# Adolescent Depression and Anxiety: A Review of Treatment Options

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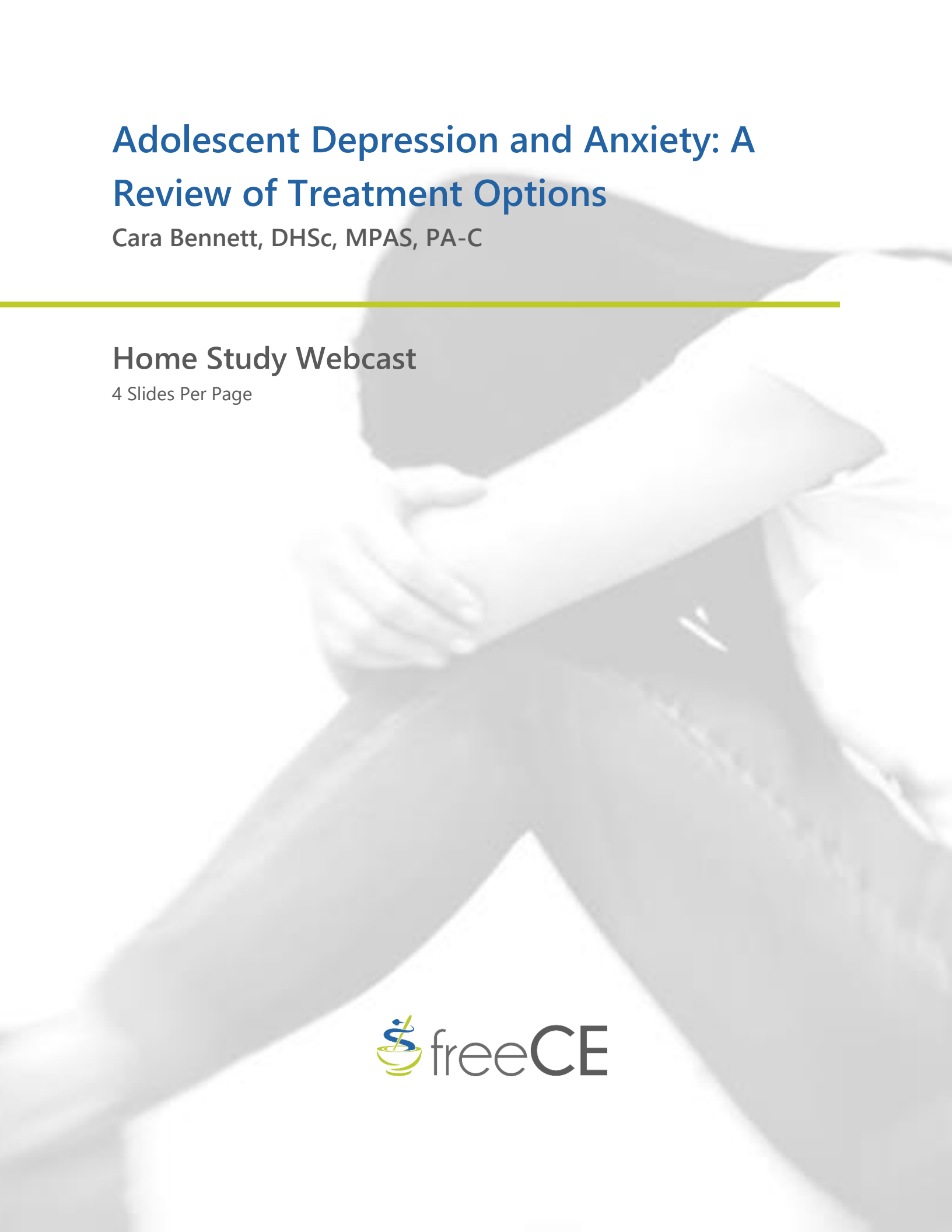
## Home Study Webcast

4 Slides Per Page



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# Adolescent Depression and Anxiety: A Review of Treatment Options

## ACTIVITY DESCRIPTION

Depression and anxiety in adolescents is more prevalent than most adults realize. Pharmacologic and non-pharmacologic interventions can improve functioning and quality of life for many adolescents.

## TARGET AUDIENCE

The target audience for this activity is **pharmacists, pharmacy technicians** and **nurses** in hospital, community, and retail pharmacy settings.

## LEARNING OBJECTIVES

After completing this activity, the **pharmacist** will be able to:

- Review DSM V criteria for diagnosis of adolescent anxiety and depression
- Define non pharmacologic treatment strategies
- List first line therapies for the treatment of anxiety and depression in adolescents
- Describe common side effects and interactions of depression and anxiety medications

After completing this activity, the **pharmacy technician** will be able to:

- Review presenting symptoms of anxiety and depression in adolescents
- Outline current treatment options for anxiety and depression
- Identify non pharmacologic treatment options

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## ACTIVITY TYPE

Knowledge-Based Home Study Webcast

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## Physician Assistant, Pediatric Healthcare Associates

### ABOUT THE AUTHOR

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**Faculty:** Cara Fox DHSc, MPAS, PA-C

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## Pharmacist Learning Objectives

- Review DSM V criteria for diagnosis of adolescent anxiety and depression
- Define non pharmacologic treatment strategies
- List first line therapies for the treatment of anxiety and depression in adolescents
- Describe common side effects and interactions of depression and anxiety medications

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## Pharmacy Technician Learning Objectives

- Review presenting symptoms of anxiety and depression in adolescents
- Outline current treatment options for anxiety and depression
- Identify non pharmacologic treatment options

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- **"I'm fine"**
- **"Nothing"**
- **"Leave me alone"**

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## Depression

- 10-20% of adolescents experience a major depressive episode in the U.S. annually
- 30% feel sad or hopeless every year
- 5-10% subclinical symptoms
- Female to male ration 2:1

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## Risk Factors

- Low birth weight
- Family history
- Family stressors/dysfunction
- Social stressors
- Gender dysphoria
- Other mental health diagnosis
- Traumatic brain injury
- Chronic illness

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## Symptoms of Depression

- Irritable mood
- Loss of interest
- Change in appetite/weight
- Fatigue
- Sleep disturbance
- Feelings of worthlessness/guilt
- Lack of concentration
- Suicidal thoughts

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## Course of Illness

- Duration 4 to 9 months
- 90% remit in 2 years
- Recurrence between 20-70%
  - Prior depression
  - Residual symptoms
  - Comorbid conditions
  - Stressors
  - Lack of social support
  - Family history

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## Comorbid Conditions

- Anxiety disorders
- Attention deficit hyperactivity disorder
- Substance abuse
- Behavioral disorders
- Higher rates of: risky sexual behavior and physical illness/complaints
- Lower rates of: relationship satisfaction and higher education

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## Suicide

- 3rd leading cause of death in the U.S for adolescents
- Depression greatest risk factor
- CDC data for 2015
  - 18% report contemplating suicide
  - 9% attempted in past year
- Males 4 times more likely to die from suicide attempt
- Females more likely to attempt
- Firearms used in > 50%

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## Assessment

- Medical and psychological history
- Physical exam
- Laboratory studies (TSH, CBC, chemistry, drug screen)
- Interview the child
  - Self reporting questionnaires
    - PHQ-9
    - Mood and feelings questionnaire
    - Reynolds Adolescent Depression Scale

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## SIG-E-CAPS

- Depressed mood plus:
  - **S**leep disorder
  - **I**nterest deficit (anhedonia)
  - **G**uilt
  - **E**nergy deficit
  - **C**oncentration deficit
  - **A**ppetite changes
  - **P**sychomotor agitation
  - **S**uicidality

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## DSM 5 Criteria
## Major Depressive Disorder

- 5 or more symptoms for at least 2 weeks, at least one being anhedonia or dysphoria
  - Depressed or irritable mood (dysphoria)
  - Diminished interest in activities (anhedonia)
  - Change in appetite or weight
  - Insomnia/hypersomnia
  - Psychomotor agitation/retardation
  - Fatigue/loss of energy
  - Feelings of worthlessness or guilt
  - Impaired concentration
  - Suicidal ideation/behavior

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## Differential Diagnosis

- Bipolar Disorder
- Substance abuse
- ADHD
- Thyroid disease
- Anemia
- Sleep apnea
- Medication side effect

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## Anxiety

- Worry and fear very common
  - What is normal for age?
  - Persistent and excessive = anxiety disorder
- Most common childhood onset psychiatric disorder
  - 10-30% prevalence rate
- Increased risk of second psychiatric diagnosis
  - ADHD
  - Depression
  - ODD
  - Learning disabilities

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## Risk Factors

- Developmental
  - Anxious toddlers
- Cognitive
  - Threat vs safe
- Genetics
  - Familial
- Environmental

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## Age Related Fears

- Preschool
  - Separation
- School age
  - Performance
- Adolescent
  - Peer perceptions and acceptance

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## Anxiety Disorders

- Generalized Anxiety Disorder
- Social Anxiety Disorder
- Panic Disorder
- Agoraphobia
- Specific Phobias
- Separation Anxiety
- Selective mutism

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## Symptoms

- Avoidance
- Somatic symptoms
- Sleep problems
- Need for reassurance
- Poor school performance
- Irritability/defiance
- Eating issues

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## DSM 5 Criteria Generalized Anxiety Disorder

- Excessive worry > 6 months
- Worry difficult to control
- One of the following
  - Restlessness, easily fatigued, difficulty concentrating, irritability, muscle tension, difficulty sleeping
- Significant impairment of functioning

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## DSM 5 Criteria
## Social Anxiety Disorder

- Persistent fear of social situation
- Exposure to feared situation causes anxiety
- Person recognizes as unreasonable
- Feared situations are avoided
- Symptoms for > 6 months

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## DSM 5 Criteria
## Panic Disorder

- Recurrent unexpected panic attacks
  - Abrupt surge of intense fear
  - Four or more of the following:
    - Palpitations, sweating, shaking, shortness of breath, feeling of choking, chest pain, nausea, dizziness, chills, paresthesias, derealization/depersonalization, fear of losing control, fear of dying
- Followed by 1 month or greater of one or both:
  - Persistent worry about another panic attack or their consequences
  - Significant maladaptive behavior change

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## DSM 5 Criteria
## Separation Anxiety

- Excessive anxiety concerning separation from home or loved one
  - 3 or more of the following:
    - Distress with separation/anticipated separation
    - Worry about losing caregiver or harm coming to them
    - Worry of bad event causing separation
    - Physical complaints with separation/anticipated separation
    - Reluctance to leave home or sleep away from home
    - Nightmares of separation
- Lasts > 4 weeks
- Onset before age 18
- Causes significant distress and/or impairment in functioning

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## Differential Diagnosis

- Cardiac disease
- Hyperthyroid
- Seizures
- Hypoglycemia
- Caffeine
- Side effects of medication
- Substance abuse

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## Assessment of Anxiety Disorders

- Medical and psychological history
- Physical exam
- Laboratory studies (TSH, CBC, chemistry, drug screen)
- Interview the child
  - Pediatric Anxiety Rating Scale
  - Screen for Child Anxiety-Related Emotional Disorder (SCAReD)

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## Non Pharmacologic Treatment

- Psychoeducation
- Increasing social support
- Physical activity
- Cognitive Behavioral Therapy
  - Thoughts
  - Feelings
  - Behaviors

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## Pharmacotherapy

- When to treat?
  - Non pharmacologic measures not making sufficient progress
  - Impairment in functioning
  - Severity of symptoms
- What medication?
  - Selective Serotonin Reuptake Inhibitors (SSRIs)
  - Serotonin-Norepinephrine Reuptake Inhibitors (SNRIs)
  - Tricyclic Antidepressants
  - Benzodiazepines

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## SSRIs

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## Choosing a Medication

- Efficacy and Safety
- Allergies
- Desire to avoid side effects
- Response to medication by parent or sibling
- Patient and/or family preference
- Potential drug interactions

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## Fluoxetine

- First line for anxiety and depression
- Extensively studied in adolescents
- Long half life
  - Caution if concerned about Bipolar Disorder
- Dosing
  - Therapeutic range 20-60 mg, start at 10mg for 6 days, then increase to 20mg
- Prolongs QT interval

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## Sertraline

- Studied extensively in adolescents
- Indicated in OCD
- Can cause sedation
- Dosing
  - Therapeutic range 50-200mg
  - Start at 25mg for 6 days, then increase to 50mg daily

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## Citalopram

- 2 stereoisomers that are mirror images
- Efficacy in depression
  - Results inconsistent
- Therapeutic range
  - 10-40mg
  - Starting dose 10mg
- QT prolongation
  - Do  not exceed 40mg
  - EKG

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## Escitalopram

- Stereoisomer of citalopram
- Inhibits serotonin reuptake more strongly than other
- Modest efficacy in adolescents
- Therapeutic range
  - 5-20mg
  - Starting dose 5mg
- QT prolongation

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## Paroxetine

- Not effective in depression
- More effective in anxiety
- Therapeutic range
  - 10-60mg daily
  - Starting dose 10mg for 1-2 weeks
  - Increase by 10mg q week

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## Adverse Reactions

- Dose dependent
- Usually resolve in 1-2 weeks
- Common side effects:
  - Abdominal pain
  - Agitation
  - Diarrhea
  - Headache
  - Nausea
  - Sleep changes
  - Decreased libido

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## Mania

- Depression switching to hypomania/mania
- Questionable if medication causes switch
  - Mania often follows depressive episode
- Increased risk for certain groups
  - Monotherapy, genetic predisposition
- If occur must stop antidepressants
  - Start antimania treatments

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## Suicidality

- Black box warning issued in 2004
  - "Children and adolescents taking antidepressant medication, including SSRIs and TCAs, are at increased risk for suicidal thinking or behavior"
- Studies show more likely to benefit than to commit suicide
- FDA recommends close monitoring during early weeks of treatment
  - Weekly for first 4 weeks
  - Biweekly during month 2
  - Monthly in month 3

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## Serotonin Syndrome

- Overstimulation of serotonin receptors
- Usually from multiple medications
- Can occur with single med
- Multiple symptoms

- Anxiety
- Hyperthermia
- GI distress
- Agitation
- Delirium
- Diaphoresis
- Hypertension
- Tremor
- Muscle rigidity
- Myoclonus
- Hyperreflexia

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## SNRIs

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## Venlafaxine

- Consider when failed 2 SSRIs
- Some improvement in symptoms
- Side effects
  - ↑ BP and pulse
  - Weight gain
  - Itching and rashes
  - ↑ cholesterol
- Therapeutic range
  - Start 37.5mg x 7 days, increase 75mg day
  - Up to 150mg daily

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## Tricyclic Antidepressants



## TCAs

- Amitriptyline, nortriptyline, clomipramine
- Efficacious in adults
- Studies fail to show efficacy in adolescents
- Unfavorable side effects
- High lethality in overdose
- Consider if fail multiple SSRIs and SNRIs



## Benzodiazepines



## Benzodiazepines

- Effective in some cases
- Little evidence in the research
- Adverse events
  - Drowsiness, irritability, oppositional behavior, abuse potential
- Longer half life suggested
  - Clonazepam 0.25mg/day
  - Can increase to 0.5mg/day if tolerated

# Other Medications

## A few others for anxiety….

- Guanfacine
  - Typically used in ADHD and Tourette syndrome
- Buspirone
  - Indicated for ages 6-17 years
  - 15-60mg/day bid
- Hydroxyzine
  - Antihistamine
  - 2mg/kg/day q6h < 12 years
  - 50-100 mg every 6 hours prn > 12 years

## A few others for depression…

- Lithium
  - Possible adjunctive therapy
  - ? Efficacy
- Omega-3 fatty acids
  - No high quality studies
- St. John's wort
  - Studies in adults inconclusive
  - No studies in kids

## Treatment Duration

- Titrate as needed until efficacy/maximum dose
  - Somatic symptoms around 2 weeks
  - Dose effect around 4-6 weeks
- Maintenance
  - Symptoms in remission
  - At least 9-12 months of stability
- Taper
  - Stress free time
  - Very slowly

## Summary

- Depression and anxiety common in adolescence
- Effective treatment is available
- Risk to benefit ratio must be considered
- When choosing pharmacologic therapy, monitor closely
- Taper to effective dose
- Maintenance
- Taper slowly off

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## Questions

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# Exam Questions:

1. What percentage of American adolescents experience depressive symptoms annually?
    a. 2%
    b. 5%
    c. 20%
    d. 80%

2. According to DSM 5 Criteria, Major Depressive Disorder can be diagnosed when 5 or more symptoms (one being dysphoria or anhedonia) have occurred for at least how long?
    a. 2 weeks
    b. 2 months
    c. 1 week
    d. 1 month

3. Which of the following is often a comorbid condition with depression?
    a. Hyperthyroidism
    b. Ulcerative colitis
    c. Mitral valve prolapse
    d. Attention Deficit Hyperactivity Disorder

4. Which of the following laboratory study is most useful in the evaluation of depression and anxiety in adolescents?
    a. Lipid panel
    b. Drug screen
    c. Urinalysis
    d. Estrogen level

5. The most common fear in adolescents is:
    a. Separation from parents
    b. Fear of the dark
    c. School performance
    d. Peer acceptance

6. All of the following should be considered in the differential diagnosis of anxiety except:
    a. Medication side effects
    b. Low blood sugar
    c. GI disease
    d. Seizures

7. The following medication can cause QT prolongation
    a. Sertraline
    b. Citalopram
    c. Paroxetine
    d. Venlafaxine

8. Serotonin syndrome symptoms include all of the following except:
    a. Chills
    b. Hypertension
    c. Hyperreflexia
    d. Anxiety

9. Which of the following is included in non-pharmacologic therapy of anxiety and depression in adolescents?
    a. Decreased physical activity
    b. Sleep studies
    c. Home schooling
    d. Cognitive behavioral therapy

10. Which is true regarding pharmacologic treatment of anxiety and depression?
    a. Start at maximum daily dose
    b. Treat only until symptoms in remission
    c. Stop treatment during stress free time
    d. Tapering off medication is not necessary