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healing young minds & hearts

# Commonly Used Psychotropic Medications

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# Disclosure

- There are no disclosures to report.
- This is not an FDA approved talk, and medications and topics discussed may be off label.

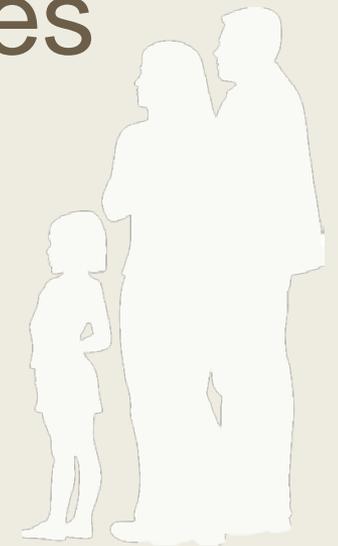


# Objectives

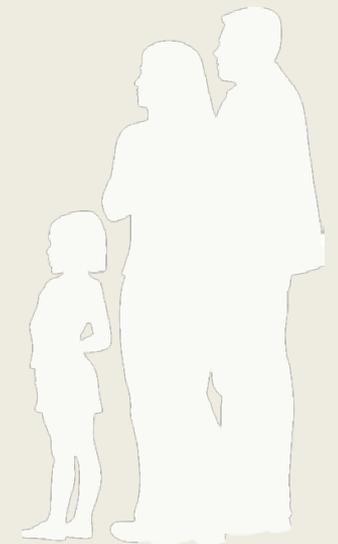
- Identify the most common mental health issues in children and adolescents
  - Mood Disorders
  - Anxiety
  - ADHD
- Psychotropic treatment in children and adolescents



# Common Mental Health Issues



# Mood disorders



# Mood disorders

- Also known as Affective disorders
  - Depressive disorders
  - Bipolar disorders
  - Disruptive mood dysregulation disorder

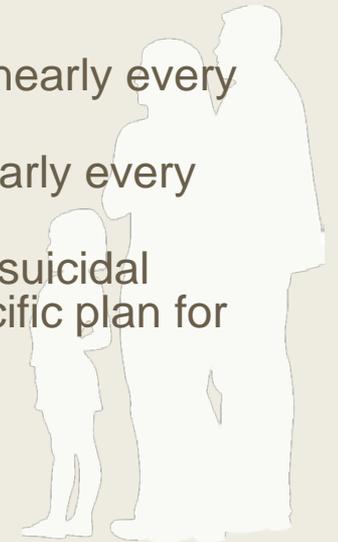


# Depression



# Major Depressive Disorder- DSM-V

- 5 or more of the following symptoms are present during a two week period and represent a change from previous functioning.
  1. Depressed mood most of the day, nearly every day
  2. Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day
  3. Significant weight loss or weight gain, or decrease or increase on appetite nearly every day.
  4. Insomnia or hypersomnia nearly every day
  5. Psychomotor agitation or retardation nearly every day
  6. Fatigue or loss of energy nearly every day
  7. Feeling of worthlessness or excessive or inappropriate guilt nearly every day
  8. Diminish ability to think or concentrate, or indecisiveness, nearly every day
  9. Recurrent thought of death (not just fear of dying), recurrent suicidal ideations without a specific plan, or suicide attempt or a specific plan for committing suicide



# Depression-Symptoms

- Feeling or appearing depressed, sad, tearful or irritable
- Not enjoying things as much as they used to
- Spending less time with friends or in after school activities
- Feeling tired or having less energy
- Feeling like everything is their fault or they are not good for anything
- Having trouble concentrating
- Caring less about school or not doing as well in school
- Having thoughts of suicide or wanting to die



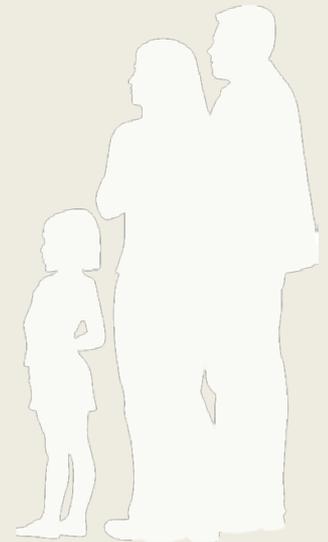
# Depression

- Prevalence of MDD is estimated to be approximately 2% in children and 4-8% in adolescents.
  - Male to female ratio
    - 1:1 in children
    - 1:2 in adolescents
- 5-10% of children and adolescents have sub syndrome symptoms of depression



# Depression

- Early identification and effective treatment may reduce the impact of depression on the family, social and academic functioning.
  - May reduce the risk of suicide, substance abuse and persistence of depressive disorders into adulthood.
- Possible causes of depression
  - Stress
  - Loss
  - Changes in the household
  - Bullying
  - Genetic loading



# Bipolar Disorder



# DSM-5 Criteria for Bipolar Disorder

- For a diagnosis of Bipolar I disorder, it is necessary to meet the following criteria for a manic episode which may have been preceded by and may be followed by hypomanic or major depressive episodes
- Manic Episode
  - A distinct period of abnormally and persistently elevated, expansive or irritable mood and abnormally and persistently increase goal directed activity or energy, lasting at least 1 week and present most of the day, nearly every day.
  - During the period of mood disturbance and increased energy or activity (3 or more) of the following symptoms are present.



# DSM-5 Criteria for Bipolar disorder

- 1. Inflated self esteem or grandiosity
- 2. Decreased need for sleep
- 3. More talkative than usual or pressure to keep talking
- 4. Flight of ideas or subjective experience that thoughts are racing
- 5. Distractibility
- 6. Increase in goal directed activity
- 7. Excessive involvement in activities that have high potential for painful consequences.



# Bipolar disorder

- Bipolar disorder is a mental disorder that causes people to experience noticeable, sometimes extreme, changes in mood and behavior.
- Bipolar disorder in children is not the same as the normal ups and downs every child goes through.
- The mood changes on Bipolar disorder are more extreme, often unprovoked, and accompanied with changes in sleep, energy level and the ability to think clearly.



# Bipolar Disorder

- Children and teens having a manic episode may:
  - Show intense happiness or silliness for long period of time
  - Have a very short temper or seem extremely irritable
  - Talk fast about a lot of different things
  - Have trouble sleeping but not feel tired
  - Have trouble staying focused and experiencing racing thoughts
  - Seem overly interested or involve in pleasurable but risky activities
  - Do risky or reckless things that show poor judgement



# Bipolar disorder

- Children and teens having a depressive episode may:
  - Feel frequent and unprovoked sadness
  - Show increased irritability, anger or hostility
  - Complain a lot about pain
  - Have a noticeable increase in amount of sleep
  - Have difficulty concentrating
  - Feel hopeless and worthless
  - Have difficulty communicating or maintaining relationships
  - Eat too much or too little
  - Have little energy or no interest in activities they usually enjoy
  - Think about death or have thought about suicide



# Bipolar disorder

- A person with Bipolar disorder might have a manic episode, a depressive episode or a mixed episode
- Some person with Bipolar disorder might develop psychotic symptoms.
- Signs and symptoms may overlap with symptoms of other disorders that are common in young people, such as ADHD, conduct problems, major depression and anxiety disorder.



# Bipolar disorder

- Most people are diagnosed in adolescence or early adulthood, but the symptoms can appear earlier in childhood.
- Symptoms are episodic, but it usually last a lifetime.



# Bipolar disorder

- An estimated 2.9% of adolescents have Bipolar disorder
- 2.6% have severe impairment.
- Prevalence in adolescents is higher for females (3.3%) than for males (2.6%)
- High level of comorbid disorders to include
  - ADHD
  - Misuse of alcohol and drugs
  - Anxiety disorders

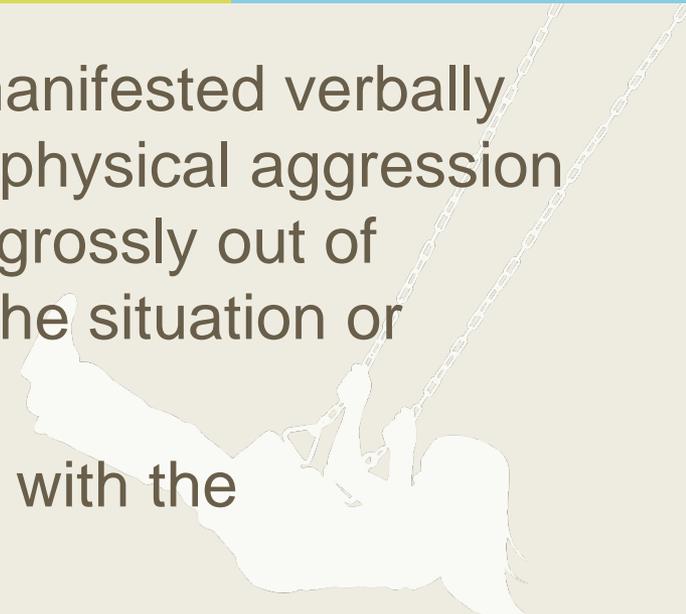


# Disruptive Mood Dysregulation Disorder



# DMDD- DSM V Criteria

- Severe recurrent temper outbursts manifested verbally (verbally rages) and/or behaviorally (physical aggression towards people or property) that are grossly out of proportion in intensity or duration to the situation or provocation.
- The temper outbursts are inconsistent with the developmental level.
- The temper outbursts occur, on average, three or more times per week.
- The mood between outbursts is persistently irritable or angry most of the day, nearly every day, and is observable by others.



# DMDD

- DMDD is a new disorder created to more accurately categorize some children who had previously diagnosed with pediatric bipolar disorder.
- These children do not experience the episodic mania or hypomania characteristic of bipolar disorder, and they do not typically develop adult bipolar disorder.
- They are at elevated risk for depression and anxiety as adult.

# DMDD

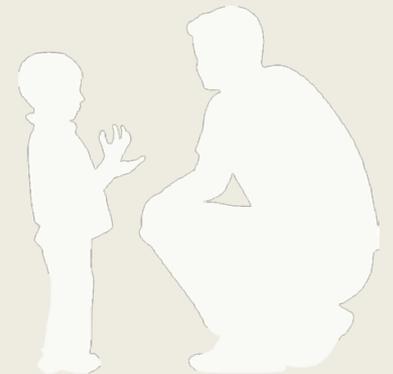
- Occasional temper tantrums are a normal part of growing up.
- However, when children are usually irritable or angry or when temper tantrums are frequent, intense and ongoing, it may be signs of a mood disorder such as DMDD

# DMDD

- The prevalence of DMDD among children and adolescents is estimated to fall into the 2%-5% range
- Unlike pediatric bipolar disorder, DMDD is thought to occur more often in boys than in girls.



# Anxiety



# Anxiety

- Anxiety disorders represent one of the most common forms of psychopathology among children and adolescents
  - They often go undetected or untreated.
- Early identification and effective treatment may reduce the impact of anxiety on academic and social functioning in youths and may reduce the persistence of anxiety disorder into adulthood.
- Prevalence rates of having at least one childhood anxiety disorder vary from 6%-20% on several large epidemiologic studies



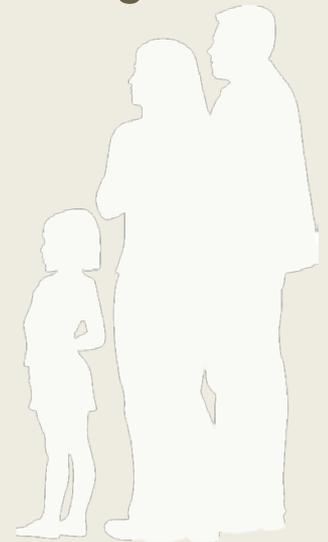
# Anxiety

- Fear and worry are common in normal children.
  - Sometimes it is needed to distinguish normal, developmentally appropriate worries, fears, and shyness from anxiety disorders that significantly impair a child's functioning.
  - Fears during childhood represent a normal developmental transition and may develop in response to perceive dangers, but they become problematic if they do not subside with time and if they impair child's functioning
  - Children with anxiety disorders may present with fear or worry and may not recognize their fear as unreasonable.



# Anxiety

- Children commonly have somatic complaints of headaches and stomachaches.
- The crying, irritability, and angry outbursts that often accompany anxiety disorders in youth may be misunderstood as oppositionality or disobedience, when in fact represent the child's expression of fear or effort to avoid anxiety provoking stimulus.



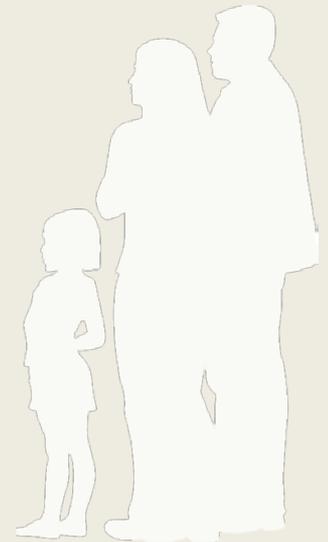
# Anxiety

- Symptoms of separation anxiety include:
  - Constant thoughts and intense fear about the safety of parents and caretakers
  - Refusal to go to school
  - Frequent stomachaches and other physical complaints
  - Extreme worries about sleeping away from home
  - Being overly clingy
  - Panic or tantrums at times of separation from parents
  - Trouble sleeping or nightmares



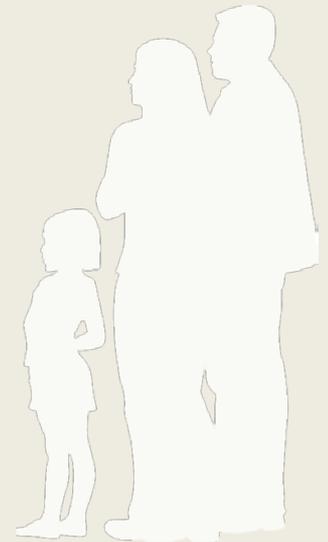
# Anxiety

- Symptoms of phobia:
  - Extreme fear about a specific thing or situation
  - Fears causing significant distress and interfering with usual activities
- Symptoms of social anxiety include:
  - Fear of meeting or talking to people
  - Avoidance of social situations
  - Few friends outside the family



# Anxiety

- Other symptoms of anxious children and adolescents
  - Many worries about things before they happen
  - Constant worries or concerns about family, school, friends, or activities
  - Repetitive, unwanted thoughts (obsessions) or actions (compulsions)
  - Fears of embarrassment or making mistakes
  - Low self esteem and lack of self-confidence



# ADHD



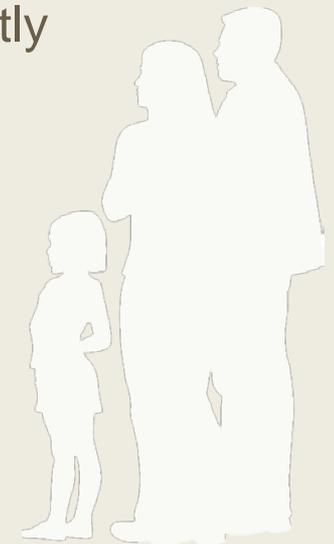
# ADHD- DSM-V criteria

- A persistent pattern of inattention and/or hyperactivity-impulsivity that interfere with functioning or development:
  1. Inattention-6 or more symptoms of inattention for children up to age 16, present for at least 6 month and they are inappropriate for the developmental level
    1. Often fails to give close attention to details or makes careless mistakes in schoolwork, at work, or with other activities
    2. Often has trouble holding attention on tasks or play activities
    3. Often does not seem to listen when spoken to directly
    4. Often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace
    5. Often has trouble organizing tasks and activities
    6. Often avoids, dislikes, or is reluctant to do tasks that require mental effort over a long period of time
    7. Often loses things necessary for tasks and activities
    8. Is often easily distracted
    9. Is often forgetful in daily activities



# ADHD- DSM-V criteria

- Hyperactivity and impulsivity: Six or more symptoms for children up to age 16, symptoms have been present for at least 6 months to an extent that is disruptive and inappropriate for the person's developmental level
  - Often fidget with or taps hands or feet, or squirms in seat
  - Often leaves seat in situations when remaining seated is expected
  - Often runs about or climbs in situations where it is not appropriate
  - Often unable to play or take part in leisure activities quietly
  - Is often “on the go” acting if “driven by a motor”
  - Often talks excessively
  - Often blurts out answer before a question is completed
  - Often has trouble waiting his/her turn
  - Often interrupts or intrudes on others



# ADHD

- A child with ADHD often shows some of the following:
  - Trouble paying attention
  - Inattention to details and makes careless mistakes
  - Easily distracted
  - Losses school supplies, forgets to turn in homework
  - Trouble finishing class work and homework
  - Trouble listening
  - Trouble following multiple adult commands



# ADHD

- Blurts out answers
- Impatience
- Fidget or squirms
- Leaves seat and runs about or climbs excessively
- Seems "on the go"
- Talks too much and has difficulty playing quietly
- Interrupts or intrudes on others



# ADHD

- There are three types
  1. ADHD - inattentive subtype
    - Children have only difficulty with attention and organization
  2. ADHD – Hyperactive subtype
    - Children have only difficulty with hyperactive and impulsive behaviors
  3. ADHD – Combined type
    - Children have difficulties with attention and hyperactivity
    - This is the most common subgroup



# ADHD

- Any child may show inattention, distractibility, impulsivity, or hyperactivity at times, but the child with ADHD shows these symptoms and behaviors more frequently and severely than other children of the same age or developmental level.
- ADHD occurs in 3-5% of school age children.
- ADHD typically begins in childhood but can continue into adulthood.
- ADHD runs in families with about 25% of biological parents also having this medical condition.

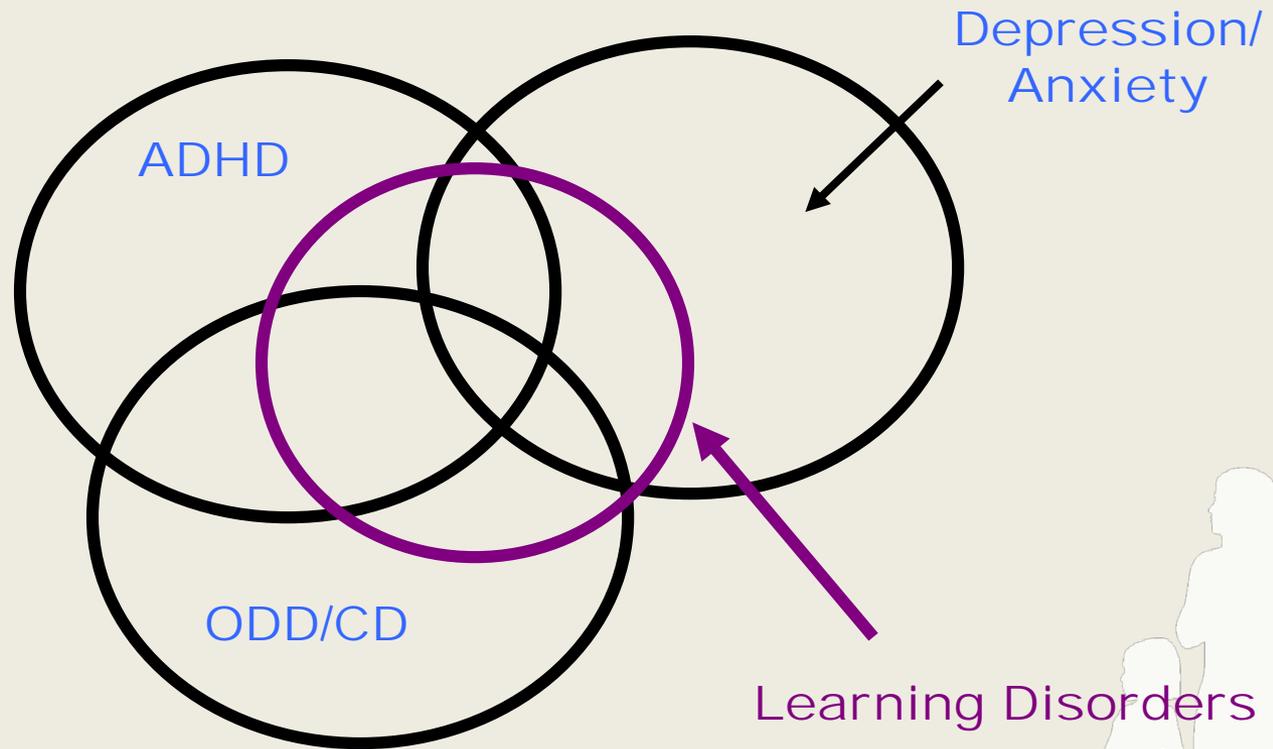


# ADHD

- Even though the child with ADHD often want to be a good student, the impulsive and difficulty paying attention in class frequently interferes and causes problems.
- Parents and teachers know that the child is misbehaving or different but they may not be able to tell exactly what is wrong
- A child presenting with ADHD symptoms should have a comprehensive evaluation.
- Without proper treatment, the child may fall behind in schoolwork and friendships may suffer, as well his/hers self esteem.

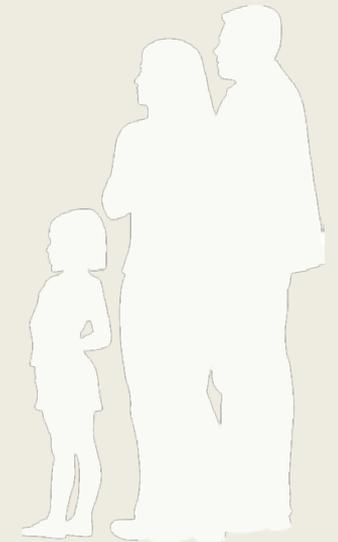


# Comorbidities

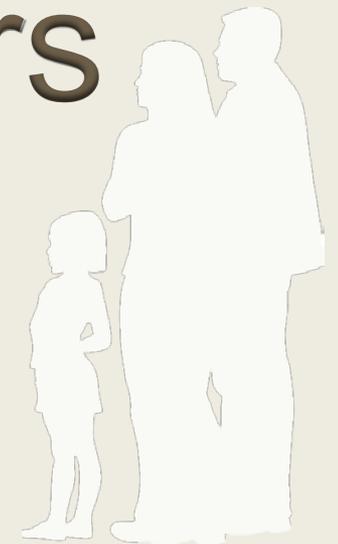


# Medication Categories

- Mood Stabilizers
  - Antipsychotics
  - Classic Mood Stabilizers
- Antipsychotics
- Antidepressants
  - SSRI's
  - Tricyclics
  - -Other
- Sleep Medications
- Antianxiety
  - SSRI's
  - Benzodiazepines
  - Other
- ADHD Medications
  - Stimulants
  - Non-stimulants
- Miscellaneous



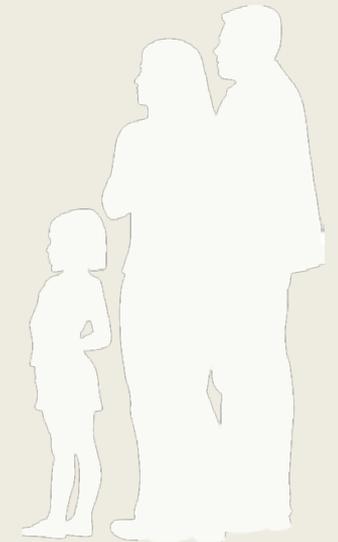
# Mood stabilizers



# Atypical Antipsychotics

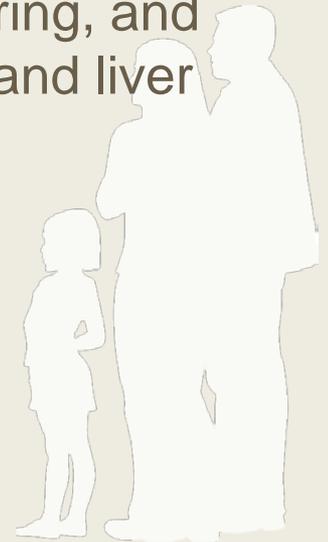
- Medications:

- » Risperdal/M-tab/suspension (risperidone)
- » Zyprexa (olanzapine)/Zydis
- » Seroquel/XR (quetiapine)
- » Clozaril (clozapine)
- » Geodon (ziprasidone)
- » Abilify (aripiprazole)
- » Latuda (lurasidone)
- » Symbiax (olanzapine/fluoxetine)
- » Invega (paliperidone)
- » Saphris (asenapine)



# Atypical Antipsychotics

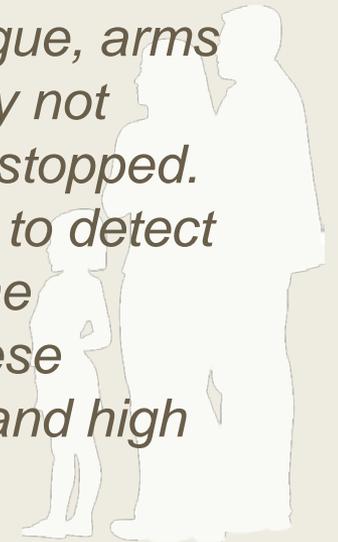
- **Some uses:** psychosis, bipolar disorder, agitation, aggression, autism, Tourette's Disorder
- Some available in tablet, IM, dissolvable, or liquid
- Clozaril needs frequent blood draws and monitoring, and others need monitoring of blood glucose, lipids, and liver function tests.



# Atypical Antipsychotics

- Side effects:

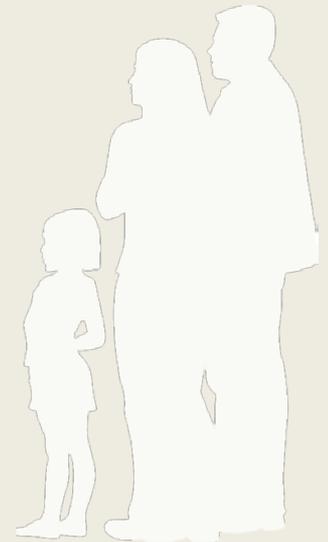
- » Common: *sleepiness, dizziness, increased appetite, weight gain with increased cholesterol, muscle stiffness, tremors (shakiness).*
- » Rare: *After many years of use of these medications can lead to being overweight, high blood pressure and risk of diabetes or high blood sugar and some may develop a twitching of the face, tongue, arms or legs called tardive dyskinesia that may not always go away when the medication is stopped. We will examine your teenager regularly to detect this early and we may take him/her off the medication. In extremely rare cases, these medications may cause muscle stiffness and high fevers that can be fatal.*



# Typical Antipsychotics

- Medications:

- » Mellaril (thioridazine),
- » Thorazine (chlorpromazine),
- » Moban (molindone),
- » Haldol (haloperidol),
- » Stelazine (trifluoperazine),
- » Prolixin (fluphenazine)
- » perphenazine



# Typical Antipsychotics

- **Some uses:** psychosis, agitation, aggression, autism, Tourette's Disorder, delirium.
- Some available in tablet or IM.
- These are older medications and have more side effects.
- **Common side effects:** See above under Atypicals. *Also:* seizures, aplastic anemia, NMS, EPS symptoms, thrombocytopenia, drowsiness, hypotension, jaundice, dry mouth, constipation



# Anticonvulsant Mood Stabilizers

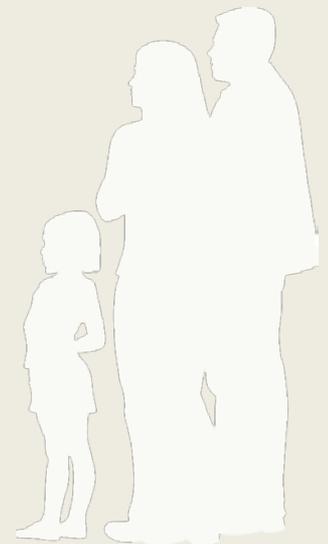
- Medications:

- » Depakote/Depakene (valproate/valproic acid)
- » Tegretol (carbamazepine)
- » Trileptal (oxcarbamazepine)
- » Neurontin (gabapentin)
- » Lamictal (lamotrigine)
- » Topamax (topiramate)
- » Keppra (levetiracetam)



# Anticonvulsant Mood Stabilizers

- **Some uses:** Bipolar disorder, mood regulation, aggression, explosive disorders, seizures, migraine prophylaxis
- These need frequent blood monitoring (initial level and 3-6 month levels), and baseline labs (especially liver function tests).
- Most of these are metabolized by the liver.



# Anticonvulsant Mood Stabilizers

- Side effects:

- » Common: *sleepiness, tremors, weight gain.*
- » Rare: *liver or pancreas problems, dizziness, confusion, changes in blood cell and platelet numbers, changes in vision, severe skin rash, and birth defects if taken when pregnant.*
- » ***Lamictal or Tegretol can cause a severe, possibly deadly allergic reaction where the skin blisters and falls off or the white count goes very low.. Please let the doctor know if there are any new rashes or changes of the skin.***



# Other Mood Stabilizers

- **Medications:**
  - » Lithium carbonate, Lithobid
- **Side effects:**
  - » Common: *sleepiness, tremors, weight gain, increased or decreased urination, increased thirst, worsening of acne, loose stools or diarrhea*
  - » Rare: *Thyroid or kidney problems, irregular heartbeat, confusion, brain injury if blood level goes to high, clumsiness and dizziness.*



# Other Mood Stabilizers

- **Some uses:** mood stabilization, antidepressant augmentation, aggression
- Lithium is excreted in the urine, so water intake and sweating need to be monitored.
- These need frequent blood level monitoring and baseline labs (especially renal function tests) to check for problems and to be sure the blood level of lithium is right.



# Antidepressants



# SSRI Antidepressants

- Medications:
  - » Prozac (fluoxetine),
  - » Zoloft (sertraline),
  - » Paxil (paroxetine),
  - » Celexa (citalopram),
  - » Luvox (fluvoxamine),
  - » Lexapro (escitalapram)



# SSRI Antidepressants

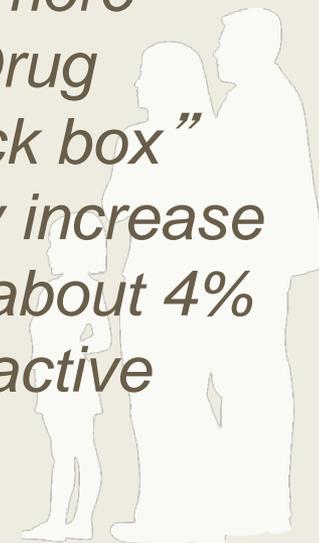
- **Some uses:** depression, anxiety, panic disorder, obsessive-compulsive disorder, PTSD, pain, headaches
- Some available in capsule, tablet, or suspension.
- No lab work needed for monitoring.
- Recent concern over increased suicide risk when using antidepressants in children and adolescents.



# SSRI Antidepressants

- **Side effects:**

- » Common: *headache, dizziness, stomachaches, nausea, loose stools or diarrhea, dry mouth, weight gain or loss (mild), sleepiness or insomnia.*
- » Rare: *Feeling excited, irritable or more depressed. The U.S. Food and Drug Administration has put out a “black box” warning that antidepressants may increase suicidal thoughts and behaviors (about 4% of the time compared to 2% on inactive medication).*



# Other Antidepressants

- Medications:
  - » Cymbalta (duloxetine),
  - » Effexor/XR (venlafaxine),
  - » Pristiq (desvenlafaxine)
  - » Wellbutrin/ SR/ XL (bupropion)
  - » Remeron (mirtazapine),
  - » trazodone



# Other Antidepressants

- **Side effects:**

- » Common: *headache, dizziness, stomachaches, nausea, loose stools or diarrhea, dry mouth, weight gain or loss (mild), sleepiness or insomnia.*
- » Rare: *Feeling excited, irritable or more depressed. The U.S. Food and Drug Administration has put out a “black box” warning that antidepressants may increase suicidal thoughts and behaviors (about 4% of the time compared to 2% on inactive medication).*

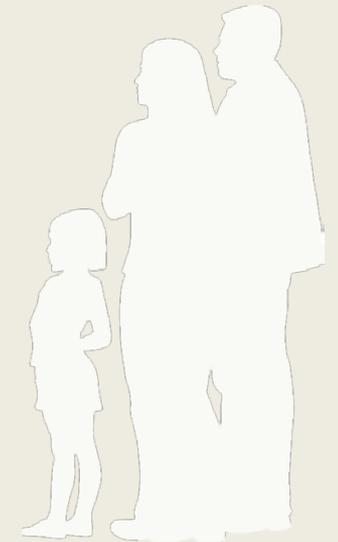


# Tricyclic Antidepressants

- **Meds**: Elavil (amitriptyline), Anafranil (clomipramine), Norpramin (desipramine), and Tofranil (imipramine)
- **Some uses**: depression, anxiety, chronic pain
- These can be fatal in overdoses, and need to be used only patients not thought to be high risk for suicide
- **Side effects**: See above under SSRI' s. *Also*: myocardial infarction, agranulocytosis, thrombocytopenia, dry mouth, drowsiness, confusion, tachycardia, urinary retention
- Repeat EKG' s are needed for monitoring.



# Anxiolytics



# Anxiolytics

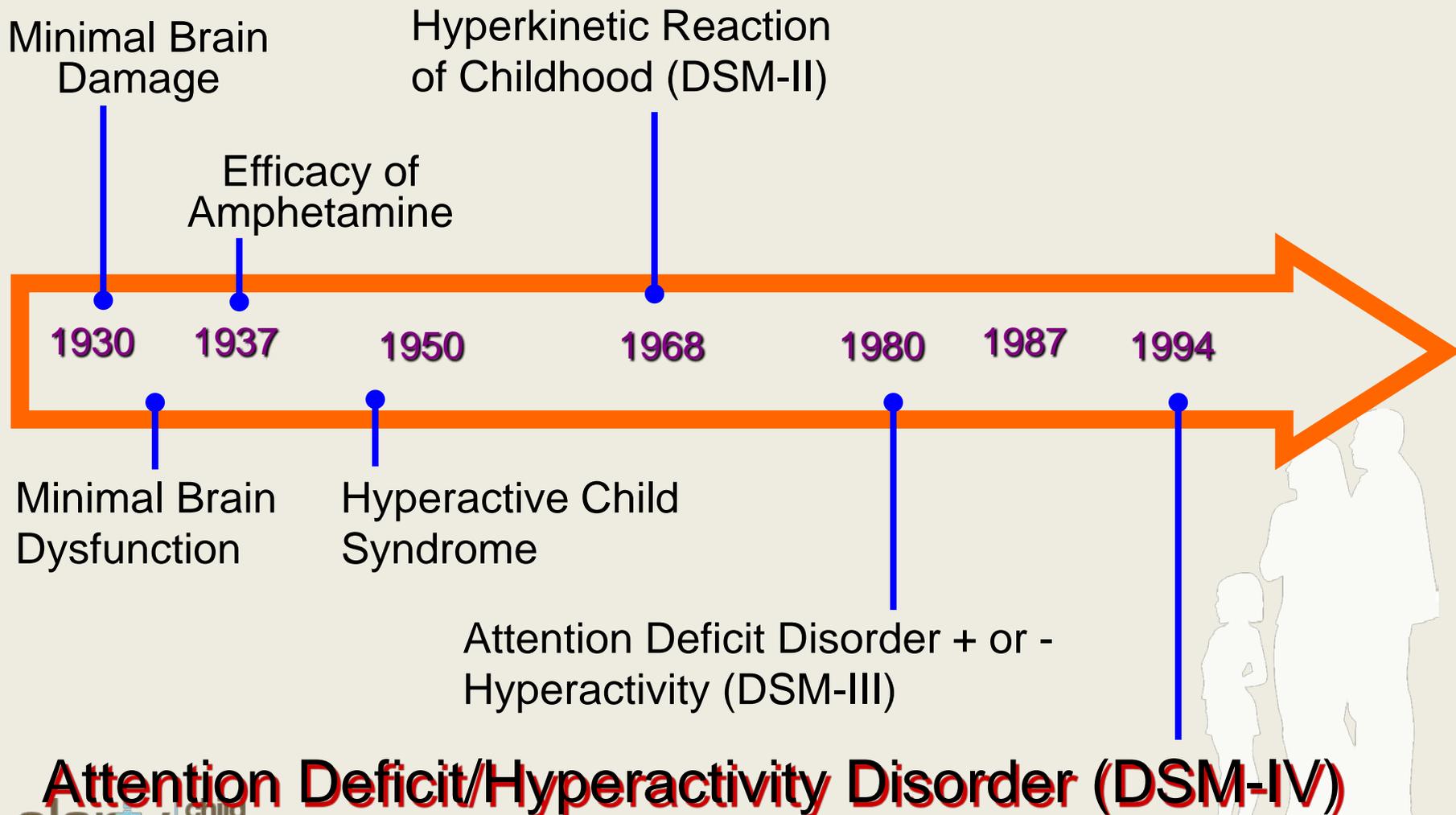
- ***Benadryl, Buspar (buspirone), Hydroxyzine*** – safe, minimal side effects
- ***SSRI's*** – see above
- ***Benzodiazepines***
  - Examples are Xanax (alprazolam), Ativan (lorazepam), Valium (diazepam), and Klonopin (clonazepam)
  - Common side effects: addiction, sedation, disinhibition



# ADHD Medications

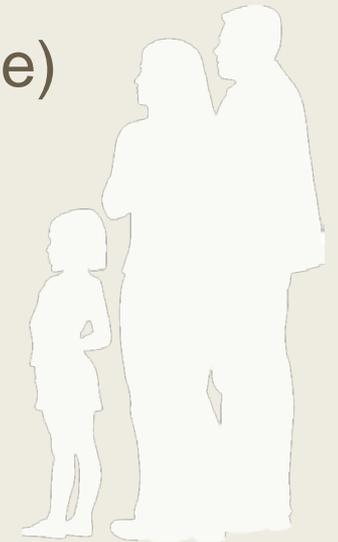


# ADHD – Historical Timeline



# ADHD Medications: Stimulants

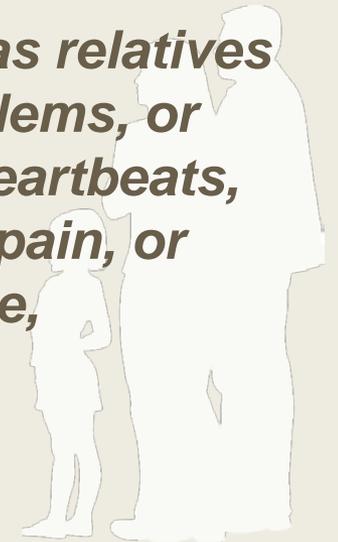
- Medications:
  - » Ritalin, Concerta, Ritalin LA, Metadate, Aptensio XR, Methylin, Quillichew ,Jornay (methylphenidate)
  - » Focalin, Focalin XR (d-methamphetamine)
  - » Adderall, Adderall XR (amphetamine/dextroamphetamine)
  - » Vyvanse (lisdexamfetamine)
  - » Adzenys XR, Dyanavel XR (amphetamines)
  - » Dexedrine (dextroamphetamine)



# ADHD Medications: Stimulants

- Side Effects:

- » Common: *headache, trouble sleeping, stomachaches, loss of appetite, weight loss.*
- » Rare: *Tics (twitching of the face, blinking or throat clearing, biting finger nails), increased irritability or excitability, decreased growth (possibly an inch over 3-8 years).*
- » ***Please tell your doctor if your child has relatives under 50 who have died of heart problems, or your child has a history of irregular heartbeats, heart murmurs, fainting spells, chest pain, or structural heart problems (for instance, abnormal heart valves).***



# ADHD Medications: Non-stimulants

- **Alpha-agonists** : Tenex (guanfacine), Intuniv, Catapres (clonidine), Kapvay
  - » Some uses: ADHD, ODD
  - » Side effects: *Sleepiness, low blood pressure, dizziness, dry mouth, dry eyes, blurry vision, headache, weakness, and decreased heart rate.*
  - » ***If your child has been taking this medication and suddenly stops it, his/her blood pressure can go up very high. If the medication needs to be stopped, you should discuss with your doctor how to go off this safely.***



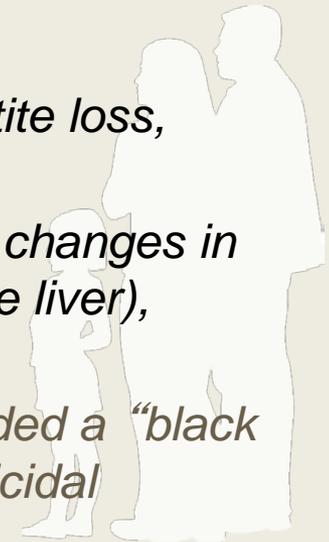
# ADHD Medications: Non-stimulants

- Wellbutrin (bupropion)

- » Side effects: See above under SSRI' s.
- » Some uses: adult ADHD, impulsive behavior

- Strattera (atomoxetine)- SNRI

- » Some uses: ADHD, mild anxiety, mild depressive symptoms
- » Side effects:
  - Common: *sleepiness or insomnia, appetite loss, weight loss, nausea, stomachaches.*
  - Rare: *eyes and/or skin turning yellow or changes in urine color (related to inflammation of the liver), trouble urinating, or worsening moods.*
- » *The U.S. Food & Drug Association has included a “black box” warning that Strattera may increase suicidal thoughts and behaviors*

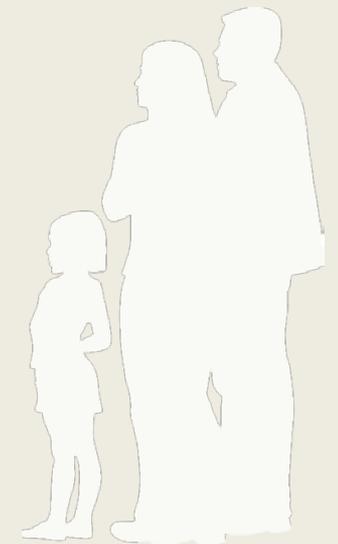


# Sleep Medications

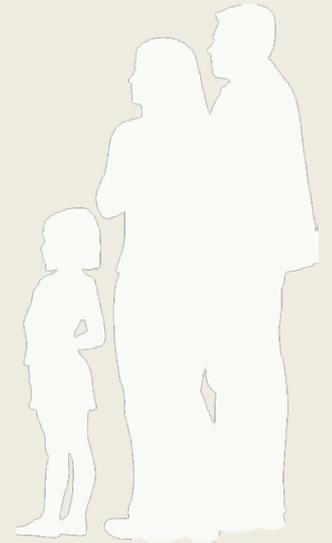


# Sleep Medications

- Melatonin
- Trazodone
- Benzodiazepines
- Ambien
- Lunesta
- Remeron
- Sonata



# Miscellaneous



# Miscellaneous

- ***Periactin (cyproheptadine)*** – used for migraines, appetite stimulation, sleep, PTSD
- ***Desmopressin (DDAVP)*** – for enuresis



# Psychotherapy



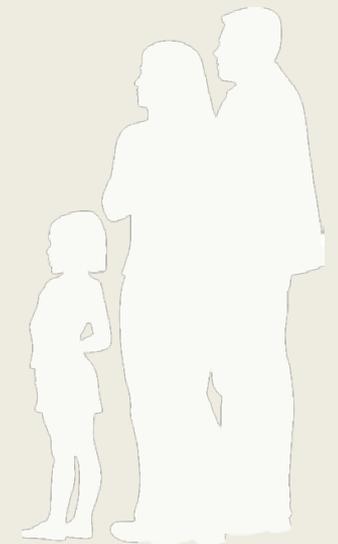
# Psychotherapy

- Psychotherapy is a form of psychiatric treatment that involves therapeutic conversations and interactions between the therapist and child or family.
- It can help families understand and resolve problems, modify behavior, and make positive changes in their lives.



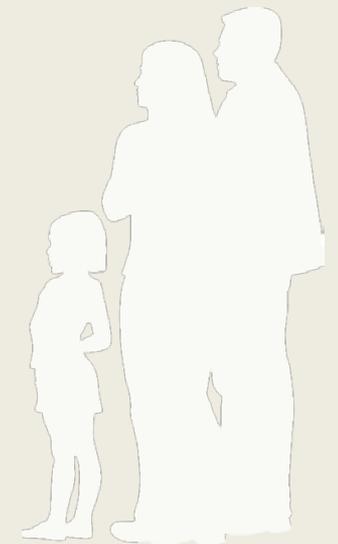
# Psychotherapy

- Acceptance and Commitment Therapy (ACT)
- Cognitive Behavior Therapy (CBT)
- Dialectical Behavioral Therapy (DBT)
- Family Therapy
- Group Therapy
- Interpersonal Therapy (ITP)
- Mentalization Based Therapy (MBT)
- Parent Child Interaction Therapy (PCIT)
- Play Therapy
- Psychodynamic Therapy
- Supportive Therapy



# Resources

- <http://www.parentsmedguide.org/>
- AACAP Practice Parameters
- AACAP “Facts for Families” ([www.aacap.org](http://www.aacap.org))



# Resources

- Child in need of treatment right now: [www.claritycgc.org](http://www.claritycgc.org) or call 210-616-0300.
- Information about how to help kids or students during COVID (parent or a teachers): Clarity CGC's prevention and education program at [www.1in5minds.org](http://www.1in5minds.org)
- Clarity CGC also created a Special COVID-19 page on 1in5minds.org to help parents and their kids, especially those who have kids with mental health challenges. It includes encouragement and advice about self care, supporting their children, and fun print-out tips and activities. Here's the link: <https://www.1in5minds.org/covid>





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# Questions?