Psychiatric Management of Child and Adolescent Anxiety

September 14th, 2019

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Seattle Children’s Hospital
<table>
<thead>
<tr>
<th><strong>Source</strong></th>
<th><strong>Disclosure</strong></th>
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<td>Research Funding</td>
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<td>Advisor/Consultant</td>
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Learning Objectives

• Improve provider comfort in diagnosing and managing pediatric anxiety.
• Increase knowledge about the current evidence base for using medications to manage pediatric anxiety.
• Understand measures that can be used to screen for pediatric anxiety and track response to treatment.
20% of youth presenting to primary care will screen positive for anxiety on brief screen
1 in 8 youth will have an anxiety diagnosis
Only 20-30% of those with a diagnosis will have had any treatment
Commonly present with physical or somatic complaints
  • Strongly consider if GI complaints, HA and musculoskeletal pain with unclear etiology
Social anxiety, specific phobias and GAD most common

Partnership Access Line - Care Guide
https://www.seattlechildrens.org/healthcare-professionals/access-services/partnership-access-line/
866-599-7257
Anxiety Problem?
Unexplained somatic complaints?
What are Anxiety Disorders?

• Excessive fear (emotional response to imminent threat) and anxiety (anticipation of future threat) and related behavioral disturbances.

• Negative Emotion
• Physiological Arousal (fight, flight, freeze)
• Avoidance Behavior (can be internal/mental)
Predisposing and Precipitating

- Temperament (high in Behavioral Inhibition)
- Family History
- Neurodevelopmental
- Response to stress (ACES)
- Traumatic stress
- Abnormal arousal states
Safety Check

Anxiety Problem?
Unexplained somatic complaints?

Safety check:
Neglect/Abuse?
Drug abuse?
Medical cause?
(i.e. medication effects, asthma)

And:
Bullying
Parental Impairment
Psychosis
Diagnosis:

- DSM-5 diagnostic criteria
- SCARED anxiety scale or the Spence Anxiety Scale for Children (www.scaswebsite.com for the Spence, is free, has translations)
- If obsessions/compulsions, think of OCD.
- If nightmares/flashbacks or trauma, think of PTSD.
- Label as “Anxiety Disorder, NOS” if the type is unclear.
DSM Diagnosis

• Focus on treatment today (see appendix slides for details on each diagnosis)
• Screeners are helpful to identify and track
• SCARED and SPENCE do have subscales to support your diagnosis
• Many youth with anxiety will have multiple anxiety diagnoses
• For most anxiety diagnoses clinical exam
  • OCD: Children’s Yale-Brown OCD Symptom Checklist
Screening Measures for Anxiety—SCARED (child and parent versions)

- Free, ages 9-17
- Broad screen for global anxiety
- Also has subscales for specific anxiety diagnoses
- Brief version for tracking over time
- Available in several languages

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Trigger subscale when score ≥</th>
<th>Trigger respondent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panic Disorder</td>
<td>7</td>
<td>Child; Parent (if account exists)</td>
</tr>
<tr>
<td>Generalized Anxiety</td>
<td>9</td>
<td>Child; Parent (if account exists)</td>
</tr>
<tr>
<td>Separation Anxiety</td>
<td>5</td>
<td>Child; Parent (if account exists)</td>
</tr>
<tr>
<td>Social Anxiety</td>
<td>8</td>
<td>Child; Parent (if account exists)</td>
</tr>
<tr>
<td>School Avoidance</td>
<td>3</td>
<td>Child; Parent (if account exists)</td>
</tr>
</tbody>
</table>

Triggering is contingent on child respondent age ≥ 8 and ≤ 18

*Triggers are based on cutoff scores developed by Birmaher and Colleagues
Screen for Child Anxiety Related Disorders (SCARED)

Name ____________________________ Today’s Date ________________

Directions:
Below is a list of sentences that describe how people feel. Read each phrase and decide if it is “Not True or Hardly Ever True” or “Somewhat True or Sometimes True” or “Very True or Often True” for you. Then for each sentence, fill in one circle that corresponds to the response that seems to describe you for the last 3 months.

<table>
<thead>
<tr>
<th></th>
<th>0 Not True or Hardly Ever True</th>
<th>1 Somewhat True or Sometimes True</th>
<th>2 Very True or Often True</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>When I feel frightened, it is hard for me to breathe</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>I get headaches when I am at school</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>I don’t like to be with people I don’t know well</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>I get scared if I sleep away from home</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>I worry about other people liking me</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>When I get frightened, I feel like passing out</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>I am nervous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>I follow my mother or father wherever they go</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>People tell me that I look nervous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>I feel nervous with people I don’t know well</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>I get stomachaches at school</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>When I get frightened, I feel like I am going crazy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>I worry about sleeping alone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>I worry about being as good as other kids</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>When I get frightened, I feel like things are not real</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>I have nightmares about something bad happening to my parents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>I worry about going to school</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>When I get frightened, my heart beats fast</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>I get shaky</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>I have nightmares about something bad happening to me</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>I worry about things working out for me</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>When I get frightened, I sweat a lot</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Additional screeners for anxiety

- **SPENCE Children’s Anxiety Scale** [http://scaswebsite.com](http://scaswebsite.com)
  - Free, has child, parent and teacher scales
  - Ages 3-17
  - Available in many (28+) languages
  - 44 item measure for child and 38 item measure for parent
  - Screens for somatization, panic, GAD, separation anxiety and social phobia

- **GAD7**
  - Free
  - Brief, only 7 questions
  - Validated for ages 14 and up
  - Scores 0-21 with >5 (mild), >10 (moderate), >15 (severe)
  - Total score >10 should trigger extended evaluation

Additional Screeners for Anxiety

- **SCARED Traumatic Stress Disorder Scale**
  - Free, brief initial screen for PTSD symptoms
  - Ages 7-19
  - If all four questions positive, sensitivity 100%, specificity 52%
  - Score > 6, consider referral for therapy

Screen for Child Anxiety Related Disorders (SCARED) Traumatic Stress Disorder Scale

Directions:
Below is a list of sentences that describe how people feel. Read each and decide if it is "Not True or Hardly Ever True," "Somewhat True or Sometimes True," or "Very True or Often True" for you. Then for each sentence, choose the answer that seems to describe you for the last 3 months.

<table>
<thead>
<tr>
<th>0 Not True or Hardly Ever True</th>
<th>1 Somewhat True or Sometimes True</th>
<th>2 Very True or Often True</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have scary dreams about a very bad thing that once happened to me.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I try not to think about a very bad thing that once happened to me.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I get scared when I think back on a very bad thing that once happened to me.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I keep thinking about a very bad thing that once happened to me, even when I don’t want to think about it.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Score: __________________________

Muris, Merckelbach, Korver and Mesters, 2000
Think about **comorbidity**:
Depression and ADHD are common.
~50% of kids with anxiety have 2 or more anxiety diagnoses.
Comorbid Disorders

- Depression and Bipolar Disorders
- ADHD
- Autism (but repetitive behaviors are not OCD)
- Eating Disorders
- Psychosis
- Tic Disorders (Tourette’s triad of Tics, ADHD, OCD)
- Substance Use Disorders (bidirectional)
- Somatic Symptom Disorders (often presumed to be expression of anxiety)
- Borderline Personality Disorder
- Disruptive Behavior Disorders
- Sleep Disorders (bidirectional)
Anxiety, ADHD and ODD

• Anxiety about school and depressive symptoms can result from constant negative messages about behavior, but often ADHD and anxiety are simply comorbid conditions.

• Children can become very oppositional and even aggressive when pressed to do things that make them anxious.

• Social anxiety may produce enough inhibition that a child may be quiet and compliant at school but oppositional at home with family.
Treatment

Can problem be managed in primary care?

YES

Mild Problem
(noticeable, but basically functioning OK)

Discuss their concerns.
Reassure that “many kids feel this way”.
Correct distorted thoughts (e.g. “If I don’t get an ‘A’, I’ll die”).
Reduce stressors, but still have to face a fear to conquer it.
Offer tip sheet on relaxation techniques to help child tolerate exposure to their fears.
If parent is highly anxious too, encourage them to seek aid as well since anxiety can be modeled.
Offer parent and child further reading resources on anxiety.
Explain somatic symptoms as “stress pains” or something similar.

Come back if not better.

NO

Moderate/Severe Problem
(significant impairment in one setting or moderate impairment in multiple settings)

Referral

Recommend Individual psychotherapy
(CBT is preferred; key element is a gradual exposure to fears) Also offer the advice on the left pathway as per a “mild problem”.
Consider starting SSRI if therapy not helping or anxiety is severe.
Low dose Fluoxetine or Sertraline are the first line choices.
Use therapy alone before medications unless anxiety is quite impairing.
Wait four weeks between SSRI increases, use full dose range if no SE.
Check for agitation/suicidal thought side effect by phone or in person in 1-2 weeks, and stop medicine if agitation or increased anxiety.
Try a second SSRI if first is not helpful.
Initial treatment of anxiety

- **Mild**
  - Psychoeducation and/or CBT (or other therapy)

- **Moderate**
  - CBT
  - Consider SSRI– esp. if not responding, not ready for therapy

- **Severe**
  - CBT and SSRI

Relaxation Therapy Tip Sheet

The following two techniques when practiced regularly can become useful skills that help a child face a plan of gradually increasing exposure to their fears. Gradual tolerated exposures are a core element of "unlearning" a fear. It is suggested to do either or both of these once a day for a while until the calm state produced can be easily achieved. Using one of these behaviors will decrease physiological arousal if the body feels anxious, stressed or in pain. It is best to practice these skills at times when not feeling anxious so that it will be less intimidating to try at a time of high anxiety.

Breathing Control

• Imagine that you have a tube that connects the back of your mouth to your stomach. A big balloon is connected to the tube down in your stomach. When you breathe in the balloon blows up and when you breathe out the balloon deflates. Put your hand on your stomach and practice taking breaths that push your hand out as that balloon inflates. When learning this trick, it might be easier to lie down on your back while you observe what is happening.

• Now focus on doing these stomach balloon breaths as slowly and as comfortably possible. Inhale slowly, pause briefly, and then gently exhale. When you allow that balloon to deflate, notice the calm feeling that comes over you. Counting the length of each phase may help you find that sense of calm, such as counting slowly to 3 during inhalation, to 2 while pausing, then to 6 while exhalation.

• Now practice making your breath smooth, like a wave that inflates and deflates.

• If you experience brief dizziness or tingling in fingers, this just means you are breathing too quickly (hyperventilating), so slow your breathing further to stop that sensation. Once skilled at this, just a few controlled breaths at a time of stress will produce noticeable relief, and can be done anywhere.

Progressive Muscle Relaxation

This is particularly helpful for kids who experience body aches along with stress/anxiety. It is easier to have someone guide a child through this the first few times until the technique is learned. Tell kids this is like learning to turn their muscles from uncooked spaghetti into cooked spaghetti.

• Lie down in a quiet room and take slow breaths, try Breathing Control as above.

• Think about the muscles of your head and face, now scrunch them up tightly and clench your teeth, hold that as you count to 10, then allow all of those muscles to relax. Notice that feeling of relaxation in your face, and your jaw loosening.

• Now concentrate on muscles of your shoulders and neck, tighten up your neck muscles pulling your head down, shrug your shoulders up, hold that uncomfortable tightness, for a count of 10, then let all those muscles relax and notice the feeling.

• While continuing your slow breathing, move your attention to your arms and hands, tightening those muscles further and further, hold it as you count to 10. Then allow those muscles to relax.

• Now think about the muscles in your legs, your bottom and your feet, tighten all these muscles up, feel the hard tension throughout your legs, hold it as you count to 10, then allow your legs and feet to relax as you continue your slow breathing.

• Now that all of your muscles have relaxed, continue your slow breathing and take some time to enjoy the sense of relaxation. Focus on how the most relaxed areas of your body feel now.

Robert Hilt, MD

https://www.seattlechildrens.org/healthcare-professionals/access-services/partnership-access-line/resources/
Exposure Curve

The Vicious Cycle of Escape & Avoidance

Begin Exposure → Exposure Anxiety Grows → Anxiety quickly drops → PANIC PEAK → Avoidance/Escape → Anxiety quickly drops → HABITUATION Anxiety Grows → Return of trigger → Relief → MASTERY OF ANXIETY

Graduated Exposure

- Improve relaxation skills to use during exposure
- Externalize disordered thinking
- Develop exposure hierarchy
  - Small, achievable steps! Failure will set back progress
- Proceed through hierarchy
  - Reward progress
- Maintenance
Exposure Hierarchy: Fear Ladder

Climbing my Fear Ladder

What is my goal?
Get a needle at doctor’s office

<table>
<thead>
<tr>
<th>Fear Rating</th>
<th>Description</th>
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<tbody>
<tr>
<td>10/10</td>
<td>Having blood drawn from a vein</td>
</tr>
<tr>
<td>9/10</td>
<td>Getting a shot in the upper arm or fleshy part of leg</td>
</tr>
<tr>
<td>8/10</td>
<td>Slightly pricking one’s skin with a needle</td>
</tr>
<tr>
<td>8/10</td>
<td>Watching someone else get a needle</td>
</tr>
<tr>
<td>7/10</td>
<td>Rest needle against vein</td>
</tr>
<tr>
<td>7/10</td>
<td>Resting the needle against one’s skin</td>
</tr>
<tr>
<td>5/10</td>
<td>Holding a needle</td>
</tr>
<tr>
<td>3/10</td>
<td>Watching someone hold a needle</td>
</tr>
</tbody>
</table>
15 y/o presents mid-May with escalating anxiety. Difficulties started in September with transition to high-school. In October, presented to PCP with stomach aches and nausea that were keeping her home from school (and moderate social anxiety found during interview). PCP referred to therapy and she has been going weekly since November. Stomach aches are now improved, but social anxiety is worsening and grades are dropping. She endorses high anxiety, irritability, insomnia, poor concentration and appetite.

SCARED=38 today

What med would you start?
Child/adolescent Anxiety Multimodal Study (CAMS)

- Design
  - 488 7-17 y.o. with SAD, GAD or SP
  - 14 sessions of CBT, sertraline, combo, or placebo
  - 12 weeks

- Results
  - Very much or much improved:
    - 80.7% combo
    - 59.7% CBT
    - 54.9% sertraline
    - 23.7% placebo
  - Pediatric anxiety rating scale, similar results
  - SI no more frequent in sertraline than placebo, no suicide attempts

Cognitive Behavioral Therapy, Sertraline, or a Combination in Childhood Anxiety. Walkup et al. NEJM 2008;359(26), 2753
CAMS - Conclusion

- CBT and sertraline both work, combo of the two has superior response rate
The Pediatric OCD Treatment Study (POTS)

• Design
  • 112 7-17 y.o. with OCD
  • Sertraline, CBT, combo, or placebo
  • 12 weeks

• Results
  • Improvement in CY-BOCS
    • Combo>CBT=sertraline>placebo
  • Clinical remission
    • Combo 53.6%
    • CBT 39.3%
    • Sertraline 21.4%
    • Placebo 3.6%
  • No patient became suicidal or made an attempt

• Conclusion
  • Youth with OCD should begin with CBT or CBT plus SSRI

POTS team. JAMA 2004;292(16), 1969
Anxiety Medications

Starting at a very low dose of SSRI for the first week or two with anxiety disorders is especially essential to reduce the child's experience of side effects (augmented by associated somatic anxieties).

<table>
<thead>
<tr>
<th>Name</th>
<th>Dosage Form</th>
<th>Usual starting dose for adolescents</th>
<th>Increase increment (after ~4 weeks)</th>
<th>RCT anxiety treatment benefit in kids</th>
<th>FDA anxiety approved for children?</th>
<th>Editorial Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluoxetine (Prozac)</td>
<td>10, 20, 40mg 20mg/5ml</td>
<td>5-10 mg/day (60mg max)*</td>
<td>10-20mg**</td>
<td>Yes</td>
<td>Yes (For OCD &gt;7yr) (For MDD &gt;8yr)</td>
<td>Long 1/2 life, no SE from a missed dose</td>
</tr>
<tr>
<td>Sertraline (Zoloft)</td>
<td>25, 50, 100mg 20mg/ml</td>
<td>25 mg/day (200mg max)*</td>
<td>25-50mg**</td>
<td>Yes</td>
<td>Yes (For OCD &gt;6yr)</td>
<td>May be prone to SE from weaning off</td>
</tr>
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</table>

Sertraline and Fluoxetine are both first line medications for child anxiety disorders, per the evidence base

<table>
<thead>
<tr>
<th>Name</th>
<th>Dosage Form</th>
<th>Usual starting dose for adolescents</th>
<th>Increase increment (after ~4 weeks)</th>
<th>RCT anxiety treatment benefit in kids</th>
<th>FDA anxiety approved for children?</th>
<th>Editorial Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluvoxamine (Luvox)</td>
<td>25, 50, 100mg</td>
<td>25 mg/day (300mg max)*</td>
<td>50 mg**</td>
<td>Yes</td>
<td>Yes (For OCD &gt;8yr)</td>
<td>Often more side effect than other SSRI's, has many drug interactions</td>
</tr>
<tr>
<td>Paroxetine (Paxil)</td>
<td>10, 20, 30, and 40 mg 10mg/5ml 12.5, 25, 37.5mg CR forms</td>
<td>5-10 mg/day (60mg max)*</td>
<td>10-20mg**</td>
<td>Yes</td>
<td>Yes (For OCD &gt;7yr) (For social phobia &gt;8yr)</td>
<td>Not preferred if child also has depression. Can have short 1/2 life</td>
</tr>
<tr>
<td>Citalopram (Celexa)</td>
<td>10, 20, 40 mg 10mg/5ml</td>
<td>5-10 mg/day (40mg max)*</td>
<td>10-20mg**</td>
<td>Yes</td>
<td>Yes (For OCD &gt;6yr)</td>
<td>Very few drug interactions</td>
</tr>
<tr>
<td>Escitalopram (Lexapro)</td>
<td>5, 10, 20mg 5mg/5ml</td>
<td>2.5 to 5 mg/day (20mg max)*</td>
<td>5-10mg**</td>
<td>No</td>
<td>No</td>
<td>Active isomer of citalopram</td>
</tr>
<tr>
<td>Duloxetine (Cymbalta)</td>
<td>20, 30, 40, 60mg</td>
<td>30 mg/day (120mg max)</td>
<td>30mg</td>
<td>Yes</td>
<td>Yes (For generalized anxiety &gt;7yr)</td>
<td></td>
</tr>
</tbody>
</table>

* Recommend decrease maximum dosage by at least 1/3 for pre-pubertal children
** Recommend using the lower dose increase increments for younger children.
Successful medication trials should continue for 6-12 months.
Once things stabilize . . .

- Treatment should be continued for 6 to 12 months during the continuation phase
  - Patients typically seen at least monthly, depending on clinical status, functioning, support systems, environmental stressors, motivation for treatment, and the presence of comorbid psychiatric or medical disorders.

- General rule of thumb: the longer it takes to recover or the higher the # of recurrences, the longer the period of maintenance.
  - OCD often needs treatment greater than 1 year
If the first trial doesn’t work

- Try another SSRI
- Add therapy
- Consider comorbid diagnosis again
  - Are they self-medicating?
- Review sleep hygiene, relaxation techniques and self-care
Switching antidepressants

• Cross taper vs. switch over
• Potential concerns:
  • Discontinuation syndrome
  • Relapse of partially treated symptoms
  • Side effects to new medication
  • Medication interactions
    • Serotonin syndrome
    • P450 2D6
      • fluoxetine and paroxetine strongly inhibit it, most commonly used antidepressants are substrates
      • So are amphetamine>methylphenidate products
  • Time to get to therapeutic dose of new med
  • Complexity of instructions
### Approximate dose equivalents of antidepressants

<table>
<thead>
<tr>
<th>Antidepressant</th>
<th>Equivalent Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluoxetine</td>
<td>20 mg</td>
</tr>
<tr>
<td>Paroxetine</td>
<td>20 mg</td>
</tr>
<tr>
<td>Sertraline</td>
<td>50-75 mg</td>
</tr>
<tr>
<td>Citalopram</td>
<td>20 mg</td>
</tr>
<tr>
<td>Escitalopram</td>
<td>10 mg</td>
</tr>
<tr>
<td>Fluvoxamine</td>
<td>100 mg</td>
</tr>
<tr>
<td>Venlafaxine</td>
<td>75 mg</td>
</tr>
</tbody>
</table>
SSRI Potential Side Effects

<table>
<thead>
<tr>
<th>Side Effect</th>
<th>Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gastrointestinal distress</td>
<td>Typically self-resolves</td>
</tr>
<tr>
<td></td>
<td>Symptomatic care</td>
</tr>
<tr>
<td>Headache</td>
<td>Typically self-resolves</td>
</tr>
<tr>
<td></td>
<td>Symptomatic care</td>
</tr>
<tr>
<td>Appetite change</td>
<td>Counsel on healthy nutrition</td>
</tr>
<tr>
<td>Sedation</td>
<td>Administration at bedtime</td>
</tr>
<tr>
<td>Sleep disturbance</td>
<td>Administration in morning</td>
</tr>
<tr>
<td></td>
<td>Counsel on sleep hygiene</td>
</tr>
<tr>
<td></td>
<td>Consider melatonin as needed</td>
</tr>
<tr>
<td>Diaphoresis</td>
<td>No action if mild</td>
</tr>
<tr>
<td>Sexual side effects</td>
<td>Consider medication change</td>
</tr>
<tr>
<td>Activation (disinhibition, agitation, irritability, silly)</td>
<td>If persistent and significant, discontinue medication</td>
</tr>
<tr>
<td>Platelet dysfunction (rare)</td>
<td>Discontinue medication</td>
</tr>
</tbody>
</table>

*If any symptoms are severe, prescriber may decrease medication dose or switch to another.*

WARNING: SUICIDALITY AND ANTIDEPRESSANT DRUGS

Antidepressants increased the risk compared to placebo of suicidal thinking and behavior (suicidality) in children, adolescents, and young adults in short-term studies of Major Depressive Disorder (MDD) and other psychiatric disorders. Anyone considering the use of PROZAC or any other antidepressant in a child, adolescent, or young adult must balance this risk with the clinical need. Short-term studies did not show an increase in the risk of suicidality with antidepressants compared to placebo in adults beyond age 24; there was a reduction in risk with antidepressants compared to placebo in adults aged 65 and older. Depression and certain other psychiatric disorders are themselves associated with increases in the risk of suicide. Patients of all ages who are started on antidepressant therapy should be monitored appropriately and observed closely for clinical worsening, suicidality, or unusual changes in behavior. Families and caregivers should be advised of the need for close observation and communication with the prescriber. PROZAC is approved for use in pediatric patients with MDD and Obsessive Compulsive Disorder (OCD).
FIGURE 1. SSRI Prescription Rates in the United States, 2002–2005, Stratified by Age Group and Expressed as a Percentage of the 2003 Rate

FIGURE 2. Suicide Rate in Children and Adolescents (Ages 5–19 Years) in the United States, 1988–2004
Black box warning, recent meta-analyses

- Bridge et al, JAMA. 2007;297:1683-1696
  - Meta-analysis of 27 RCTs for antidepressants relative to placebo for pediatric MDD and anxiety (OCD and non-OCD)
  - Results:
    - Overall small but increased risk of treatment-emergent suicidal ideation/suicide attempt.
      - Pooled risk of suicidal ideation/suicide attempt for each indication were all **less than 1%**.
    - Depending on treatment indication, **NNT ranges from 3 to 10, while NNH via emergence of suicidal ideation/suicide attempt ranges from 112 to 200**
SSRI Risk Benefits

### TABLE 8

**SSRI Benefit to Suicidal Risk Comparison**

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Number Needed to Treat</th>
<th>Number Needed to Harm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>10$^a$</td>
<td>112</td>
</tr>
<tr>
<td>OCD</td>
<td>6</td>
<td>200</td>
</tr>
<tr>
<td>Non-OCD anxiety</td>
<td>3</td>
<td>143</td>
</tr>
</tbody>
</table>

- Data from ref 60. OCD, obsessive-compulsive disorder.

- High number needed to treat likely secondary to high placebo response rate in pediatric depression studies (30% to 60% compared with 40% to 70% SSRI response rate). SSRI efficacy has been established, but pooled studies and this high number needed to treat underscore the importance of individualizing treatment.
After two SSRIs don’t work

- Duloxetine (Cymbalta) – FDA Approved for GAD age 7 and up
- Venlafaxine* (Effexor XR) – Side effect profile makes this a 2nd tier option
- Mirtazapine* (Remeron) – no controlled trials
  - Consider if need sedation and appetite stimulation
- Buspirone* (Buspar) – 2 negative RCTs in youth with GAD
- Beta-blockers* - no controlled trials
  - Used for performance anxiety
- Antihistamines - no controlled trials
  - Hydroxyzine used for as adjunctive, often for insomnia/anticipatory anxiety
  - Hydroxyzine can increase QTc
  - FDA approval for “symptomatic relief of anxiety and tension associated with psychoneurosis”
- Tricyclic antidepressants
  - Clomipramine shown to be efficacious in OCD, FDA approved ≥ 10yo
  - Anticholinergic side effects, cardiac monitoring, risk of fatality with overdose

*Not FDA approved for anxiety treatment <18

Benzodiazepines

- Have not shown efficacy in RCTs with youth
- Risk of tolerance and dependence
- Disinhibited behavior, mania (alprazolam, clonazepam)
- Concerns about memory and learning
- They may limit developing a sense of mastery of situational fears
- When used for severe anxiety - adjunctively & short term
Comorbid ADHD

- Atomoxetine – May decrease comorbid anxiety more than stimulants
- Stimulants – Increased anxiety can be a side effect, but anxiety more often decreases with treatment
- Guanfacine/Clonidine – May moderated arousal side effects, but no data to support treatment of anxiety disorders
- Bupropion* – No good data to support treatment of any child or adolescent disorder, and typically described as poor choice in anxiety due to activation side effect, but a third line treatment for adolescent depression and some SSRI non-responders report improvement in anxiety and depression.
- Behavioral treatments work better in children who have comorbid anxiety than in children with ADHD alone (MTA)
Comorbid Cannabis Use

- Higher rates now in WA in the 18 and over cohort
- Higher rates of cannabis use in youth with SAD
- Likely helps with acute anxiety, but worsens long-term anxiety
  - Rusby et al. found “anxious mood lability was significantly higher for adolescents reporting recent marijuana use compared to those reporting no recent marijuana use (past 30 days)” Addict Behav. 2019 May;92:89-94. doi: 10.1016/j.addbeh.2018.12.029. Epub 2018 Dec 23.
Antipsychotics

- Risperidone and aripiprazole with indications for irritability and agitation in autism
- Augmentation for depression treatment in adults
- Lurasidone and fluoxetine+olanzapine approved for bipolar depression in youth.
- May decrease intrusive thoughts-impulses across diagnosis (OCD, PTSD, Tic Disorders, bipolar spectrum)
- Concerns about long-term risk due to weight gain, metabolic syndrome, tardive dyskinesia and hyperprolactinemia requiring increased monitoring
Alternative Treatments

• St. John’s Wort (hypericum) [www.nccam.nih.gov/health/stjohnswort/]
  • Inconsistent data in adults only, no RCT’s in youth
  • Drug interactions: can potentiate serotonergic drugs and increase risk of serotonin syndrome, must stop prior to SSRI trial

• Cannabidiol Oil: a case report for use in youth with PTSD and insomnia [Perm J. 2016 Fall;20(4):16-005]

• L-Theanine (from green tea): One RTC in teen boys with ADHD showed objective improvement in sleep measures. [Altern Med Rev. 2011 Dec;16(4):348-54.]


• Magnesium: some support in adults, no RTC, [Nutrients. 2017 Apr 26;9(5).]
• Bacopa (2013 study shows it lowers cortisol and may act on GABA): no RTC
• 5-Hydroxytryptophoan (5-HTP): mixed results in adults, no RCT’s in youth
Sleep Troubles

- Commonly impacted by anxiety
- Impact from SSRI’s
- Sleep hygiene
- CBT-Insomnia
- Sleep meds: NO medication labeled for insomnia in children by FDA
  - **Melatonin**: 3-5 mg, 1 hour before bedtime
  - **Diphenhydramine**: 12.5-25 mg starting dose, max 50 mg QHS, short term only
  - **Trazodone**: 25-50 mg QHS, max 200 mg QHS
    - More serotonergic at higher doses and may increase risk of serotonin syndrome
    - Cases of priapism in males
  - **Gabapentin**: May improve sleep quality, decrease anxiety, reduce cannabis craving
Refusal to engage in therapy

- Help him/her learn more about what therapy really is; see: https://www.aacap.org/AACAP/Families_and_Youth/Facts_for_Families/FFF-Guide/What-Is-Psychotherapy-For-Children-And-Adolescents-053.aspx
- Educate patient and family on the benefits of therapy
- Remind him/her that therapists are different, therapies are different, and the future experience may be nothing like the past
- Suggest starting with self-guided therapy
- Take a motivational stance – Teens especially may respond to appeals not to be controlled by external forces on to have freedom
Self-guided therapy (depression and anxiety)

• For parents:
  • Helping Your Anxious Child: A Step-by-Step Guide for Parents (Rapee et al)
  • Freeing Your Child From Anxiety: Powerful, Practical Solutions to Overcome Your Child’s Fears, Worries, and Phobias. (Tamar Chansky)
  • Freeing Your Child From Negative Thinking: Powerful, Practical Strategies to Build a Lifetime of Resilience, Flexibility and Happiness. (Tamar Chansky)
  • The Depressed Child: Overcoming Teen Depression (Kaufman)

• For children:
  • What to Do When You Worry Too Much: A Kid’s Guide to Overcoming Anxiety (Huebner and Matthews).
  • What to Do When Your Brain Gets Stuck (Huebner)
  • Taking Depression to School (2002), (Kathy Khalsa)
  • Where’s Your Smile, Crocodile? (Clair Freedman)
Self-guided therapy (depression and anxiety)

• For adolescents/young adults:
  • Mastery of Your Anxiety and Worry: Workbook (Craske and Barlow)
  • Mastery of Your Anxiety and Panic: Workbook (Barlow and Craske)
  • Riding the Wave Workbook (Pincus et al)
  • Feeling Good: The New Mood Therapy (David Burns)
  • Relaxation Exercises
  • [http://www.seattlechildrens.org/healthcare-professionals/access-services/partnership-access-line/resources/](http://www.seattlechildrens.org/healthcare-professionals/access-services/partnership-access-line/resources/)
    • Relaxation Therapy Tip Sheet, page 30 in Primary Care Principles for Child Mental Health
Useful Apps: mood and anxiety

• Positive Penguins: educational app to help kids understand why they feel the way they do and help them challenge their negative thinking
  • http://positivepenguins.com/

• Breathe2Relax: app designed by the National Center for Telehealth & Technology to teach breathing techniques to manage stress

• Worry Box: app to track worries

• Bellybio: interactive, guided deep breathing

• Optimism: mood tracking app

• Mindful Yeti: mindfulness app for anxiety
Useful Apps: Sleep

- Bedtime meditations for kids: guided meditations
- Deep Sleep with Andrew Johnson: guided progressive muscle relaxation to target anxiety and insomnia
- isleep: guided meditations with music for sleep
Diagnosis Review Appendix
Separation Anxiety

• Normal
  • between 18 months and three years old when parent leaves
    • usually distractible and “fine 5 minutes after you left”
  • when first starting daycare/pre-school
    • resolves once engaged in new setting over period of days to weeks

• Separation Anxiety Disorder: persistent and excessive anxiety when anticipating or experiencing separation from primary caregiver
  • effects 4 percent of children
  • symptoms: extreme homesickness, refusal of activities away from home (camp, school, sleepovers), worry bad things will happen to loved ones while away, and worry bad things (kidnapping, illness etc.) will take them from caregiver, frequent reassurance seeking, fear of being home alone or sleeping alone

Selective Mutism

• Diagnosis: refusal to speak in situations where talking is expected or necessary, to the extent that it interferes with school and making friends
• Symptoms: standing motionless and expressionless, turning their heads, chewing or twirling hair, avoiding eye contact, or hiding.
• Normal and talkative at home or where comfortable
• Often discovered with start of school
• Tx:
  • Behavioral treatment with means to decrease anxiety, increase exposure to hierarchy of anxiety provoking situations
  • If severe, good evidence for fluoxetine

https://www.selectivemutism.org
Specific Phobia

- Diagnosis: Marked fear or anxiety about a specific object or situation – typically persisting for 6 months or more.
- Common phobias may make sense from an evolutionary perspective (snakes, spiders, heights) but with “clinically significant distress or impairment in social, occupational, or other important areas of functioning.”
- Very treatable with exposure therapy.
Social Anxiety Disorder (Social Phobia)

- Diagnosis: Marked fear or anxiety about one or more social situations in which the individual is exposed to possible scrutiny by others.
- In children, must occur in peer settings – not just with adults
- Fear of showing anxiety symptoms that will be negatively evaluated (i.e. will be humiliating or embarrassing; will lead to rejection or offend others
- Fear of speaking in front of others is common, but also meeting new people, eating, drinking, writing in front of others.
- Increased risk for substance use disorders.
Panic Disorder

- Panic attacks that peak within minutes, usually subside within minutes.
- Not triggered by phobic reaction.
- Four or more of: palpitations, sweating, shaking, SOB, choking, chest pain, nausea, dizzy or lightheaded, hot or cold, paresthesias, derealization, fear of losing control or “going crazy”, fear of dying.
- Persistent concern or worry, for 1 month or more, about additional panic attacks or their consequences or maladaptive change in behavior.
- Not the same as “very very anxious” or impulsive responding to stressful circumstances.
Agoraphobia

- Marked fear or anxiety about two or more: public transportation, open spaces, enclosed spaces, standing in line/being in a crowd, being outside of the home alone
- With or without panic attacks.
- Individuals with PTSD often avoid crowds, enclosed spaces
- A reason to move to Alaska?
Generalized Anxiety Disorder

• Diagnosis: Excessive anxiety and worry more days than not for at least 6 months about a number of events and activities (such as work or school performance).
• Three or more (one or more in children) of: restlessness, being easily fatigued, difficulty concentrating, irritability, muscle tension, sleep disturbance.
• Intergrades with depression and patients may present with both in varying proportions at different times.
Obsessive-Compulsive Disorder

• Now classified under Obsessive-Compulsive and Related Disorders
• Obsessions
• Compulsions
• Commonly a comorbid condition with tic disorders
• Not the same as preoccupations, need for sameness and repetitive, stereotypic behaviors in Autism Spectrum Disorder
Posttraumatic Stress Disorder

- Now classified under Trauma- and Stressor-Related Disorders
- New criteria set for children 6 and under
- High threshold for traumatic experience: exposure to actual or threatened death, serious injury or sexual violence (not counting through media unless work related).
- Symptom overlap with depression and anxiety
- Common
- You have to ask about trauma (or use screening tool)
School Refusal

- Diagnosis: extremely poor attendance
- Prevalence: 2-5%
- Commonly start with staying home/leaving early due to physical symptoms
  - Headaches, stomachaches, nausea and diarrhea common
- Anxiety may present with defiance, outright refusal, tantrums, inflexibility, separation anxiety, avoidance
- Onset: start of school year, new school, stressful life events, separation anxiety, fear of poor grades, bullying
- Treatment:
  - Behavioral
    - Back to school ASAP
    - Make sure home isn’t rewarding
    - Work with school (IEP, 504, school counselor)
  - Meds: SSRI, rarely long-acting benzo