Maryland Behavioral Health Integration in Pediatric Primary Care (MD BHIPP)

Addressing Child and Adolescent Depression in the Primary Care Setting

BHIPP Resilience Break
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Conflicts and Off-Label Prescribing

- No Conflicts of Interest
- Some Off-Label Prescribing May be Discussed

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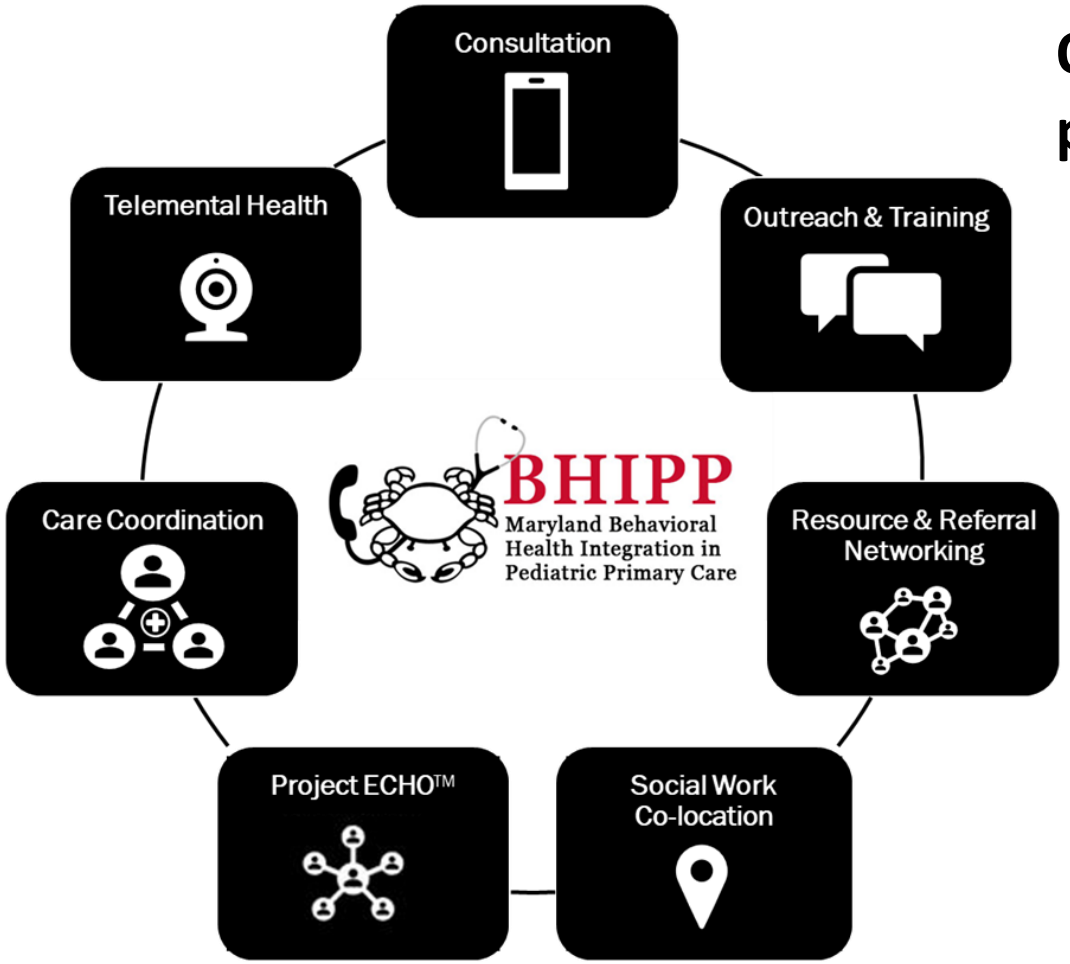
Who We Are – Maryland BHIPP



Offering support to pediatric primary care providers through free:

- Telephone consultation (855-MD-BHIPP)
- Resource & referral support
- Training & education
- Regionally specific social work co-location (Salisbury University and Morgan State University)
- Project ECHO®
- Direct Telepsychiatry & Telecounseling Services
- Care coordination

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Partners & Funding

- BHIPP is supported by funding from the **Maryland Department of Health, Behavioral Health Administration** and operates as a collaboration between the **University of Maryland School of Medicine**, the **Johns Hopkins University School of Medicine**, **Salisbury University** and **Morgan State University**.

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Learning Objectives

Participants will learn, in the context of the COVID pandemic:

How to identify children and adolescents who need treatment for symptoms of depression
Basic principles of therapeutic treatment of depression in children and adolescents
How to implement and monitor medications to treat depression in children and adolescents

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Impacts of the Pandemic

- Exhausted parents
- Teens reporting low motivation
- Sleep schedules disrupted
- Most children and adolescents miss school
- Most parents miss school
- Teens with anxiety about personal appearance don't like being in front of screen—"they can all see me all the time"
- Teens with social anxiety are less anxious during virtual school
- ADHD symptoms worse at home than in structure of classroom

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Why is Primary Care Important?

- Too few CAPs and skilled Psych NPs and skilled therapists
  - No state or national plan to improve this shortage
- Too many adolescents with episodes of major depression in past year
  - 13.3% of 12-17 yo;
  - 20% females, 6.8% males
- 71% of depressive episodes cause severe impairment that usually requires combined treatment
- Too few receiving treatment
  - 60% no treatment
  - 20% therapy only
  - 2% med only
  - 18% both

  - 2017 National Survey of Drug Use and Health

Office appointment: mother has concerns about 13 yr old daughter

"She's not the same"

Low motivation

Falling grades

Arguing with parents and sibs

Spending lots of time in her room

Refusing to walk the dog

No recent trauma losses of stress except pandemic

Family history of recurrent depression in mother and MGM

What are the possibilities?

- Major depressive disorder
- Demoralization
- Adjustment disorder
- Adolescent developmental stuff

Demoralization

Understandable reaction to troubling circumstances

Diminished interest or pleasure is <u>not</u> present

Useful concept for most preteens with low mood/irritability

Not a DSM-5 diagnosis, but is an ICD-10 diagnosis

Explanation for placebo response of 50% in depression studies?

Think COVID-19 pandemic (and low motivation)

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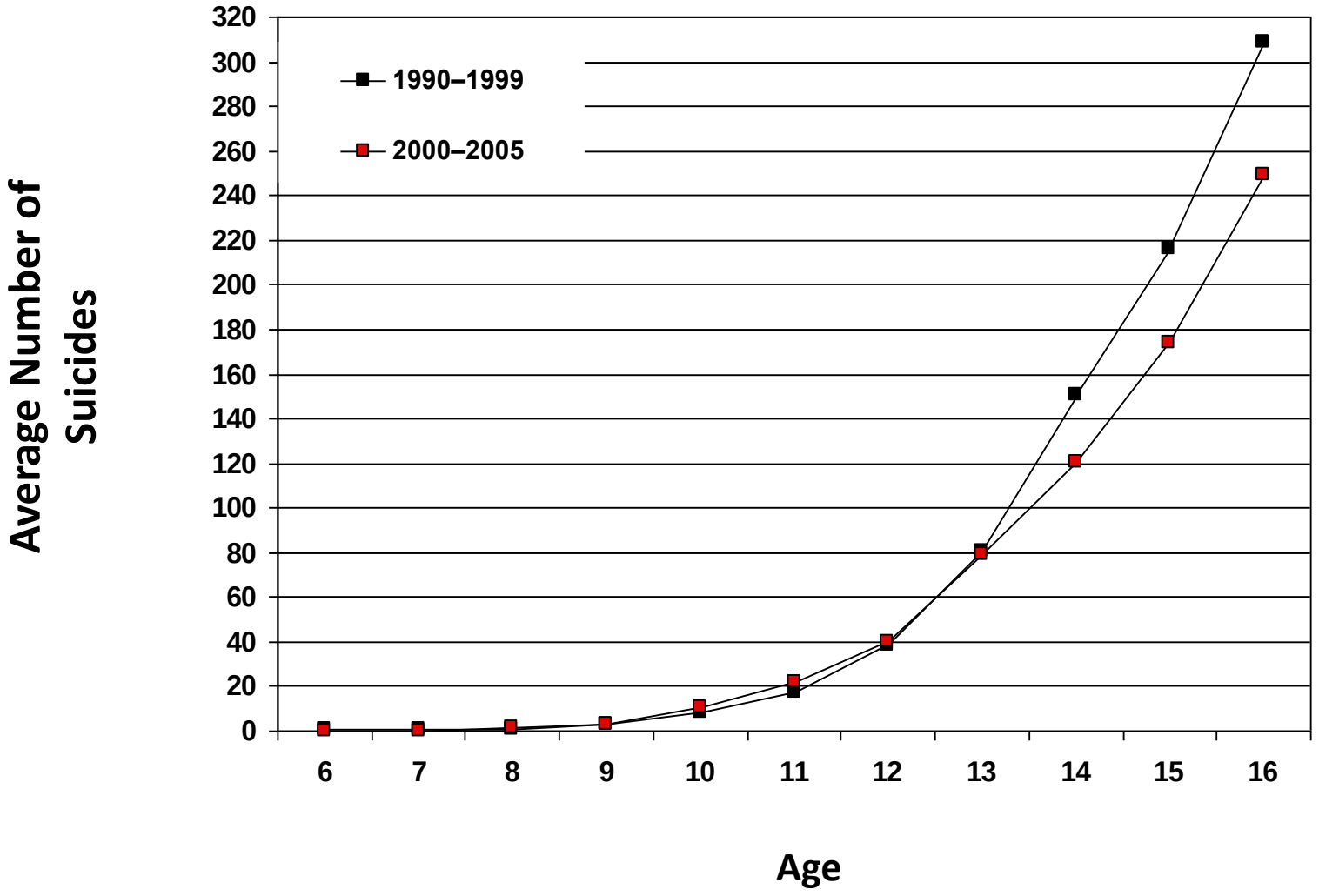
CHILD/TEEN SUICIDE RATES

— UNITED STATES, AGES 6–16, 1990–2005 —



CDC 2008 (WISQARS) (reviewed 01/24/2008)

Assessment--PHQ-9 for Teens

Over the last 2 *weeks*, how often have you been bothered by any of the following problems?
(use "✓" to indicate your answer)

	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself—or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed. Or the opposite – being so figety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead, or of hurting yourself	0	1	2	3

Past year (persistent depressive disorder)
Function: work (school), home, relationships
Suicidal thoughts past month; Suicide attempt ever

Scoring the PHQ-9

Total Score	Depression Severity
0 – 4	No or minimal
5 – 9	Mild
----------	----------
10 – 14	Moderate
15 – 19	Moderately severe
20 – 27	Severe

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DSM-5 Symptoms of Depression

Mood
- *Depressed* and/or *irritable*

Neurovegetative (Somatic)
- *Diminished interest or pleasure*
- Insomnia or hypersomnia
- Fatigue or loss of energy
- Weight loss or gain
- Psychomotor agitation or retardation

Cognitive
- Decreased concentration or indecisiveness
- Worthlessness or guilt
- Suicidal ideation

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For 2's and 3's (positive symptoms) "Tell me more about…."

- Mood: low…..sad….irritable
- Physical symptoms: sleep….energy….appetite……..slow/fast
- Diminished interest or pleasure
- Cognition: concentration….self worth…..guilt…..never get better
- Suicidal thoughts

- Function……school, home, friends, activities
- Course of symptoms over time…..recently…..in past
- Who have your shared with?.....family…..friends……their response?
- So far, has anything helped?.....therapy…..exercise…..sleep

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Your diagnosis is major depressive disorder

- Majority (5) of DSM-5 symptoms
  - 1 symptom either depressed mood *or* loss of interest or pleasure
- Present most of day, nearly every day, for
- 2 weeks duration
- Major change from previous functioning
- Causing clinically significant distress or impairment (school, home, activities)

NIH Ask Suicide-Screening Questionnaire (ASQ)

Ask the patient:

1. In the past few weeks, have you wished you were dead?	❍ Yes	❍ No
2. In the past few weeks, have you felt that you or your family would be better off if you were dead?	❍ Yes	❍ No
3. In the past week, have you been having thoughts about killing yourself?	❍ Yes	❍ No
4. Have you ever tried to kill yourself?	❍ Yes	❍ No

If yes, how? _____

_____

_____

When? _____

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Suicidal Thoughts and Behaviors

- Level of Concern
  - Passive death *wish*?---If you fell asleep and never woke up, would that be okay?
  - Active *thought* of doing *something* to harm self?
  - Active thoughts of *specific plan* to kill self?
  - *Intent*?
- Most consistent predictor: past history of suicide attempts or threats
- Safety plan: Who will the patient tell if suicidal thoughts emerge? Guns, sharps, drugs?
- Active monitoring: Staff phone calls….or electronic communication
- Management Plan: Threshold for referral to hospital ED (no agreement on safety plan)
- Behavior/Mental Health Consultation?

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Development and the Course of Depression

- *Likelihood of onset increases markedly during puberty*
- Course quite variable
- Episodic…..with complete or incomplete remission
- *Chronicity* increases likelihood of personality, anxiety & substance use disorders & *decreases treatment response*
- Somatic symptoms recover first; *cognitive symptoms recover last (including suicidality)*

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Education About Depression

- Episodic
- Sometimes runs in families
- No ones fault
- Sometimes recurrent (may need chronic illness approach, like asthma)
- Treatable
- You are committed and confident that treatment will work

Depression Treatment—”Just do something”

- Personal Commitments
  - Primary care clinician
  - Parent, guardian, coach, religious leader
- Activation
  - Sleep
  - Exercise
  - Substances

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Sleep

- Studies of adults with MDD show that treatment of sleep is an *important separate treatment* for MDD
- There is a ***simple psychotherapy (CBT)* for insomnia in adults**; it has been adapted for use in adolescents
- ***Sleep hygiene counseling*** works but requires persistence!
  - *Scheduled regular awakening*
  - Daytime sleep restriction (no naps) and caffeine restriction
  - Bedtime stimulus control (lights, electronics, music, etc.)
- Melatonin, a sedative at higher doses, is a popular sleep aid, but……

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Melatonin

- Pineal gland hormone regulates 24-hour sleep-wake cycle and other circadian rhythms
- Peak levels during night
- Daytime dose in young adults of 0.1-0.3 mg increased plasma melatonin to normal night range
- Melatonin has **sedative** effect at higher doses
- Adult data: sleep onset about 30 minutes earlier; this effect wears off in about 4 weeks
- OTC melatonin preparations range from 1 to 10 mg
- In a study of 31 melatonin preparations, melatonin varied from -83% to + 478% of labeled content
- *USP verified* preps are accurate, but cost more and only available in 3 and 5 mgs dosages

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Melatonin and Children

- Used by lots of parents with or without recommendation of PCP
- Best efficacy data for autism
- “Data supporting use of melatonin in developmentally normal children are limited and its long-term safety is unknown.” (*Medical Letter*, June 29, 2020)
- Long-term melatonin supplementation can suppress the hypothalamic-gonadal axis and may be associated with delayed onset of puberty, possibly by preventing the decline in nocturnal levels of melatonin that occur during the onset of puberty
- Melatonin may be the most benign sedative for sleep onset, with above caveats, although not meds preferred, if possible

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Exercise

- Just do something—some better than none
- Child's choice
- Rewards (not Snickers)

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Substances

- Marijuana—anxiety treatment that does help while high; but lowers motivation; prevents recovery
- Alcohol—another anxiety treatment

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Therapies for Depression

Cognitive Behavior Therapy (CBT)

- Not as straightforward as with anxiety
- Exposure and response prevention more difficult

Interpersonal Therapy (IPT)

- Personal commitments

Behavioral Activation Therapy (BAT)

- Exercise, participation

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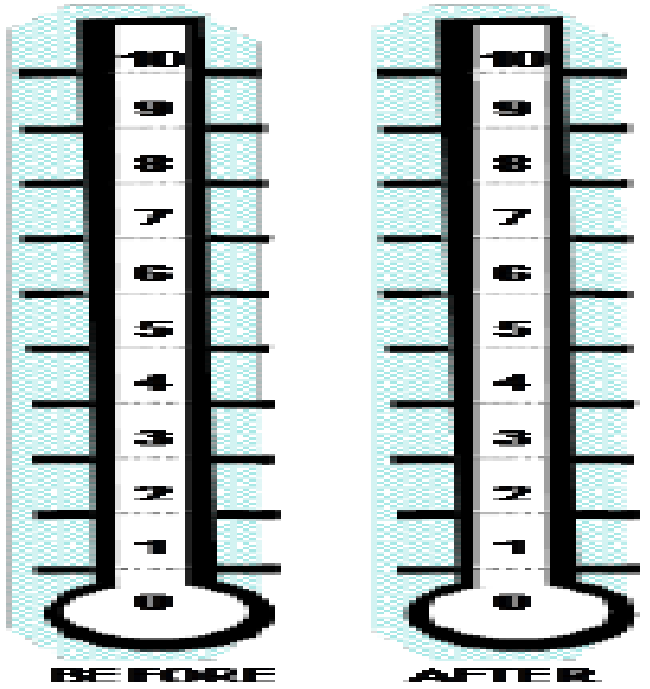
CBT Components

- Psychological education about child/adolescent anxiety
- Relaxation training
- Cognitive strategies
- Exposures or “behavioral experiments”
- Homework Assignments



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CBT Components – Hierarchy and Exposures

- Generate list of anxiety-provoking situations
- Get fear thermometer ratings
- Create a hierarchy based on ratings
- Set up exposures
- Practice, Practice, Practice facing fears!

Types of Exposures for Separation Anxiety Disorder:

- Exposure to worries about something bad happening to them or their caregiver while separated

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Example Fear Hierarchy

Worry/Feared Situation	Child Rating	Parent Rating
Separating from parent for 10 minutes while child still at home	2	2
Separating from parent for 1 hour while child still at home	4	3
Separating from parent for 1 hour while child at school	5	6
Separating from parent for whole school day	8	7
Separating from parent for 10 minutes in a less familiar environment (e.g., grocery store)	7	9
Staying in own bed for half of the night	6	6
Staying in own bed for the whole night	10	9

Umm…what about the meds?!

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SSRI'S

Generic	Brand Name
Fluoxetine (MDD 8+; OCD 6+)	**Prozac**
Escitalopram (MDD 12+)	**Lexapro**
Sertraline (OCD 7+)	**Zoloft**
Fluvoxamine (sigma1)	Rarely used in USA
Citalopram	*Less safe than Lexa*
Paroxetine	*Nonlinear kinetics*

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SSRI Differences

Escitalopram (Lexapro)

- *No isoenzyme interactions*
- *Generic scored 10 & 20 mg tablets (only one prescription for dose range)*
- *Least activating (better for sleep)*

Sertraline (Zoloft)

- *Moderate inhibitor of CYP450 2D6, 2B6*
- *Wider dosing range (max is 200 mg/day)*

Fluoxetine (Prozac)

- *Very long half-life*
- Strong inhibitor of CYP450 2D6
- Most activating

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General Principles

START LOW, GO SLOW…….BUT not too slow…….

Effect size* with comparison to stimulants for ADHD = 1.0

- 0.7 for anxiety
- 0.2 for depression (b/o high placebo response rate)

Side effects generally minimal and *reversible* if SSRI discontinued

4-8 weeks to reach therapeutic dose and maximum benefit

Screening lab: TSH

*Locher C et al, JAMA Psychiatry, 74: 1011-1020; 2017

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Doses (mg)

Agent	Start Adult—Teen--Child	Maximum Adult	Increments Adult-Teen-Child
Sertraline	50 25-50 ≤25	200	50 25-50 ≤25
Fluoxetine	20 10 5	20*	20 10 5
Escitalopram	10 5-10 5	20**	10 5-10 5

* 60 mg/day for bulimia nervosa

** 10 mg/day for adults with GAD

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SSRI Dose Equivalencies

- Fluoxetine 20 mg
- Escitalopram 10 mg
- Sertraline 50 mg*

*Least valid or the 3 equivalencies; much larger range of values across studies.

NOTE: Adult data; increases to fluoxetine 40 mg equivalent can increase response, higher dose yields only more side effects

Furukawa TA et al. Optimal dose of selective serotonin…..*Lancet Psychiatry*: 6, 601-609, 2019.

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Reversible Side Effects of SSRIs

None (most common)

GI discomfort, nausea

Behavioral activation……suicidality (1 per 100)
- more common in younger children
- agitation, restlessness, insomnia, impulsivity
- behavioral disinhibition

Sexual
- diminished libido
- delayed orgasm or anorgasmia
- erectile dysfunction

Pregnancy

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Serotonin syndrome*

GI: nausea, vomiting, diarrhea

Mental Status: agitation, delirium, hallucinations, coma

Autonomic Instability: tachycardia, labile blood pressure, diaphoresis, hyperthermia, flushing, dizziness

Neuromuscular: tremor, hyperreflexia, rigidity, myoclonus, hyperreflexia, incoordination

*5HTP supplements and tryptans for migraines common causative agents

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Discontinuation Syndrome

- Flu-like symptoms
- GI symptoms – nausea, vomiting, diarrhea
- ----------
- Dizziness, vertigo
- Tingling/numbness
- ----------
- Sleep disruption
- Anxiety, agitation
- Irritability, low mood

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Other “Antidepressants”

• Duloxetine (Cymbalta)	SNRI	FDA indication for C&A GAD, milder sexual AEs
• Bupropion (Wellbutrin)	similar to amphetamine, no serotonin effect, seizures	
• Venlafaxine (Effexor)	SNRI	more side effects than duloxetine
• Mirtazapine (Remeron)	serotonergic; sedating and appetite inducing	
• Lamotrigine (Lamictal)	rare fatal rash; used for bipolar depression	

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Thank you!

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