

# PSYCHIATRIC DIAGNOSES AND TREATMENT: AN INTRODUCTION

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# DISCLOSURES

- No conflicts of interest to disclose.
- The information presented in this talk is meant to serve as a general introduction to psychiatric disorders and treatment. For additional information and to discuss specific treatment, please consult with a physician.

# FDA APPROVED vs. OFF LABEL USE

- FDA Approved Use
  - ◆ Medication is approved by the U.S. Food and Drug Administration for a specific condition.
  - ◆ FDA makes decision based on evaluation of benefits/risks and availability of scientific data supporting its use.
- “Off label use”
  - An FDA approved drug is being used in a manner that was not officially approved by the FDA
  - Psychiatrists weight the risks vs benefits of all treatment and medications are used “off label” when benefits outweigh the risks.

# MEDICATION INTERACTIONS

- Drug-Drug interactions can occur when one drug or substance affects the activity of another drug when both are administered together.
- Risk is greater with multiple medications.
- Always provide an up to date list of all medications to your medical and psychiatric providers.

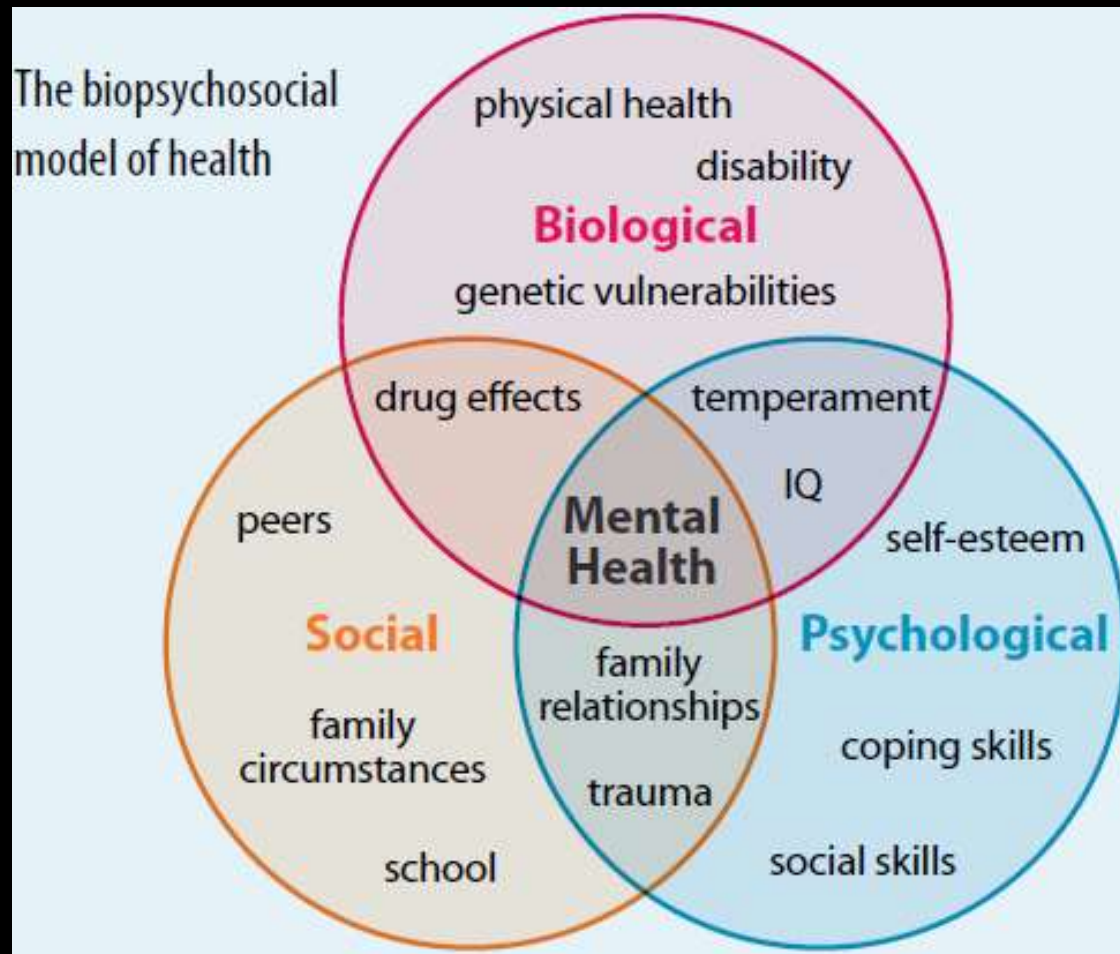
# Mental Illness

- Mental illness can impact a person's mood, feelings, thoughts, and behaviors.
- One in 5 adults experience a mental health condition every year. (NAMI)
- In 2015, there were an estimated 9.8 million adults aged 18 or older in the United States with a serious mental illness within the past year. (NIMH)

# Mental Illness

- Commonly treated conditions:
  - ◆ Depression
  - ◆ Anxiety
  - ◆ Bipolar Disorder
  - ◆ Schizophrenia and other psychotic disorders
  - ◆ PTSD
  - ◆ ADHD
  - ◆ Dementia
  - ◆ Eating Disorders

# BIOPSYCHOSOCIAL MODEL



# DEPRESSION

- According to NIMH, one of the most common mental disorders in the United States.
- In 2015, an estimated 16.1 million adults aged 18 or older in the United States had at least one major depressive episode in the past year. An estimated 10.3 million adults had associated severe impairment.





# DEPRESSION

- A period of two weeks or longer in which there is either depressed mood or loss of interest, accompanied by:
  - ◆ Changes in sleep/appetite
  - ◆ Changes in energy
  - ◆ Decreased concentration/indecisiveness
  - ◆ Feelings of worthlessness/hopelessness, feelings of guilt
  - ◆ Thoughts of harming oneself, suicidal ideation
- ◆ Other signs/symptoms include: aches/pains, loss of self-esteem, irritability, social withdrawal, diminished attention to grooming/hygiene, etc.

# DEPRESSION

- Depression can be acute or chronic.
- Course:
  - ◆ **Remission:** Period of time in which an individual no longer meets criteria for the disorder. In full remission, there are no more than minimal symptoms.
  - ◆ **Recovery:** Defined as full remission that lasts for a definite period of time, signals the end of an episode.
  - ◆ **Relapse:** Return of symptom prior to recovery, return of an episode.
  - ◆ **Recurrence:** Return of symptoms occurring after the beginning of recovery, represents the beginning of a new episode of an illness.
- Risk of relapse after full remission increases with number of depressive episodes.

# DEPRESSION

- Treatment
  - ◆ Medications
  - ◆ Psychotherapy
  - ◆ Electroconvulsive therapy,  
transcranial magnetic  
stimulation, etc.
  - ◆ Lifestyle modifying behaviors

# MEDICATIONS FOR DEPRESSION

- Antidepressants are used for moderate to severe depression, depression accompanied by physical symptoms (lack of appetite, decreased energy, changes in sleep/appetite), depression accompanied by suicidal ideation.
- Antidepressants work to modulate imbalance of neurotransmitters (serotonin, norepinephrine, dopamine).

# MEDICATIONS FOR DEPRESSION

- Selective Serotonin Reuptake Inhibitors (SSRIs)
  - ◆ Increase the level of serotonin that is available to bind to receptors.
  - ◆ Paroxetine (Paxil), Sertraline (Zoloft), Escitalopram (Lexapro), Citalopram (Celexa), Fluoxetine (Prozac).
  - ◆ All are considered equally effective but differ in terms of interactions, metabolism, side effects.

# MEDICATIONS FOR DEPRESSION

- SSRIs
  - ◆ **Side effects:** Temporary GI disturbance (nausea, vomiting, abdominal cramping), appetite disturbance, headache, insomnia, restlessness, sexual dysfunction, emotional blunting.
  - ◆ **Additional uses/indications:** Post-traumatic stress disorder, Obsessive-Compulsive Disorder, Social Anxiety Disorder, Generalized Anxiety Disorder, Premenstrual Dysphoric Disorder,

# MEDICATIONS FOR DEPRESSION

- Serotonin-Norepinephrine Reuptake Inhibitors (SNRIs)
  - ◆ Act on both serotonin and norepinephrine.
  - ◆ Venlafaxine (Effexor), Desvenlafaxine (Pristiq), Duloxetine (Cymbalta), Levomilnacipran (Fetzima)
  - ◆ Used in patients with poor response or intolerable side effects to SSRIs or in depression accompanied by pain
  - ◆ Tend to be activating medications and can lead to improvements in energy.

# MEDICATIONS FOR DEPRESSION

- SNRIs

- ◆ **Side Effects:** Dizziness, Dry mouth, headache, insomnia, sedation, nausea.

- ◆ **Indications/Uses:** Generalized Anxiety Disorder, Panic Disorder, Social Anxiety Disorder, Post-traumatic stress disorder, Premenstrual Dysphoric Disorder, Fibromyalgia, Urinary Stress Incontinence, Hot flashes associated with menopause, musculoskeletal pain



# MEDICATIONS FOR DEPRESSION

- Noradrenergic and specific serotonergic antidepressant
  - ◆ Act on noradrenergic receptors to enhance serotonergic transmission.
  - ◆ Mirtazapine (Remeron)
    - Side effects: Increased appetite/weight gain, sedation/drowsiness, dry mouth, dizziness.
    - Indications: **Depression**, Anxiety, PTSD

# MEDICATIONS FOR DEPRESSION

- Serotonin antagonist and reuptake inhibitor (SARI)
  - ◆ Inhibitor of Serotonin transporter
  - ◆ Trazodone (Desyrel, Oleptro)
  - ◆ Often used as a sleep aid or to augment treatment of depression
    - ◆ Doses < 150 mg/day → Target sleep
    - ◆ Doses > 150 mg/day → Target depression
  - ◆ Side Effects: Dry mouth, nausea, sedation, hypotension, priapism
  - ◆ Uses: Depression, Insomnia, Anxiety

# MEDICATIONS FOR DEPRESSION

- Serotonin Modulators and Stimulators (SMSs)

- ◆ **Vortioxetine (Brintellix/Trintellix)**

- Acts as a serotonin reuptake inhibitor, partial agonist/antagonist of serotonin receptors
    - Advertised potential advantage: Improvement of cognitive symptoms of depression, response in patients who have not responded to traditional antidepressants, weight neutral medication
    - Side Effects: Nausea, vomiting, constipation,
    - **Uses: Major depressive disorder, Generalized Anxiety Disorder, Geriatric depression**

# MEDICATIONS FOR DEPRESSION

- Serotonin Partial Agonist Reuptake Inhibitor (SPARI)
  - ◆ Vilazodone (Viibryd)
    - Also acts as a serotonin partial agonist
    - Advertised potential advantage: Theoretical decreased risk of sexual dysfunction or weight gain.
    - **Side effects:** Nausea, diarrhea, vomiting, insomnia
    - Uses: **Depression**, Anxiety, Obsessive Compulsive Disorder

# Bipolar disorder

- AKA Manic-depressive illness.
- Causes unusual shifts in mood, energy, activity levels, and ability to carry out day to day tasks.
- What it is NOT: Changing mood from one day to the next or changing mood from one minute to the next.



# Definitions

- **Manic episode**
- A distinctive period of abnormally and persistently elevated, expansive or irritable mood and abnormally and persistently increased goal-directed activity, **lasting at least ONE WEEK** and present most of the day, nearly every day **(or any duration if hospitalization is needed)**

# Mania

- During mood disturbance and increased energy, **three or more of the following (or four if mood is only irritable)** are present; noticeable change from usual behavior:
- Inflated self esteem or grandiosity
- Decreased need for sleep
- More talkative than usual or pressure to keep talking
- Flight of ideas or feeling that thoughts are racing
- Distractibility (ie attention too easily drawn to unimportant or irrelevant external stimuli)
- Increase in goal-directed activity (socially, at work or school, or sexually), or psychomotor agitation (ie purposeless non-goal directed activity). → **feeling like you can do a lot of things at once**
- Excessive involvement in activities that have a high potential for painful consequences ( ie engaging in unrestrained buying sprees, sexual indiscretions, foolish business investments) → **risky behavior**

# Hypomania

- A. A distinctive period of abnormally and persistently elevated, expansive or irritable mood and abnormally and persistently increased activity or energy, **lasting at least 4 consecutive days and present most of the day, nearly every day**



# Hypomania

- During mood disturbance and increased energy, **three or more of the following (or four if mood is only irritable)** are present; noticeable change from usual behavior:
  - Inflated self esteem or grandiosity
  - Decreased need for sleep
  - More talkative than usual or pressure to keep talking
  - Flight of ideas or feeling that thoughts are racing
  - Distractibility (ie attention too easily drawn to unimportant or irrelevant external stimuli)
  - Increase in goal-directed activity (socially, at work or school, or sexually), or psychomotor agitation (ie purposeless non-goal directed activity). → **feeling like you can do a lot of things at once**
  - Excessive involvement in activities that have a high potential for painful consequences ( ie engaging in unrestrained buying sprees, sexual indiscretions, foolish business investments) → **risky behavior**

# Hypomania

- Episode is associated with **unequivocal change in functioning that is uncharacteristic of individual when not symptomatic**
- Disturbance in mood is observable by others
- **Episode is NOT severe enough to cause marked impairment in social or occupational functioning. Does NOT require hospitalization.**  
If psychosis= MANIA
- Not attributable to physiological effects of a substance

# Major Depressive Episode

- A. **Five or more** of the following sx during a two week period.
- Change from previous functioning.
- At least **one is either Depressed mood OR Loss of interest or pleasure**

# MDD; 5 or more:

- **Depressed mood.** Can be subjective or objective
- **Marked loss of interest** or pleasure in all, or almost all, activities
- Significant unintended weight loss or weight gain. Increased or decreased appetite → **eat too much or too little**
- Insomnia or hypersomnia → **sleep too little or too much**
- Psychomotor agitation or retardation nearly every day (observable by others) → **feel tired or “slowed down”**
- Fatigue or loss of energy nearly every day
- Feelings of worthlessness or excessive or inappropriate guilt (may be delusional) nearly every day (not merely self-reproach or guilt about being sick)
- Difficulty concentrating, or indecisiveness (subjective or objective)
- **Recurrent thoughts of death** (not just fear of dying), recurrent **suicidal ideation** without a specific plan, or a **suicidal attempt** or a **specific plan** to commit suicide

# MDD

- B. Symptoms cause clinically significant distress or impairment in social, occupational or other important areas of functioning
- C. Not attributable to physiological effects of a substance or another medical condition

# Four basic types

- **Bipolar I:** Criteria for Manic episode has been met at least once
- **Bipolar II:** Hypomania + current or past Major depressive disorder

# Bipolar subtypes

- **Cyclothymic d/o:** 2yrs of hypomanic sx that *do not meet criteria for hypomanic episode* and numerous periods with *depressive sx that do not meet MDD*.
- B. Criteria present for at least half the time and the individual has not been w/o sx for >2 mos at a time
- C. Have never met criteria for MDD, manic or hypomanic d/o
- **Other specified and unspecified Bipolar and related disorders:** When there are not enough sx to place in one specific diagnosis

# Treatment

- **Mood stabilizers:** Carbamazepine (Tegretol)
- lamotrigine (Lamictal) ; Oxcarbazepine (trileptal) ; Lithium ; Valproic Acid (Depakote)
  
- **Atypical Antipsychotics:** Olanzapine (Zyprexa),
- Aripiprazole (abilify), Quetiapine (Seroquel),
- Ziprasidone (Geodon), Lurasidone (Latuda)
- Paliperidone (Invega), Risperidone (Risperdal)



# Mood stabilizers

- Carbamazepine (Tegretol)
- Oxcarbazepine (trileptal) ;
- lamotrigine (Lamictal)
  
- All are anticonvulsants
- Common Side effects among these:
- Dizziness, somnolence, nausea, vomiting, headache,.

# Side effects: Serious but rare

- Steven-Johnsons Syndrome rare but fatal.
- Anaphylaxis- throat swelling, angioedema (swelling of tissue due to vascular leaking)
- Blood abnormalities (ie.. low blood counts, including low platelets, anemia, low WBC's,) Hepatitis



# Lithium

- Gold standard for bipolar disorder, especially euphoric mania
- Effective for depressive episodes and maintenance of bipolar
- Needs frequent blood levels initially
- Mood stabilizer!
- Mechanism of action:
- Overall “unknown and complex” Alters neuronal sodium transport; may alter signaling pathways
- NEUROPROTECTANT!!! → protects the brain!

# Mood stabilizers: lithium

Most common SE

- Nausea/diarrhea, increased thirst
- Fine tremor ; memory problems
- Hypothyroidism
- Acne or worsening psoriasis
- Benign increase in WBC
  
- Serious but rare
- May decrease ability for kidneys to concentrate urine
- Decreased heart rate
- Cardiac arrhythmias (improper beating of heart; too fast or too slow)

# Mood stabilizers

- Valproic Acid
- Sodium channel blocker
- Needs blood tests to monitor level initially, and then every 6 mos once level is steady
- Most common SE
- Somnolence (sleepiness), fatigue, tremor
- Nausea, dizziness,
- Hair loss
- Decreased platelets

# Valproic Acid...

- Serious but rare SE's:
- Liver toxicity
- Hepatitis
- Pancreatitis
- PCOS (polycystic Ovarian Syndrome)
- Increased ammonia
- Encephalopathy (disorder of the brain)

# Treatment...

- **Atypical Antipsychotics:**
- Olanzapine (Zyprexa)
- Aripiprazole (abilify)
- Quetiapine (Seroquel)
- Ziprasidone (Geodon)
- Lurasidone (Latuda)
- Paliperidone (Invega)
- Risperidone (Risperdal)

# Treatment Antipsychotics

- In general, act on Dopamine receptors and serotonin receptors
- **Side effects:**
  - Weight gain
  - Hyperlipidemia (high cholesterol)
  - Diabetes – new onset or worsening of diabetes
  - Sedation
  - Cardiac issues – EKG changes
  - EPS (Extra pyramidal symptoms)- rigidity, tremors, muscle spasms, akathisia (motor restlessness)



# Bipolar Depression

- Antidepressants can induce manic episodes.
- Approved treatments for Bipolar depression
  - Lurasidone (Latuda)
  - Quetiapine (Seroquel)
  - Olanzapine and Fluoxetine combination (Symbyax)
- There is evidence that Abilify and Lithium can help treat Bipolar depression

# Anxiety

- What is it?
- Oxford dictionary: A feeling of worry, nervousness, or unease about something with an uncertain outcome
- A nervous disorder marked by excessive uneasiness and apprehension, typically with compulsive behavior or panic attacks.

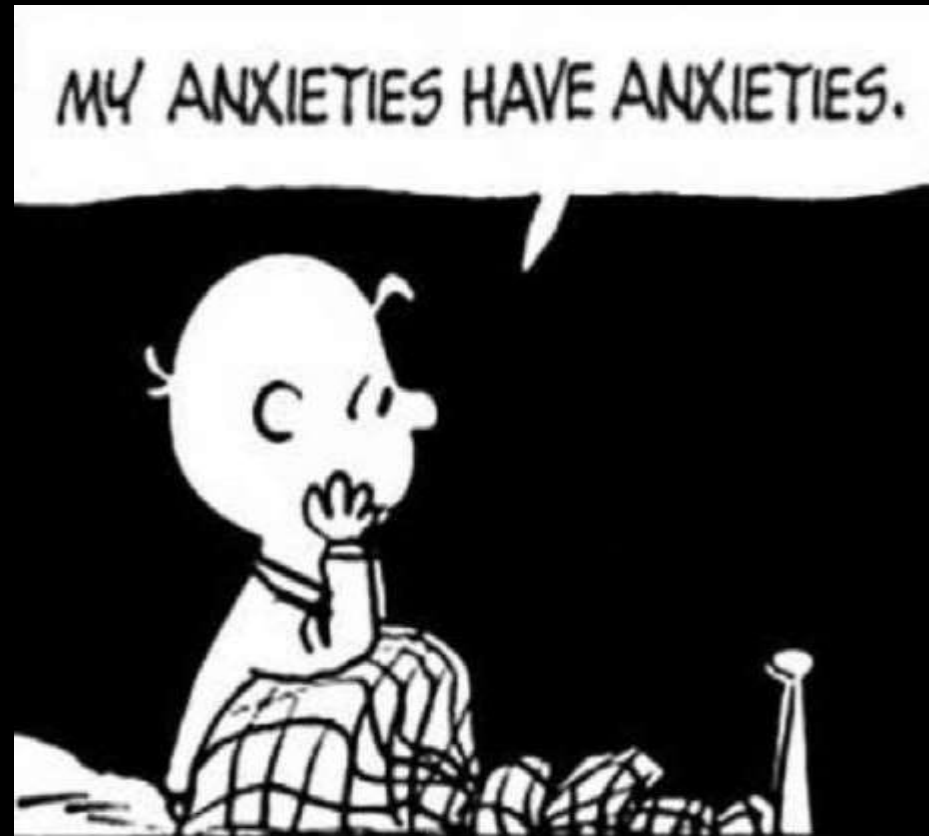
I CAN'T  
KEEP CALM  
BECAUSE  
I HAVE  
ANXIETY

# Anxiety

- NORMAL part of life
- Can be helpful to get to work on time, take a test, or when you have to make an important decision!
- It becomes a disorder when:
- Feelings affect daily activities – school, work, relationships

# Types of anxiety

- Generalized Anxiety Disorder (GAD)
- Social anxiety Disorder
- Specific phobias
- Separation anxiety disorder
- Selective Mutism
- Panic Disorder
- Agoraphobia
- Substance/Medication Induced Anxiety Disorder
- Anxiety d/o due to another medical condition
- Other specified anxiety d/o
- Unspecified anxiety d/o
  
- \*\* Panic attacks are NOT a Mental Health diagnosis\*\*\*



# GAD Diagnostic Criteria

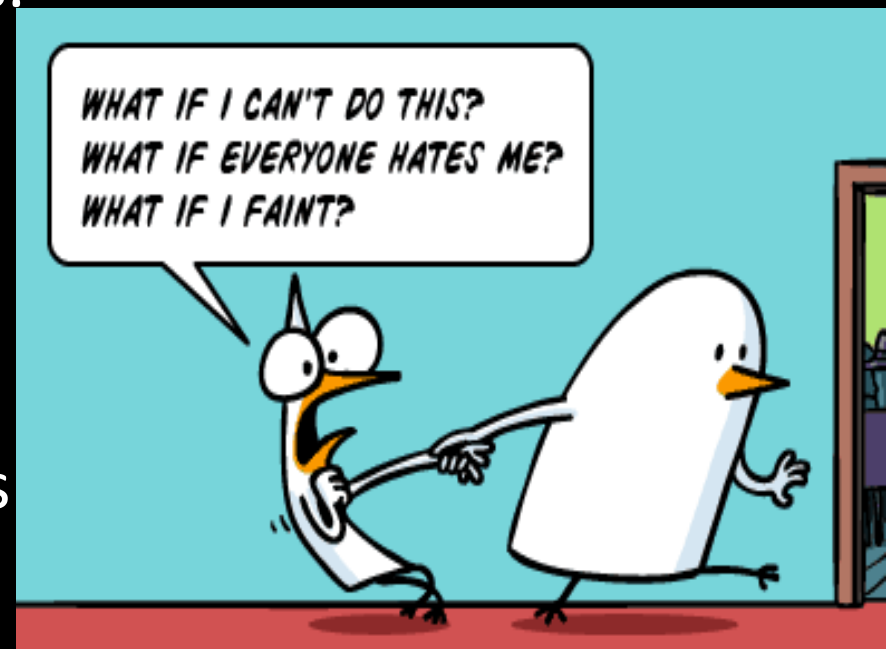
- Excessive anxiety and worry, occurring for at least 6 mos, about multiple events or activities (ie school, work..)
- Difficulty controlling worry
- Sx are associated with **three or more** of the following:
  - Restlessness or feeling keyed up or on edge
  - Being easily fatigued
  - Difficulty concentrating or mind going blank
  - Irritability
  - Muscle tension
  - Sleep disturbance ( difficulty falling or staying asleep, or restless, unsatisfying sleep)

# GAD Dx criteria

- Causes clinically significant distress or impairment in social, occupational, or other important areas of functioning
- Sx are not caused by substance use (i.e. drug of abuse or medication, or another medical condition)
- Not better explained by another mental d/o,

# Social Anxiety Disorder (SAD)

- Marked fear or anxiety about one or more social situations in which the individual is exposed to possible scrutiny by others. Examples: social interactions (ie having conversations, meeting unfamiliar people)
- being observed (ie eating or drinking)
- performing in front of others (ie giving this presentation)



# SAD

- Fear: person will act in a way or show anxiety sx that will be negatively evaluated
- Situations almost always provoke fear or anxiety
- The social situations are avoided or endured with intense anxiety
- Fear or anxiety is out of proportion to the actual threat and to the sociocultural context
- Fear, anxiety or avoidance is persistent,  $\geq 6$  mos



# SAD

- Clinically significant distress or impairment in social, occupational or other important areas of functioning
- Sx are not attributable to substance use (ie drug of abuse, medication) or other medical condition
- Sx not better explained by sx of another mental d/o
- If another medical condition is present, the fear, anxiety or avoidance is clearly unrelated or is excessive

# Panic Disorder

- Recurrent unexpected panic attacks.
- Panic attacks: an abrupt surge of intense fear or intense discomfort that reaches a peak within minutes, and during which time, **four (or more) of the following sx occur.**
- NOTE- can occur from a calm state or an anxious state



# Panic: Four or more:

- Palpitations, pounding heart, or accelerated heart rate
- Sweating
- Trembling or sweating
- Sensations of shortness of breath or smothering
- Feelings of choking
- Chest pain or discomfort
- Nausea or abdominal distress
- Feeling dizzy, unsteady, light headed, or faint
- Chills or heat sensations
- Paresthesias (numbing or tingling sensations)
- Derealization (feelings of unreality) or depersonalization (being detached from oneself).
- Fear of losing control or “going crazy”
- Fear of dying

# Panic

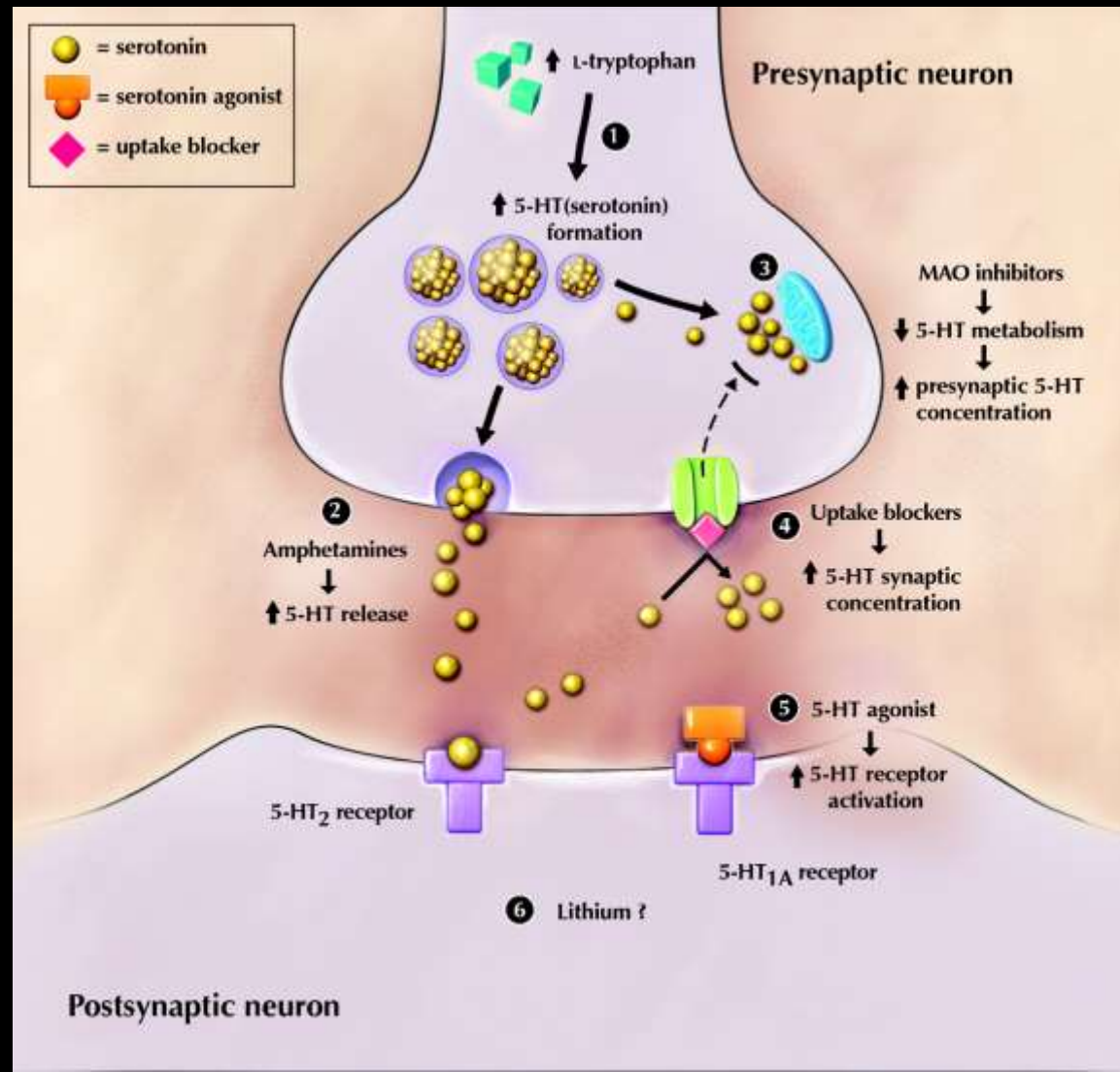
- At least one attack has been **followed by 1 month** (or more) of **one or both of the following**:
- Persistent concern or worry about additional panic attacks or their consequences
- Maladaptive changes in behavior related to the attacks
- Not attributable to effects of a substance (ie drug of abuse, medication) or other medical condition
- The disturbance is not better explained by another mental d/o

# Treatment

- Psychotherapy, particularly CBT (Cognitive Behavioral Therapy), has been proven superior to medication in placebo-controlled trials
- Combination of pharmacotherapy and/or psychotherapy
- Antidepressants are the drug of choice, especially due to the safety profile
- Benzodiazepines – work quickly and predictably, but they often lead to dependence and can lead to addiction. \*\*\*We try to avoid prescribing these as much as possible\*\*\*

# SSRI's (Selective Serotonin Receptor Inhibitors)

- Generally act by blocking the reuptake of serotonin



# Commonly used SSRIs include

- Citalopram (Celexa)
- escitalopram (Lexapro)
- fluoxetine (Prozac)
- fluvoxamine (Luvox)
- paroxetine (Paxil)
- Sertraline (Zoloft)

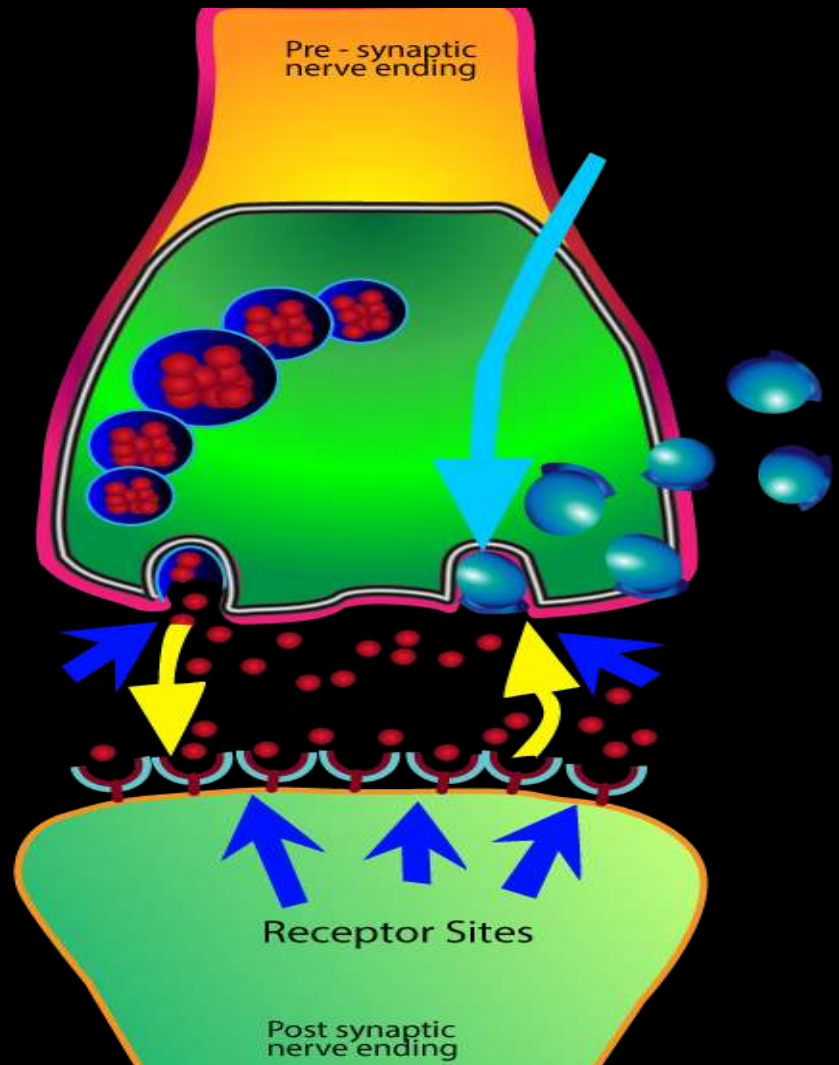
# Most common Side Effects

- GI SE: Constipation, diarrhea, dry mouth, Weight gain
- CNS: Insomnia, Anxiety, Sedation,
- Sexual side effects (men: Delayed ejaculation, Erectile dysfunction. Men and women: decreased sexual desire, anorgasmia
- Apathy
  
- **Serious but rare SE:**
- Hyponatremia (low sodium)
- Gastrointestinal bleeding especially when combined with NSAIDs such as Ibuprofen
- Interaction with other drugs that are metabolized by the liver (SSRIs are metabolized through the liver)



# SNRIs

- Primarily block serotonin and norepinephrine reuptake pumps



# Common SNRIs

- Venlafaxine (Effexor)
- Desvelafaxine (Pristiq)
- Duloxetine (Cymbalta)

# Side effects

- Common SE of SNRIs
- GI: Nausea, diarrhea, constipation, dry mouth, decreased appetite
- CNS: insomnia, sedation, dizziness
- Sexual dysfunction: Men: abnormal ejaculation/orgasm, impotence, decreased libido; women: abnormal orgasm
- Sweating
- Increase in BP
- **Serious but rare:** Hepatic failure, hepatitis, syncope, urinary retention

# Benzodiazepines

- Controlled substances
- Work quickly and predictably, but they often lead to dependence and can lead to addiction. We try to avoid prescribing these as much as possible.

# Common Benzodiazepines

- Clonazepam (Klonopin)
- Lorazepam (Ativan)
- Diazepam (Valium)
- Alprazolam (Xanax)
- Long acting: preferred; decreased likelihood that they will lead to addiction
- Short acting: Reserved for patients with occasional anxiety and prescribed on an “as needed basis”.

# Side Effects

- Sedation, somnolence, memory impairment, slurred speech, incoordination, dependence
- Serious but rare:
  - anterograde amnesia,
  - increased fall risk,
  - paradoxical reaction (irritability, agitation)
  - respiratory depression (avoid in pts with sleep apnea)

# Other as needed medications:

- Propranolol
- Off label use for Performance anxiety and GAD
- reduces some somatic sx of anxiety (tremor, sweating, flushing, tachycardia)
- Most common side effects:
- Dizziness, fatigue, low heart rate and hypotension

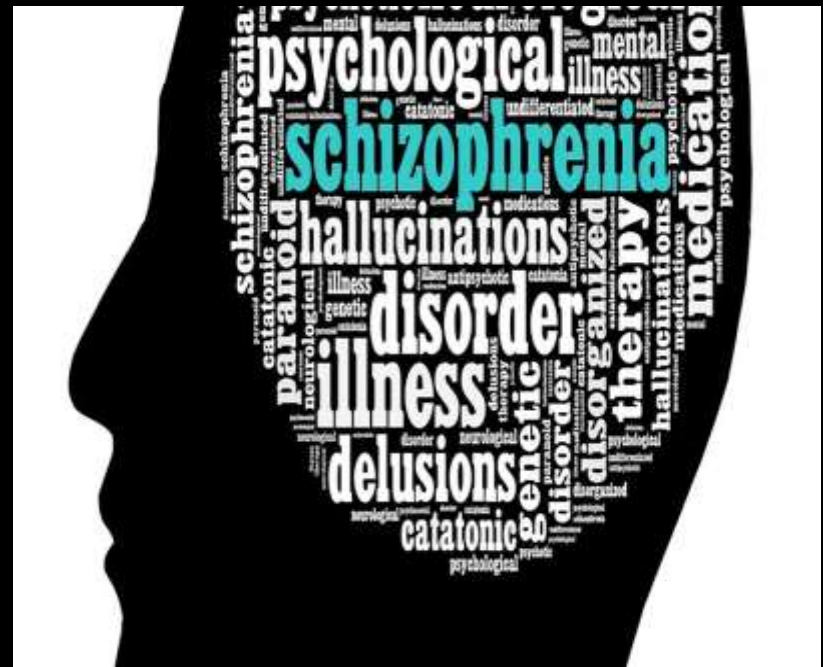
# Other as needed medications:

- Buspirone
- Similar to SSRI- requires 1-2 weeks for onset of therapeutic effects
- No as needed benefits
- Non sedating
- Non habit forming alternative to benzodiazepines for anxiety
- Most common SE:
- Dizziness, nervousness, nausea, headache, jitteriness



# PSYCHOSIS

- Disturbance of thought, perception, and behavior that leads to impaired reality testing.
  - ◆ Hallucinations
  - ◆ Delusions
  - ◆ Disorganized behavior
  - ◆ Disorganized speech
  - ◆ Alterations in cognition



# PSYCHOSIS

- Psychotic symptoms may or may not be associated with a psychotic disorder
  - ◆ Mood disorders
  - ◆ Effects of medication/toxins
  - ◆ Effects of a medical or neurological condition
  - ◆ Post-Traumatic Stress Disorder
  - ◆ Brief psychotic disorder
  - ◆ Schizophrenia and Schizoaffective disorder

# SCHIZOPHRENIA

- Chronic and potentially disabling mental disorder that affects thought processes, perceptions, and emotional responsiveness.
- Approximately 1 % one-year prevalence in the United States.
- Peak age of onset ranging from 15-30 years.
- Genetic vulnerability
  - Lifetime risk of developing schizophrenia in first degree relatives of affected individuals is 5-20x higher compared to the general population.

# SYMPTOM DOMAINS OF SCHIZOPHRENIA

## Positive Symptoms

"Positive" refers to overt symptoms that should not be present. These include:

- Hallucinations
- Delusions
- Disorganized thoughts

## Negative Symptoms

"Negative" does not refer to a person's attitude, but instead to a lack of characteristics that should be present. These include:

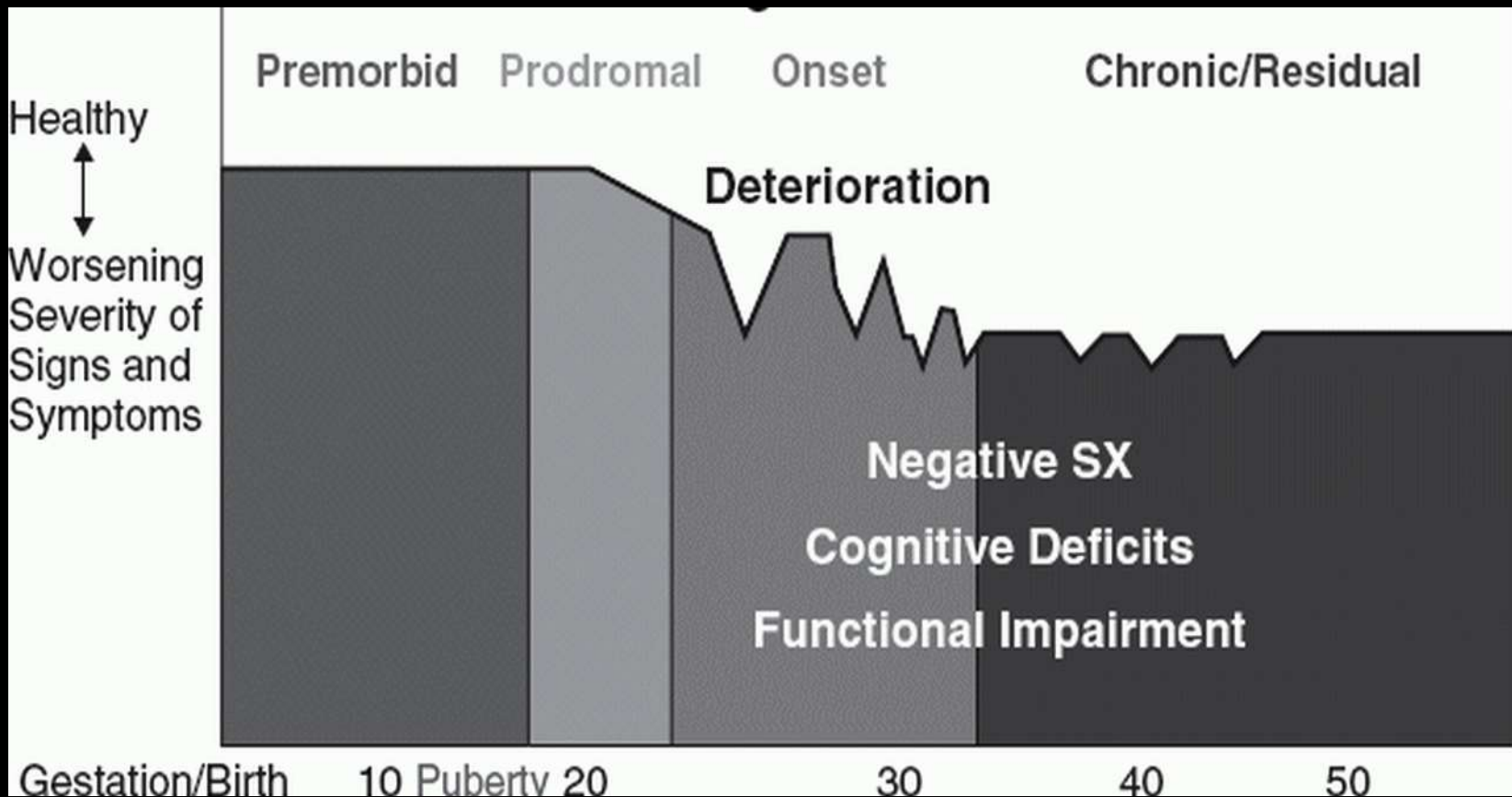
- Reduced speech, even when encouraged to interact (alogia)
- Lack of emotional and facial expression (affective flattening)
- Diminished ability to begin and sustain activities (avolition)
- Decreased ability to find pleasure in everyday (anhedonia)
- Social withdrawal (asociality)

## Cognitive Deficits

Difficulties with following aspects of cognition can make it hard to live a normal life or earn a living:

- Memory
- Attention
- Planning
- Decision Making

# COURSE OF PSYCHOSIS



# TREATMENT OF PSYCHOSIS



## ◆ Pharmacological treatment

- Typical antipsychotics
- Atypical antipsychotics
- Mood stabilizers

## ◆ Medical co-management

## ◆ Non-pharmacological treatments

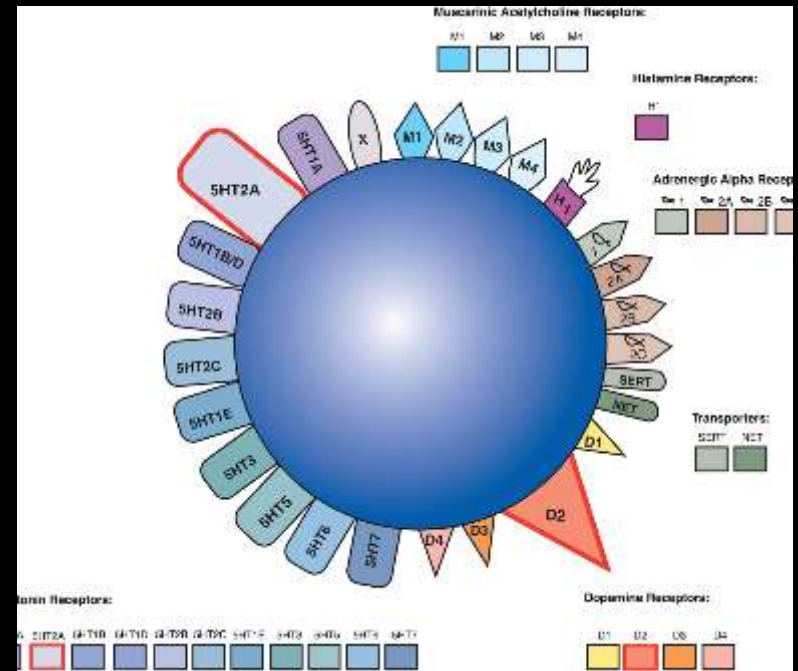
- Psychotherapy
- Cognitive rehabilitation
- Psychoeducation
- Community based interventions (ACT teams, crisis response teams, vocational training, etc)

# ANTIPSYCHOTICS

- “Typical”, first-generation antipsychotics
  - ◆ Function primarily as D2 (dopamine) antagonists.
  - ◆ Haloperidol (Haldol), Chlorpromazine (Thorazine), Perphenazine (Trilafon), Fluphenazine (Prolixin), Molindone (Moban), Thioridazine (Mellaril)
  - ◆ **Uses:** Schizophrenia, Schizoaffective disorder, mania, agitation
  - ◆ **Side Effects:** Dry mouth, muscle stiffness, tremors, restlessness, parkinsonian like symptoms, gynecomastia

# ANTIPSYCHOTICS

- “Atypical”, 2<sup>nd</sup> generation Antipsychotics
  - ◆ Bind to various serotonin, histamine, noradrenergic receptors in addition to dopamine receptors.



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# ANTIPSYCHOTICS

- “Atypical” antipsychotics
  - ◆ Risperidone (Risperdal), Quetiapine (Seroquel), Olanzapine (Zyprexa), Aripiprazole (Abilify), Ziprasidone (Geodon), Clozapine (Clozaril), Brexpiprazole (Rexulti), Lurasidone (Latuda), Cariprazine (Vraylar)
  - ◆ **Uses:** Depression, Bipolar Disorder, Schizophrenia, Schizoaffective Disorder, PTSD, Aggression/behavioral disturbance in autism and dementia

# ANTIPSYCHOTICS

- “Atypical antipsychotics”
  - ◆ **Side effects:** Dry mouth, sedation, Weight gain, hyperlipidemia, hyperglycemia, diabetes, blood dyscrasias, movement disorders, tremors, restlessness, gynecomastia/galactorrhea
  - ◆ Due to tolerability, atypical antipsychotics are most often used first.

# ANTIPSYCHOTICS

- Clozapine (Clozaril)
  - ◆ **Uses:** Treatment refractory schizophrenia, schizophrenia with suicidal ideation/behavior
  - ◆ **Side effects:** Cardiac toxicity (Arrhythmias), hypersalivation, sedation, drooling, urinary incontinence, constipation, weight gain, diabetes, blood dyscrasias
  - ◆ **Requires regular blood draws and monitoring of white blood cell count and absolute neutrophil count.**

# NEWER ANTIPSYCHOTICS

- Lurasidone (Latuda)
  - ◆ **Uses:** Approved by the FDA for use in schizophrenia, bipolar (Type I) depression
  - ◆ Increased absorption when taken with food.
  - ◆ Used in cases where weight gain has been an issue with previous antipsychotics.
  - ◆ **Side effects:** Sedation, restlessness, nausea, Parkinsonian like effects, weight gain (less likely than in other 2<sup>nd</sup> generation antipsychotics)

# NEWER ANTIPSYCHOTICS

- Brexpiprazole (Rexulti)
  - ◆ Acts as a partial dopamine agonist.
  - ◆ **Uses:** Schizophrenia, Depression
  - ◆ **Side effects:** Upper respiratory tract infection, dizziness, drowsiness, restlessness, weight gain
- Cariprazine (Vraylar)
  - ◆ Acts as a partial agonist at several dopamine receptors.
  - ◆ **Uses:** Schizophrenia, Mixed/manic episodes associated with bipolar disorder, treatment-resistant major depressive disorder
  - ◆ **Side effects:** Akathisia, weight gain, sedation, nausea, dizziness, possibility of cataracts

# TREATMENT OF SCHIZOPHRENIA

- Individuals with schizophrenia will require ongoing monitoring and treatment.
- Due to side effects of medication as well as influence of the disease process itself, it is recommended that individuals be frequently monitored for hypertension, hyperlipidemia, diabetes, and other effects related to weight gain.

# SUMMARY

- Mental illness refers to a wide range of conditions that can affect one's mood, feelings, thoughts, and behavior.
- Medications may be used to help with symptoms associated with mental illness.
- Some conditions will require chronic treatment with a medication along with therapy.

# REFERENCES

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# QUESTIONS

