
  - Anxiety/depression symptoms:
    - Improved strategy performance in ADHD-C
    - Improved spatial span performance in ADHD-I
    - Worsened search errors in non-ADHD comparison group
- **Comorbid anxiety and neurocognitive dysfunction (Bloemsma, 2013)**
  - Child reported anxiety:
    - Slower motor speed and response speed
    - Better behavioral inhibition
  - Teacher reported anxiety:
    - Worse time production

Recognizing Anxiety in ADHD Patients

- Children
  - Initial insomnia
    - Multiple requests after lights out
    - Request to sleep with parents
    - Need parent in room to fall asleep
  - Unexplained headache, abdominal pain, diarrhea
  - Social avoidance
  - “People pleaser”
  - Well-behaved, but inattentive
  - High need for reassurance
Recognizing Anxiety in ADHD Patients

• Adults
  • Initial insomnia
  • Highly organized, but inefficient
  • Skillful grooming, makeup or stylish clothes
  • Consistent exercise regimen
  • Unexplained medical symptoms: headache, abdominal pain
  • Social avoidance
  • “People pleaser”
  • High need for reassurance
Recognizing Anxiety in ADHD Patients

• Clinical history
  • Specific, direct questioning
  • ‘Stress’ and ‘worry’ endorsed more than ‘anxiety’
  • Parent recognition of children’s anxiety ~50%
  • Persistent probing may be necessary
    • “What do you worry about when you’re falling asleep? In school? At work?”
    • “What are your thoughts/feelings as you prepare for a party or social event?”
    • Adults: “Do you worry about your work? Family? Safety? Weather? Finances or the economy? Politics?”
Recognizing Anxiety in ADHD Patients

• Signals for appearance of anxiety in a treated ADHD patient:
  • Recent onset insomnia
  • Return of ADHD symptoms
  • “I think I need to increase my meds”

• Actively screen for anxiety:
  • Stimulant monotherapy
  • High-dose stimulant therapy
  • Short-acting stimulant
Treatment of ADHD/Anxiety

Severe anxiety forms: Panic, OCD, debilitating GAD or PTSD

• Treat anxiety first:
  • SSRI
    • Paroxetine (Paxil) highly effective, but withdrawal symptoms problematic
    • Systematic titration across therapeutic range
  • SNRI
    • Venlafaxine (Effexor XR), duloxetine (Cymbalta) have significant effects on ADHD symptoms
  • Mirtazapine (Remeron) useful in children
    • Weight gain, somnolence not always unwelcome
    • Especially useful for initial stabilization
    • Fatigue can be problematic in long-term use
  • Sparing use of benzodiazepines
  • Cognitive symptoms may worsen at this point
Treatment of ADHD/Anxiety

Severe anxiety forms: Panic, OCD, debilitating GAD or PTSD

• When anxiety is stabilized:
  • Atomoxetine (Strattera)
    • 2 to 3-month trial
    • Slow titration if needed for tolerability
    • Decrease dose if used with fluoxetine, paroxetine
  • Guanfacine (Intuniv, Tenex), especially if tics present
  • Stimulants poorly tolerated. If used: slow, careful titration of low doses
    • Consider continuous-release forms of long-acting stimulants
      • Transdermal MPH (Daytrana) and lys-dexamfetamine (Vyvanse) may be preferred
      • d-MPH ER (Focalin XR) sometimes tolerated better.
Treatment of ADHD/Anxiety

Other anxiety forms: GAD, Social anxiety, Separation anxiety

• Treat more disabling disorder first.
• Atomoxetine may improve both disorders
  • FDA indication for ADHD
  • Not contra-indicated when anxiety is comorbid
  • Low-dose adjuvant stimulant for residual symptoms
• Stimulants may improve both disorders
  • FDA indication for ADHD
  • Relative contra-indication when comorbid anxiety present
  • Non-stimulant adjuvants for residual symptoms
• SNRI anti-depressants may improve both disorders
  • FDA indication for anxiety, not ADHD
  • Evidence of effect on ADHD symptoms in short-term studies
• Monitor both ADHD and anxiety symptoms continuously
Does Anxiety Worsen Stimulant Response?

- Effects on working memory are blunted¹
- Symptom relief blunted²
- Symptom relief not blunted³
- Cognitive relief blunted, behavioral relief not blunted⁴

Non-pharmacologic Treatments
Non-Pharmacologic Therapy of ADHD/Anxiety

CBT For ADHD After Medication Stabilization (Safren, 2005)

- **Design:** RCT
  - Subjects: 31 volunteers, random assignment
  - Treatment: medication + CBT (n=16)
  - Control: medication alone (n=15)

- **Method:**
  - Symptom severity review
  - Medication adherence review
  - Homework review
  - Skill-material review
  - Homework assigned

- **Content of sessions**
  - core modules
    - organizing and planning
    - reducing distractibility
    - cognitive restructuring
  - optional modules
    - procrastination
    - anger and frustration management
    - communication skills

Non-Pharmacologic Therapy of ADHD/Anxiety

CBT For ADHD After Medication Stabilization (Safren, 2005)

Assessment

Independent clinician blinded to treatment group
ADHD-RS, CGI-S

Outcomes

CGI reduction >2 56% v 13% (treatment vs. control)
ADHD symptom reduction (clinician assessment and self-report)
Anxiety symptom reduction (clinician assessment and self-report)
Depressive symptom reduction (clinician assessment)

Non-Pharmacologic Therapy of ADHD/Anxiety

Mindfulness Meditation Training for ADHD Adults (Zylowska, 2008)

Design
- Non-blinded, open study
- 24 adults, 8 adolescents
- 8 weekly sessions plus out-of-session practice

Outcomes
- Self-ratings of ADHD core symptoms significantly improved
- 30% had ≥ 30% symptom reduction
- Neuro-psych assessment showed improvements.

Non-Pharmacologic Therapy of ADHD/Anxiety

- Exercise
  - Outdoor exercise might be better for both ADHD, anxiety
  - Greenspace outdoor exercise may be better than urban
  - Vigorous exercise probably more beneficial for ADHD
  - Low-level exercise may be equally beneficial for anxiety.

- Sleep hygiene
  - Melatonin 5-10 mg for insomnia
  - CBT for insomnia

Case Study 1: Anne—ADHD comorbid GAD

- “Anne” 19 year-old, college dropout sought treatment for “stress”, trouble managing life, poor attention
- Academic:
  - Hyperactive in grade school
  - Poor organization at all levels
  - Grades declined in middle and high school.
  - Minor disciplinary issues
  - Failed 1st semester college courses.
- Social History:
  - Tobacco use: smokes 1 ppd
  - EtOH: heavy use several times per week
  - Drug use: occasional marijuana
- Unhappy with life direction, frustrated at inability to change
Case Study 1: Anne—ADHD comorbid GAD

• ADHD core symptom endorsement:
  • 9 of 9 inattentive symptoms
  • 9 of 9 hyperactive/impulsive symptoms

• Anxiety symptoms:
  • Constant, exaggerated worry, tension
  • Initial insomnia
  • Denied panic, obsessions, compulsions, trauma

• Parent interview:
  • Lifelong hyperactivity, impulsivity, disorganization, underperformance
Case Study 1: Anne—ADHD comorbid GAD

• Treatment
  • Atomoxetine (Strattera)
    • 18 mg x 5d
    • 25 mg x 5d
    • 40 mg x 5d
    • 60 mg x 15d
  • Continue with previously established therapist
Case Study 1: Anne—ADHD comorbid GAD

- 4-week follow-up visit
  - Anxiety subsided within first week
  - ADHD symptoms not noticeably improved
  - Atomoxetine increased to 80 mg/d

- 8-week follow-up visit
  - No anxiety present
  - Modest improvement in ADHD symptoms

- 16-week follow-up visit
  - No anxiety present
  - Robust improvement in ADHD symptoms
  - Abstinent marijuana and alcohol, smoking reduced to 5 cigs/d.
  - Enrolled in community college
Case Study 2: Betsy—ADHD comorbid SAD

- 29 year-old social worker, diagnosed with ADHD in grade school, stopped medication in high school, wishes to restart.
- GPA: 3.2 in HS 3.3 at state college. “Master procrastinator”
- Friends getting married, social engagement declining
- Not dating currently: “My standards might be too high.”
- Not impulsive—a few highly regimented behaviors
- Severe insomnia, trouble waking
- Disciplined at work for low productivity despite long hours (off the clock)
- Scattered, poor time management, high frustration level
Case Study 2: Betsy—ADHD comorbid SAD

- Anxious in large groups, new situations
- Normal concerns for safety, weather, future
- Denies panic, obsessions, compulsions, trauma
- Exam:
  - Stylishly dressed, skillfully applied make-up, perfectly styled hair
  - Upright posture, minor fidgeting of hands in lap
  - 8 of 9 inattentive symptoms, 3 of 9 hyperactive
  - CPT testing showed low vigilance
Case Study 2: Betsy—ADHD comorbid SAD

• Treatment:
  • Atomoxetine titrated 18 – 60 mg
  • Life coaching, ADHD specialist

• 4-week follow-up
  • No response, significant nausea
  • Concerned with work performance
  • Changed to OROS-MPH (Concerta) 18 mg x 7d, 36 mg x 7d, 54 mg x 7d
Case Study 2: Betsy—ADHD comorbid SAD

- Treatment (con’t):
- 8-week follow-up
  - 36 mg OROS-MPH yielded best combination of tolerability, effect
  - 35% reduction inattention symptoms
  - Insomnia 45-60 minutes nightly
  - Social anxiety unchanged
  - Fluoxetine (Prozac) 20 mg/d added
- 12-week follow-up
  - “I feel better than I’ve felt in ages.”
  - 70% reduction inattention
ADHD and Anxiety—Questions?

Soaring with ADHD
CHADD Annual International Conference on ADHD

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