



Anxiety and Depression in Teens-Primary Care Approach

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Disclosures

I have had no financial relationship or other affiliation with a commercial interest within the last 12 months



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Objectives

- 1) Review **Scope** of Anxiety and Depression
- 2) Review **Primary Care Evaluation** and **Screening Instruments**
- 3) Review **Coexisting Conditions**
- 4) Review **Self-management, Behavioral, and Pharmacologic Options**



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Why is this Important?

- In **Youth Mental Health** Rankings, **South Carolina** ranks out of the 50 states-**42nd** *
 - Higher prevalence of mental illness
 - Lower rates of access to care

*THE STATE OF MENTAL HEALTH IN AMERICA 2018
www.mentalhealthamerica.net



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1) Scope of Anxiety

- **25%** of teens ages 13-18 are affected by anxiety disorders
- If Anxiety is left **untreated**
 - Higher risk for **poor academic** performance
 - Develops into **adult anxiety/depressive** disorders
 - Higher risk of **substance use**
- With **Anxiety** diagnosis
 - **10-15%** will have depression



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Anxiety

Fear

- Emotional response to real or perceived imminent threat causing “fight or flight” reaction

Anxiety

- Anticipation of future threats causing muscle tension, vigilance, cautious or avoidant behaviors
 - Develops in childhood and persists if not treated
- Anxiety D/O **differ** in DSM-5 by **what induces fear**
- Anxiety is top complaint among **college students** seeking mental health services



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Types of Anxiety

Separation Anxiety-F93.0

- Preschool onset; Females > Males
- 4% children 1.6% teens 1.9% adults

Specific Phobias

- Onset prior to age 10; 2:1 Females to Males
- 5% children 16% teens 3-5% adults

Social Anxiety-F40.10

- Onset 8-15 years; Females > Males
- 7-9% in children, teens, and adults

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Types of Anxiety

Panic Disorder-F41.0

- Onset 20-24 years; 2:1 Females to Males
- 0.4% children 2-3% teens and adults

Agoraphobia-F40.0

- Onset < 35 years, may occur in children
- 1.7% teens and adults

Generalized Anxiety Disorder-F41.1

- Onset ~ 30 years; 2:1 Females to Males
 - symptoms of anxiety from young age
- 0.9% teens 2.9% adults



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Separation Anxiety
F93.0



Needle phobia
F43.231



Arachnophobia
F40.218



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Scope of Depression

- In US, rates of **severe** youth depression
 - increased from 5.9% to 8.2 % in a 5year period
- On average, **10 years lapse** between onset of symptoms and treatment*
- With **Depression** diagnosis
 - **75%** also have anxiety

*THE STATE OF MENTAL HEALTH IN AMERICA 2018
www.mentalhealthamerica.net



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Depression in SC

- **11 %** ages 12-17
 - At least one episode of Major Depressive episode in past year*
- **19%** of 9th-12th graders
 - Report seriously considering attempting suicide**
- **11%** of 9-12th graders
 - Report attempting suicide at least once**

*THE STATE OF MENTAL HEALTH IN AMERICA 2018
www.mentalhealthamerica.net

**Centers for Disease Control and Prevention. (2018)
<https://nccd.cdc.gov/Youthonline/App/Default.aspx>



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Suicide in SC

- **Suicide** was the **second leading cause of death** for persons aged 10–14, 15–19, and 20–24 in 2017 in SC*
- **Suicide rate** was 53% higher in 2016 than the Healthy People 2020 target and 16% higher than the national rate**

*<https://www.cdc.gov/nchs/products/databriefs/db352.htm>

**<https://www.scdhec.gov/sites/default/files/media/document/SC%20Suicide%20Fact%20Sheet-%202016%20Data.pdf>



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Types of Depression

Disruptive Mood Dysregulation Disorder DMDD

- **2-5%** in children; Males > Females
- Persistent **irritability/anger** present most days
- **Frequent** episodes of **out-of-control** behavior
- F34.8

Major Depressive Disorder MDD

- **2%** in children; **4-8%** in teens
- 1:1 M:F in children; 2:1 F:M in teens
- F32.9 with specifiers



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Disruptive Mood Dysregulation Disorder



- **New** DSM5 category to mitigate frequency of Bipolar Disorder Diagnoses
- Outbursts can last up to **8 hours**
- Diagnosed **before age 10**



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Types of Depression

Persistent Depressive Disorder(Dysthymia)

- **2-5%** in children and teens; Males>Females
- F34.1

Premenstrual Dysphoric Disorder-N94.3

- **1.5% to 5.8%** in menstruating females

Differences in DSM-5 Depression Disorders are in **duration** and **timing**



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Risk Factors

Genetics and Environment

- **Anxious parents'** children are **5x more likely** to develop early anxiety and depression
- **Depressed parents'** children at high risk for early anxiety and depression
- Parental **rejection** associated with **depression**
- Parental **control** associated with **anxiety**
- Familial risk is **genetic** AND related to shared **environmental stressors**



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2) Evaluation

- Focused assessment of mental health issues
 - Family, Patient, School, Other settings
- **ADHD** is often an **undiagnosed underlying** disorder in Anxiety and Depressive Disorders
- If you as PCP, **Diagnose and Treat ADHD*** often symptoms of Anxiety and Depression improve without other interventions or medications

*Clinical Practice Guideline for the Diagnosis, Evaluation and Treatment of Attention-Deficit/Hyperactivity Disorder (ADHD) in Children and Adolescents
<https://doi.org/10.1542/peds.2019-2528>



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Normal vs Abnormal?

- **“Normal”** for teens does not mean always happy, easy, or functioning 100% of the time
- **“Abnormal”** is the clinician’s judgement
 - Excessive, out of proportion **fears/worry** more days than not for at least 6 months
 - Extended **sadness**, other symptoms for 2 weeks
 - Symptoms **inconsistent** with development levels
 - **Impairment in functioning** in home, school, social/sport activities, and relationships



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Focused Assessment

- Family and Patient's **Chief Complaints**
- **History** of symptoms-mostly insidious onset
 - Behavioral symptoms
 - Cognitive impact-Teacher reports helpful
 - Physical symptoms
- **Functioning level *****
- **PMH, Fam HX, Psychosocial Hx, ROS**



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Clinical Interview

SIGECAPS-Depression

- Sleep
- Interest
- Guilt
- Energy
- Concentration
- Appetite
- Psychomotor
- Suicidality

FISP-Anxiety

- Feeling nervous, Fearful, Fatigue
- Irritability, Inability to relax
- Sleep difficulties, cannot Stop worry, cannot Sit still
- Panic, Poor concentration



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Medical Differential

- Thyroid disease
- Vitamin D deficiency
- Epstein Barr infection
- Anemia
- HIV
- Neurodegenerative disorders
- Hepatitis
- Inflammatory Bowel
- Collagen Vascular
- CNS Disorders
- Side effects of medications

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Differential

- **Anxiety/ Depression** symptoms are **Insidious**
- **Sudden** onset of symptoms -consider
 - Head trauma
 - Physical or sexual abuse
 - Major psychological stress in family or school, such as domestic violence or bullying



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Screening

- **Pediatric Symptom Checklist-** 35 questions
 - Parents (**PSC-35-Parent**) and Youth (**PSC-35-Y**)
 - Ages 4-16 and PSC-35-Youth for ages 11 and up
 - Assess **psychosocial** function
 - Responses are scored- Total possible is 70
 - Never = 0, Sometimes = 1 or Often = 2
 - Ages 6-16, **possible problem score is 28 or higher**
 - Ages 3-5, **possible problem score is 24 or higher**
 - Ignore items 5,6,17, and 18 (school-related)-Total is 62

<https://www.massgeneral.org/psychiatry/treatments-and-services/pediatric-symptom-checklist/>



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Screening

- Subscales of PSC-35 by parent or patient
 - **Attention**
 - Questions 4, 7, 8, 9, 14
 - Possible problem score is **7 or higher**
 - **Anxiety/Depression (Internalizing)**
 - Questions 11, 13, 19, 22, 27
 - Possible problem is **5 or higher**
 - **Conduct (Externalizing)**
 - Questions 16, 29, 31, 32, 33, 34, 35
 - Possible problem score is **7 or higher**

<https://www.massgeneral.org/psychiatry/treatments-and-services/pediatric-symptom-checklist/>



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Screening

- **Pediatric Symptom Checklist-17**
 - Parent (**PSC-17-Parent**) and Youth(**PSC-17-Y**)
 - Overall possible problem score is **15 or higher**
- **Attention** Subscale
 - Questions 6-10
 - Possible problem score is **7 or greater**
- **Anxiety/Depression (Internalizing)**
 - Questions 1-5
 - Possible problem score is **5 or greater**
- **Conduct (Externalizing)**
 - Questions 11-17
 - Possible problem is **7 or greater**

<https://www.massgeneral.org/psychiatry/treatments-and-services/pediatric-symptom-checklist/>



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Screening

- **PHQ-9** for Depression
 - Not at all = 0; Several days = 1; More than half the days = 2; Nearly every day = 3
 - Total Score Depression Severity
 - 1-4 **Minimal** depression
 - 5-9 **Mild** depression
 - 10-14 **Moderate** depression
 - 15-19 **Moderately severe** depression
 - 20-27 **Severe** depression



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Screening

- **GAD 7** for Anxiety
 - 0 = Not at all, 1 = Several days, 2 = More than half the days, 3 = Nearly every day
 - Total scores of 5 = **Mild** anxiety 10 = **Moderate** 15 = **Severe** Anxiety
- **SCARED** (Screen for Child Anxiety Related Emotional Disorders)-parent and child versions



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Screening

GAD-7

Over the last 2 weeks, how often have you been bothered by the following problems?

	Not at all	Several days	More than half the days	Nearly every day
1. Feeling nervous, anxious or on edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3
3. Worrying too much about different things	0	1	2	3
4. Trouble relaxing	0	1	2	3
5. Being so restless that it is hard to sit still	0	1	2	3
6. Becoming easily annoyed or irritable	0	1	2	3
7. Feeling afraid as if something awful might happen	0	1	2	3

Total Score — = Add Columns — + — + —

If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all	Somewhat difficult	Very difficult	Extremely difficult
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Follow up screening results from any of these screening instruments is an additional help in monitoring severity and improvements or worsening in mental health



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Screening

• NICHQ Vanderbilt Assessment Scale-PARENT

- Inattentive ADHD-Questions 1-9
- Hyperactive/Impulsive ADHD-Questions 9-18
- Combined Type ADHD-Questions 1-18
- Oppositional-Defiant Disorder 19-26
- Conduct Disorder-Questions 27-40
- Anxiety/Depression Screen-Questions 41-47
- Performance Questions 48-55

https://www.nichq.org/sites/default/files/resource-file/NICHQ_Vanderbilt_Assessment_Scales.pdf



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Screening

• NICHQ Vanderbilt Assessment Scale- TEACHER

- Inattentive ADHD-Questions 1-9
- Hyperactive/Impulsive ADHD- Questions 10-18
- Combined ADHD-Questions 1-18
- Oppositional Defiant/Conduct Disorder-19-28
- Anxiety/Depression-Questions 29-35
- Performance Questions 36-43

https://www.nichq.org/sites/default/files/resource-file/NICHQ_Vanderbilt_Assessment_Scales.pdf



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3) Coexisting Conditions

• SLEEP MATTERS !

• Daytime sleepiness

- **impairs** concentration, attention span, memory, ability to convert short term memory into long term memory and may lead to loss of inhibition of prefrontal cortex causing **behavior problems**

- **Sleep disorders** occur in up to **30%** of children and teens

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1432166>



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Coexisting Conditions

• SLEEP MATTERS !

- Teenagers need between 8.50 and 9.25 hours of sleep each night
- Children ages 5 through 12 need between 10 and 11 hours of sleep per night
- Adults need 7 to 9 hours

<https://www.sleepfoundation.org/sleep-disorders/>



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Coexisting Conditions

- **Bereavement**
- **Neurodevelopmental Disorders**
 - ADHD, any subtype
 - Specific Learning disorders-Reading, Math, Written expression
 - Communication disorders-Language, Speech
 - Motor disorders- Tourette's, Tics
 - Autism Spectrum disorder
 - Intellectual disabilities



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Stuttering

ADHD

Tic Disorder

Reading Disability
Dyslexia

Math Disability
Dyscalculia

I DON'T HAVE
ADHD, I JUST
DO YOU LIKE
WAFFLES?



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Coexisting Conditions

• Behavioral Disorders

- Oppositional Defiant disorder-ODD
- Conduct disorder

• Sleep Disorders

- Insomnia, Hypersomnia, Parasomnias
- Circadian (biological clock) rhythm disorders
- Breathing-related- Snoring, Sleep Apnea, OSA, or CSA
- Narcolepsy- irresistible falling asleep
- Movement disorders -Restless Legs syndrome, Sleepwalking
- Disrupted sleep from GERD, Bedwetting, Nightmares/ Night terrors



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Coexisting Conditions

• Mood disorders

- Obsessive Compulsive and related disorders
- Trauma disorders
- Stressor-Related disorders
- Bipolar disorders

• Schizophrenia

spectrum and psychotic disorders

• Personality disorders

• Substance Use disorders



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Coexisting Conditions

- **60-70%** patients with anxiety or depression
 - have at least **one** coexisting disorder
- **10-15%** patients with anxiety or depression
 - have **2 or more** coexisting disorders
- The higher the number of coexisting conditions the **greater** the **impairments** in function

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4) Self-Management

- **Teach Patient/Parent**
 - **Breathing** Techniques
 - **Relaxation** Techniques
 - **Mental imagery** so that worries float away
 - **Safe place** imagery
 - **Thought stopping** or **Thought substituting**
 - **Positive self-talk**



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Self-Management

- **Exercise** daily
- Get enough **sleep**
- Eat **well- balanced diet**
- Practice **relaxation techniques**
 - Yoga
 - Mindfulness
- **Stop** consumption of caffeinated drinks
- Consider **expressive writing/journaling**

<https://www.mhanational.org/infographic-b4stage4-changing-way-we-think-about-mental-health>



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Parenting Tips

- Every child “wants” to be good!
 - **Reward** positive behaviors
 - Practice **Active listening** and **Validation of feelings**
 - Be **Clear** and **Give requests** with as few steps as possible
 - **Set** and **Explain** limits
 - Give **Consistent, CALM** responses to negative behaviors
 - Learn **De-escalation** techniques
 - Help your child learn to “**Reframe**”
 - Focus on **Strengths** not weaknesses
 - **Increase Enjoyable** activities together
 - **BUILD RESILIENCE**

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Positive Parenting Works
Focus on Resilience



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Behavioral Therapy

• Anxiety

- CBT-Cognitive Behavior Therapy
- PCIT (Parent-Child Interaction Therapy)
 - for ages 2-7

• Depression

- CBT-Cognitive Behavioral Therapy
- Interpersonal Psychotherapy (IPT)
- Group CBT



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Pharmacologic

Anxiety

- **SSRIs**-Selective Serotonin Reuptake Inhibitors
- Other Medication Options
 - **Anxiolytics**
 - **SNRIs** (Selective Norepinephrine Reuptake Inhibitors)
 - **TCAs** (Tricyclic Antidepressants)



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Pharmacologic

Depression

- **Counseling (CBT) plus medication(SSRIs) are BEST**
- Other Medication Options
 - **SNRIs** (Selective Norepinephrine Reuptake Inhibitors)
 - **TCAs** (Tricyclic Antidepressants)
 - **Atypical Antidepressants** like Wellbutrin (NDRI)
 - Norepinephrine/Dopamine Reuptake Inhibitor



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Choosing Medications

Genetic testing can detect variants

- **Pharmacodynamic genes**

- Indicate the effect a medication has on the body
- Can inform drug candidate selection

- **Pharmacokinetic genes**

- Indicate the effect the body has on the drug via metabolism
- Can inform drug dosage



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Choosing Medications

- **Family history** of success with medication
- **Genetic testing** information
- **FDA approved** for condition and age group
 - Off Label Use
- **Side Effect Risk**
- Previous experience of clinician



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Antidepressants

Medication SSRIs	Indication	Age	Initial Dose	Maximum
Fluoxetine (Prozac)	MDD*, OCD**	MDD 8 or > OCD 7 or >	5-20 mg	20 mg up to 80 mg
Sertraline (Zoloft)	OCD	6 or >	25 mg	200 mg
Fluvoxamine (Luvox)	OCD, SAD***	8 or > >18	25 mg	200 mg 300 mg

*MDD=Major Depressive Disorder **OCD=Obsessive Compulsive Disorder

***SAD=Social Anxiety Disorder



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Antidepressants

Medication- SSRIs	Indication	Age	Initial Dose	Maximum
Escitalopram (Lexapro)	MDD, GAD* >18	12 or >	10 mg	20 mg
Citalopram (Celexa)	MDD	18 or >	20 mg	40 mg
Paroxetine (Paxil)	MDD, OCD, SAD, GAD, PTSD**	18 or >	10 mg	60mg

*GAD=Generalized Anxiety Disorder

**PTSD=Post-Traumatic Stress Disorder



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Antidepressants

Medications SNRIs	Indication	Age	Initial Dose	Maximum
Duloxetine (Cymbalta)	GAD* MDD**	7 or > 18 or >	30 mg	120 mg
Venlafaxine (Effexor)	MDD, GAD, SAD***	Adol 18 or >	37.5 mg	225 mg
Desvenlafaxine (Pristiq) (Brand only)	MDD GAD(ol) SAD(ol)	7-17 18 or >	25 mg 50 mg	200 mg 400 mg-adults

*GAD=Generalized Anxiety Disorder **MDD=Major Depressive Disorder

***SAD=Social Anxiety Disorder (ol)=off label



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Antidepressants

Atypical Meds	Indication	Age	Initial Dose	Maximum
Bupropion (Wellbutrin) NDRI	MDD May help ADHD(ol)	6 or > Adol	3mg/kg/d 75 mg 150 mg	150-250 mg (6mg/kg) 450 mg for XL
XL-1x/d; SR-2x/d; IR-3x/d	Smoking cessation		for XL	XL
Trazodone (Desyrel)	Insomnia (ol) MDD	18 mo 18 or >	25 mg 150 mg	100 mg < 3 y 150 mg 600 mg

ol=off label



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Antidepressants

Medications- Atypical	Indication	Age	Initial Dose	Maximum
Mirtazapine (Remeron) NASSA	MDD* SAD**	>3 7 and up	7.5 mg 15 mg	45 mg
Vilazodone (Viibryd)-SSRI + (Brand only)	MDD GAD*** OCD****	12-17 18 or >	5 mg 10 mg	40 mg
Vortioxetine (Trintellix)-SSRI+ (Brand only)	MDD GAD	7-18 18 or >	5 mg	20 mg

*MDD=Major Depressive Disorder; **SAD=Social Anxiety Disorder;
GAD=Generalized Anxiety Disorder; *OCD=Obsessive Compulsive Disorder



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Antidepressants

Medications TCAs	Indication	Age	Initial Dose	Maximum
Clomipramine (Anafranil)	OCD MDD	10 or > 18 or >	25 mg 25 mg	200 mg 250 mg
Amitriptyline (Elavil)	MDD Headache	12 or >	25 mg 10 mg	300 mg



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Anxiolytics

Medications	Indication	Age	Initial Dose	Maximum
Alprazolam (Xanax) (SCH IV)	GAD*, Panic DO	18 or >	0.25 mg	4-6 mg (adults)
Buspirone (BuSpar)	GAD	6 or >	7.5 mg BID	60 mg
Clonazepam (Klonopin) (SCH IV)	Seizures Panic DO	Children 18 or >	1.5 mg 0.25 mg TID	20 mg 4 mg

*GAD=Generalized Anxiety Disorder



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Anxiolytics

Medications	Indication	Age	Initial Dose	Maximum
Hydroxyzine (Vistaril)	Anxiety Sedation	6 or > Under 6	10 mg 0.6 mg/kg	100 mg- divided 100 mg
Lorazepam (Ativan) (SCH IV)	Sedation (IV-IM) Anxiety	18 or > 18 or >	0.5 up to 2 mg BID-TID	10 mg
Temazepam (Restoril) (SCH IV)	Insomnia	18 or >	7.5 mg	30 mg



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Others

Medications- Antipsychotic	Indication	Age	Initial Dose	Maximum
Quetiapine (Seroquel)	Schizophrenia Bipolar Depression augmentation Sleep (ol) Behavior (ol) Poor impulse control (ol)	10 or >	25 mg	800 mg

ol = Off Label



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Others

2 nd gen antipsychotics	Indication	Age	Initial Dose	Maximum
Aripiprazole (Abilify)	Autism Irritability Tourette's DO Depression augmentation	6 or > 6 or >	2 mg	20 mg
Risperidone (Risperdal)	Autism Irritability	5 or >	0.25 mg	3 mg



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CBD Oil

CBD-Cannabidiol oil

- Extracted from industrial hemp *Cannabis sativa*
- **Not** psychoactive-THC < 0.3%
- Reacts with Endocannabinoid System (ECS)
 - ECS maintains homeostasis connecting all organs/systems*

*Cannabidiol (CBD) Critical Review Report. Expert Committee on Drug Dependence Fortieth Meeting. World Health Organization. Geneva 2018 Jun 4-7



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CBD Oil

- Only FDA approved use in children is *Epidiolex*[®]
 - use in intractable epilepsy Dravet syndrome, Lennox-Gastaut syndrome
 - lack of regulation in production and distribution pose current problems
- Most research currently in chronic pain and addiction* but stay tuned

*Clinicians' Guide to Cannabidiol and Hemp Oils Mayo Clin Proc. 2019;94(9):1840-1851



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