**Psychiatry + Behavioral Health**

**MOOD DISORDERS**

**Bipolar I Disorder**
- **Definition:** >1 manic episode and occasional major depressive episodes
- **r/f:** family history = strongest risk
- **mania:** abnormal and persistently elevated, expansive or irritable mood at least 1 week with marked impairment of social / occupational function – 3+:
  - **mood:** euphoria, irritable, labile, dysphoric
  - **thinking:** racing, disorganized, expansive, grandiose
  - **behavior:** physical hyperactivity, pressured speech, decreased need sleep, increased impulsivity / risk taking, increased goal directed activity
  - **DIGFAST:** distractibility, impulsivity (poor judgement, spending sprees, reckless driving), grandiosity (increased self esteem), flight of ideas (racing thoughts), activities (psychomotor agitation), sleep (decreased need), talkativeness (pressured speech)
- **screening:** mood disorder questionnaire
  - When staff-assisted mental health care is available, screening for depression and bipolar disorders is recommended for patients 12 to 18 years of age
- **treatment:** 1. mood stabilizer – 2nd or 1st generation anti-psychotic – may add SSRI for depressive sx 2. Good sleep hygiene 3. Cognitive, behavioral, and interpersonal therapy

**Bipolar II Disorder**
- **definition:** hypomania + major depressive episode
  - **hypomania:** period of elevated, expansive or irritable mood at least 4 days that is different from usual non-depressed mood but does not cause marked impairment (no psychotic features) – 3+:
    - **mood:** euphoria
    - **thinking:** racing, disorganized, expansive, grandiose
    - **behavior:** physical hyperactivity, pressured speech, decreased sleep need, excessive involvement pleasurable activities
- **screening:** mood disorder questionnaire
- **management:**
  - **mania:** lithium, valproate, 2nd generation antipsychotics
  - **depression:** lithium, valproate, carbamazepine, 2nd gen antipsychotic
  - **mixed:** atypical antipsychotic, valproate

**Major Depressive Disorder**
- **definition:** depressed mood + anhedonia with >5 assoc sx almost every day, most of day, 2 weeks
  1. fatigue, insomnia or hypersomnia, guilt, worthlessness, recurring thoughts of death or suicide, psychomotor agitation, significant weight change >5%, decreased concentration / indecisiveness
  2. somatic: constipation, HA, skin changes, chest or abdominal pain, cough, dyspnea
  3. **sx cause clinical distress / impairment in social, occupational or other important areas of functioning
  4. NO MANIA OR HYPOMANIA; STRONG FAMILYHX COMPONENT
- **Screening:** Beck Depression Inventory for Primary Care
- **Childhood maltreatment** has been **associated with a greater risk of relapse or recurrence** of major depressive disorder after successful treatment. The rate of recurrence over twenty years is approximately 40 percent. The **risk of recurrence is greatest within the first few months after treatment.**
- **Management:**
  1. **Psychotherapy:** 1st line in mild to moderate depression – 15% commit suicide (esp in M 25-30 / F 40-50yo)
  2. **Medications:** SSRI = 1st line, SNRI, TCA
  3. **CBT:** exposure and response prevention, psyceducation, support groups
  4. **ECT** in pts who fail medical therapy, previous response to ECT, rapid response in pt with severe sx
- **New diagnosis:** look for diabetes / lipid disorders
- **SIGECAPS (depression)**
  - **S:** sleep changes
  - **I:** Interest lack thereof
  - **G:** Guilt excessive
  - **E:** Energy lack
  - **C:** Concentration Decrease
• A: Appetite altered
• P: psychomotor dysfunction (agitation)
• S: Suicidal Thoughts

A major depressive episode must consist of either persistently depressed mood most of the day, nearly every day for at least two weeks or loss of interest or pleasure in most activities, nearly every day for at least two weeks.

**Suicide**

- Depression and suicidal ideation are common complaints seen in the primary care setting. Any patient who reveals having thoughts of suicide should be assessed further to determine more details about the thoughts of suicide, as well as intent and plan. Risk factors for suicide include psychiatric illness, history of previous suicide attempts, individuals who have never been married, previous or active military service, childhood abuse, family history of suicide, and access to weapons. Women attempt suicide twice as often as men, but men are three times more likely to be successful. Management of a patient who is suicidal includes risk factor reduction, managing the underlying cause, close monitoring, and follow up. Determination of the lethality of the patient’s current medication regimen is part of the risk reduction process. Selective serotonin reuptake inhibitors (SSRIs) seem to be safer in the case of an overdose than other agents. SSRIs, such as fluoxetine, are therefore the agents of choice in the treatment of depression for patients who are potentially suicidal

- **Increased risk** = SADPERSONS: male Sex, Age, Depression, Previous attempt, Excess alcohol or substance abuse, loss of Rational thinking, lack of Social supports, Organized plan, No spouse, Sickness

- **Highest rate** = Caucasian men, age >85

- **any patient presenting with a possible suicide attempt should have an emergent psychiatric evaluation**

- always get acetaminophen level in pt. with overdose – can present without sx early on and is in lots of meds

- girls more commonly attempt compared to boys

- percentage of students in grades 9 through 12 reported that they had seriously considered attempting suicide in the 12 months preceding the survey = 14.5%

**Dysthymic Disorder (persistent depressive disorder)**

- Mild chronic form of major depression – chronically depressed mood ≥2y in adults (>1 in children); severity of mood does not meet criteria for MDD

- Manage: similar to major depression

- Persistent depressive: includes chronic major depressive disorder + dysthymic disorder

- **Persistent depressive disorder**, or dysthymia, is defined as a period of at least two years of feeling sad, down, or depressed most of the time and on most days, with at least two of the following additional symptoms: decreased or increased appetite, insomnia or hypersomnia, fatigue, low self-esteem, impaired concentration, and hopelessness.

**Cyclothymic Disorder**

- pt described as moody, erratic, impulsive, somewhat volatile; similar to bipolar but less severe; 15-20% risk of bipolar disorder

- **definition:**
  - recurring periods of less severe depressive episodes and hypomania over 2 year period, with symptom free periods lasting for no more than 2 months at a time
  - depressive episodes not severe enough to be classified as MD episode; no manic / mixed episodes

- **management:** similar to bipolar I – mood stabilizers and antimanic drugs = 1st line

<table>
<thead>
<tr>
<th></th>
<th>Mania/mixed</th>
<th>Depression</th>
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</thead>
<tbody>
<tr>
<td>Bipolar I</td>
<td>Mania</td>
<td>Typical; not required</td>
</tr>
<tr>
<td>Bipolar II</td>
<td>Hypomania only (no mania)</td>
<td>Yes</td>
</tr>
<tr>
<td>MDD</td>
<td>Never</td>
<td>Yes</td>
</tr>
<tr>
<td>Cyclothymia</td>
<td>Never (but periods of elevation)</td>
<td>Sx but no full episode w/in 1-2 yrs</td>
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**Postpartum Depression**

- **Treatment:** Selective serotonin reuptake inhibitors such as sertraline are the most commonly used medications for postpartum depression. They have fewer side effects and are considered safer than tricyclic antidepressants, especially in depressed women who may be at increased risk for medication overdose. In one study, infant serum levels of sertraline and paroxetine were undetectable. It is also recommended that a woman with postpartum depression be started on a medication that she had taken previously with a good response, unless there is evidence of potential harm to her infant.

- Strongest r/f: PPD in previous pregnancy
ANXIETY RELATED DISORDERS

**Generalized Anxiety Disorder**
- **definition:** excessive anxiety or worry a majority of days / more days than not in a 6-mo period associated >3: fatigue, restlessness, difficulty concentrating, muscle tension, sleep disturbance, irritability, shakiness, HA
- **management:**
  1. antidepressant: SSRI (paroxetine and escitalopram); SNRIs – venlafaxine
  2. buspirone (buspar): simulates serotonin receptors and blocks dopamine – may take weeks for improvement; does not cause sedation; s/e: dizzy, nervous, nausea
  3. benzodiazepines (short term); beta blockers
  4. psychotherapy

  Generalized anxiety disorder (GAD) is a common psychiatric disorder often seen in the primary care setting. It is characterized by **excessive and persistent worrying that occurs more days than not for six or more months**. Other clinical manifestations include **insomnia, headaches, difficulty relaxing, and fatigue**. The anxiety symptoms experienced with GAD are difficult to control and cause significant distress and impairment in activities of daily living. **GAD is two times more common in women than in men** and is the **most common psychiatric disorder seen in the elderly**. Diagnosis is determined using the **Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5)** criteria. Recommended treatment is with a combination of pharmacotherapy and psychotherapy.

- **Serotonergic antidepressants**, such as sertraline, are prescribed for generalized anxiety disorder in doses equal to those used in major depressive disorder.

**Panic Disorder**
- **criteria:** sx not due to substance, medical condition or other mental disorder, recurrent, unexpected expected attacks (at least 2) not related to trigger, familial trait, panic attack followed by concern of more attacks, worry about implication of attacks, significant change in behavior related to attacks
  1. **panic attacks:** feature of many different anxiety disorders but not disorder itself
    - episode of intense fear or discomfort with 4+ following sx developing abruptly, reaching peak in 10 minutes – palpitations, trembling, sweating, choking, SOB, chills, dizzy, nausea, chills, hot flashes, paresthesias, fear of dying, losing control
    - **management:** benzos for acute attack

  **dominant symptoms:** sudden onset palpitations, chest pain, choking sensation, dizziness, feelings of unreality, secondary fear of dying, losing control, going mad

  Childhood exposure to sexual or physical abuse and childhood smoking increases the risk of developing panic disorder in adulthood.

- **alcohol use MC associated with panic disorder**
- **management:**
  1. SSIRs 1st line long term tx: paroxetine, sertraline, fluoxetine
  2. Benzo: for acute attack; TCAs (imipramine)
  3. CBT – focus on thinking / behaviors (relaxation, desensitization, examine behavior consequence) = most effective, in fact just as effective as anti-depressants

  Check labs first:TSH, CMP, CBC

**Phobic Disorders**
- **General characteristics:** irrational fear and disproportionate excessive anxiety when presented with object / situational event; exposure = immediate increased anxiety and can → panic attack; all → avoidance / apprehension; pt. knows fear is excessive / unreasonable (insight)
- **dx:** made if response to phobic stimuli interferes with daily routine, social functioning, or occupational functioning
- **comorbidities:** MDD, substance abuse, other anxiety disorders, personality disorders

  **Specific phobias:** More common than social phobias; last 6+ months; fear of specific object / situation
  1. Animal: fear of specific animals or insects
  2. Natural environment: fear of natural phenomena (storm, height, water, lighting)
  3. Blood injection injury: fear of needles or invasive procedure
  4. Situation: fear of specific situations (bridges, tall buildings, flying, driving, elevators)
  5. Other: fear of situations → choking, vomiting, illness in children; fear of loud noises / clowns

  **Agoraphobia:** intense anxiety about placing oneself into situation in which incapacitating problem could occur and no help would be available; fear of public or crowded places; may occur with or without hx of panic disorder → avoid situations
1. Dx criteria: any of sx that are characteristic of panic attack may be present; pt. may have incapacitating or embarrassing rex (lack of bowel / bladder control); duration 6+ months
2. Sx may render pt. unwilling / unable to leave home
• This patient has developed a phobia as the result of hearing stories about her cousin, an example of informational transmission, a cognitive factor in the development of a phobia.

Tx:
1. SSRI (paroxetine, fluoxetine, sertraline, venlafaxine) = 1st line – 2. if unsuccessful → benzo 3. TCA (imipramine) but this is less effective
2. B-blockers (propranolol) – reduce autonomic hyperarousal sx and tremor associated with performance situations
3. Insight-oriented therapy + graded exposure – systematic desensitization + exposure therapy = most effective
4. Specific phobias can be treated with short-term benzo and b-blocker as adjuncts

PTSD
• MC in young adults – combat, violence, rape, assault
• 1. Exposed to traumatic event and actual / threatened death / injury or violation to self or others  2. Response may involve helplessness, dissociative sx, avoidance of associated stimuli, emotional numbing, increased autonomic arousal
• Criteria: trauma is re-experienced: >1 month recollections, distressing dreams, acting/ feeling as if event were recurring, physiologic distress, and avoidance of related stimuli (thoughts, feelings, conversations)
  o Re-experiencing trauma: intrusive memories, dreams, flashbacks
  o Avoidance: social withdrawal, emotional detachment, sense of foreshortened future
  o Hyperarousal: insomnia, irritability, difficulty concentrating, exaggerated startle response
• Management: 1. Antidepressants (SSRI’s = first line → paroxetine, sertraline, fluoxetine, TCA’s, MAOIs); CBT (psychotherapy, counseling)
  o Selective serotonin reuptake inhibitors are used as first-line therapy for post-traumatic stress disorder (PTSD) in combination with cognitive and behavioral therapies. PTSD is a severe disorder characterized by intrusive thoughts, sleep disturbance, nightmares, and hypervigilance as a result of a traumatic experience or event. Pharmacologic treatment is used to decrease the severity of the symptoms. Selective serotonin reuptake inhibitors (SSRIs) are used as first-line therapy because they have been proven to most effectively decrease the symptoms of PTSD.

Acute Stress Disorder
• Similar to PTSD but sx <1mo; anxiety as a result of extraordinary life stress event
• Treatment: counseling / psychotherapy; if persistent tx as PTSD

SUBSTANCE RELATED DISORDERS
• General characteristics: MC abused drugs = alcohol, nicotine, caffeine
• Substance use: inappropriate use of a substance resulting in significant impairment → 2+ of the following 11 maladaptive behaviors in a 12 month period
  1. Tolerance: decreased effect over time when same amt. substance used or need to increase to get to baseline
  2. Withdrawal: sx with onset closest to cessation of substance
  3. Use of increasingly larger amounts of substance or over over longer period than intended
  4. Unsuccessful efforts to stop or decrease amount of substance used
  5. Significantly more time spent attempting to acquire or use substance or recover from its effects
  6. Continued use of substance despite awareness of adverse consequences (fails to meet home / school / work obligations, repeatedly uses substance n hazardous situations, cravings / strong desire to use, continues to use despite interpersonal / social problems)
• Intoxication: maladaptive behavioral or psychological changes attributed to recent ingestion of substance; reversible and not caused by mental disorder / medical condition)
• Severity: mild (2-3 sx), moderate (4-5 sx), sever (6+ sx)
• Epidemiology: lifetime prevalence = 17%; most likely age group = 18-24 M>F; in US substance abusers have 3x greater risk having mental disorder; r/f measured through CAGE questionnaire (below)
• Marijuana, cocaine, hallucinogens = most commonly used
Alcohol Related Disorders

- **s/s:** intoxication = slurred speech, ataxia, facial flushing, erratic behavior, loss of inhibition, euphoria
  - chronic abuse: acne rosacea, palmar erythema, hepatomegaly, dupuytren contracture, testicular atrophy, gynecomastia
- **screening:** CAGE – cut down, annoyed / criticized for drinking, guilty, eye opener
- **alcohol use d/o = strong urge / craving to use alcohol**
- **diagnostics:** elevated GGT (early sign), ALT, AST, lactate dehydrogenase, MCV, decreased BUN, decreased LDL and red blood cell volume
- **withdrawal sx:** shakes, jitters 8-18 hours after stopping, peak 24-48 hours; abnormal perceptions, n/v (8-18 hours), seizures, hallucination (within 2 days), delirium tremens (2-3 days but can occur up to a week after)
  - 12-24 hours: Irritable, diaphoretic, tachycardic, insomnia, tremor, autonomic hyperactivity
  - 24-48 hours: Seizure
  - patients may develop **alcohol withdrawal with mild symptoms, alcohol related seizures** or in the most serious and life-threatening form of withdrawal, delirium tremens. The patient described here has several abnormal vital **signs** (fever, tachycardia, hypertension). These abnormalities are concerning for **major alcohol withdrawal** which is a constellation of symptoms which may include anxiety, irritability, tremors, tachycardia, fever, hypertension, decreased seizure threshold and both auditory and visual hallucinations. In its most severe form, patients develop delirium tremens, which is a severe hyper-adrenergic state with confusion, hallucinations and hemodynamic instability. This condition is life-threatening and requires aggressive treatment with benzodiazepines and possibly antipsychotics.
  - In ED: give glucose, thiamine (to regenerate NAD), fluid repletion, supportive measures
- **tx:**
  - nonpharm: education, coping skills, relaxation therapy, family therapy, psychotherapy, health and nutritional counseling, AA
  - pharm: 
    - withdrawal = benzos (diazepam = chlordizepoxide or Librium) + folic acid and MVI, thiamin may prevent Wernicke’s encephalopathy; antipsychotic may be indicated for alcoholic halucinosis
    - disulfiram (Antabuse) – alcohol-deterrent that causes nausea with consumption
    - naltrexone: maintenance therapy (decrease cravings and perhaps relapse rates)

Cannabis Related Disorders

- mild euphoriants with some sedative effects
- **MOA:**
  - **Marijuana** is the most widely used illegal psychoactive substance in the world. **Its psychoactive properties come from delta-9-tetrahydrocannabinol** which is chiefly found in the flowering heads of the female plant. **Delta-9-tetrahydrocannabinol is a partial agonist at both the cannabinoid 1 and cannabinoid 2 receptors.** Cannabinoid 2 receptors are found on immune cells and some neurons, and stimulation of these receptors does not lead to positive reinforcing or rewarding effects. In contrast, cannabinoid 1 receptors are located throughout the body, including the dopaminergic mesolimbic brain circuit, otherwise known as the body’s brain reward system. It is the stimulation of these receptors which leads to the potential for abuse of marijuana. Cannabis can be smoked, inhaled as a vapor, or ingested orally. Smoked and inhaled cannabis has a rapid onset of action, while ingested cannabis has a slower absorption and leads to less intense effects. **The potency of cannabis is determined by the ratio of delta-9-tetrahydrocannabinol to cannabidiol contained in the substance.** Cannabidiol is not psychoactive and tends to inhibit or lessen the effects of delta-9-tetrahydrocannabinol, so the lower the ratio of delta-9-tetrahydrocannabinol to cannabidiol, the lower the potency of the drug. Negative health consequences of cannabis use include decreased memory, attention, and concentration. Some users may also experience transient psychosis. A cannabis use disorder, similar to that seen in other drugs of abuse, can develop. Not all users of marijuana develop cannabis use disorder. Genetic predisposition and environmental factors play important roles in determining those who will progress from recreational use to cannabis use disorder.
- **s/s intoxication:** disconnected speech, recent memory impairment, emotional lability, depersonalization, confusion, increased HR, conjunctival injection, decreased body temp
- **adverse reactions:** panic, psychosis, depression (rare) – chronic psychotic states secondary to cannabis use have been reported in eastern cultures where doses are presumable much higher
Opioid Related Disorders

- amotivational syndrome: low drive, poor judgment, introversion, loss of insight, poor communication skills, depersonalization – occurs in people who use marijuana heavily on regular basis for many months / years
- no clear whether heavy cannabis use causes or results from this condition of low motivation
- adverse effects of intermittent use = not study

- withdrawal does not require medication but anxiolytics can be used
  - Withdrawal usually occurs within 24 to 48 hours of stopping the drug, and symptoms include malaise, irritability, insomnia, diaphoresis, night sweats, GI disturbance, and drug craving. The withdrawal symptoms usually peak by day 4 and are resolved by day 10-14.
  - CBT and motivational incentives are successful

- Detectable in urine for 1 month

Hallucinogen Related Disorders – psilocybin (shrooms), mescaline (peyote), LSD, DMT

- induce altered states of awareness that resemble those of natural psychoses
- Phencyclidine (PCP) is a hallucinogenic drug that can be insufflated, smoked, ingested, or injected. It can cause violent or bizarre behavior, horizontal and vertical nystagmus, disorientation, and auditory hallucinations. If the intoxication is mild, supportive care is usually sufficient to manage the patient. Should the patient be agitated or violent, the first-line treatment is benzodiazepines.
- s/s intoxication: alteration of mood (euphoria), vividness of real or fantasied sensory illusions and hallucinations, synesthesia (overflow from one sensory modality to another) confusion, time slowing, loss of body boundaries, grandiosity, omnipotence
- adverse reactions: acute panic attacks, psychosis, flashbacks, precipitation of underlying psychosis
- LSD intoxication: dilatation of pupils, increased deep tendon reflexes, muscle weakness, HTN, tachycardia, fever
- Tx: supporting and reassuring person and diminishing stimulation around the person until it wears of, CBT and motivational incentives are successful

Inhalant Related Disorders

- Definition: substances that contain mind-altering properties when inhaled (huffing / sniffing) – high only lasts several minutes (glue, aerosol, shoe polish, gas, lighter fluid, leather cleaner, paint thinner)
- Adverse reaction: seizure, coma, death; addiction uncommon but possible
- Sx: belligerence, aggressiveness, apathy, euphoria, impaired judgement, dizziness, poor coordination, slurred speech, unsteady walk, lethargy, slow movement / reflexes, muscle weakness, tremor, blurred vision, stupor, com; clears within a few minutes to hours after exposure
- erythematous rash about the mouth is a common finding in patients inhaling solvents (glue, paint thinner, lacquer). It is usually caused by a contact dermatitis to the solvent and other chemicals in the substance abused and may be associated with a secondary bacterial infection. Additional clinical features include mood swings, erratic behavior, headache, nosebleed, facial flushing, salivation, visual changes, nausea, vomiting, anorexia, unusual breath or body odor, coughing, wheezing, tachycardia, dysrhythmia, slurred speech, ataxia, disorientation, tremor, loss of consciousness, hallucinations, nystagmus, and poor attention. Chronic pulmonary, neurologic, psychiatric, cardiovascular, hematologic, renal, and hepatic disorders may result from prolonged abuse. Diagnosis is established by a thorough history and physical. Acute treatment is largely supportive, though respiratory, hematologic, renal, hepatic, and cardiovascular complications may require more intensive treatment. Ongoing psychiatric and primary care are paramount in long-term treatment, as additional behavioral and psychiatric comorbidities are common, including abuse of other substances.
- Long/term effects: damage kidney, liver, nerve fibers, brain cells
- Tx: educational campaigns; treat the seizure, CBT, individual / family therapy

Opioid Related Disorders – heroin, oxycodone, codeine, fentanyl, morphine

- Intoxication s/s: drowsiness, impaired concentration, bradycardia, hypotension, constricted pupils, slurred speech, flushing
  - Hypoventilation and respiratory depression, CNS depression, miosis
- Withdrawal s/s: lacrimation, rhinorrhea, sweating, yawning, anxiety hypertension, tachycardia, n/v, abdominal cramps, muscle/joint pain, mydriasis, lacrimation
  - Adrenergic hyperactivity (CNS excitation, tachypnea, tachycardia, hypertension)
  - GI sx: abdominal cramping, n/v/d
  - Mydriasis
  - Yawning, lacrimation
  - Give clonidine for withdrawal

- Tx:
1. Naloxone to reverse effects
   - Support the airway!
   - Provide supplemental oxygen before administering naloxone
   - Naloxone (pure opioid antagonist)!!!

2. Slow taper methadone or clonidine with adjuncts (ibuprofen for muscle cramps, loperamide for diarrhea, promethazine (anti-histamine / anti-nausea – Phenergan) or dicyclomine (bentyl) for GI distress; benzos for mild withdrawal

3. Ongoing maintenance: methadone, naltrexone, buprenorphine, or combination of the latter with naloxone

Sedative, hypnotic, or anxiolytic related disorders – “downers” that affect CNS; most = prescription drugs (benzos, barbiturates → prone to dependence)

- Longer term use of 10-40 mg benzos can result in physical dependence
- **Overdose**: sx of intoxication and overdose mimic drunkenness – drowsiness, slurred speech, lack of coordination, memory impairment, confusion, nystagmus, moodiness, faulty judgement – occur in much higher doses with benzos that barbiturates but alcohol + benzos can cause OD
  - OD tx: induce vomiting or gastric lavage to clear stomach; send blood / urine / gastric content for tox analysis; monitor and support respiratory / cardiac function for at least 24 hours
  - **Comatose / semi-comatose**: attempt gastric lavage if drug taken <12 hrs earlier, alkalinize urine to increase excretion; support life function via intubation, oxygen, plasma expanders, vasopressors
- **Withdrawal**: seizures and cardiovascular collapse and death; sx = agitation, anxiety, anorexia, vomiting, increased HR, postural hypotension, hyperreflexia, tremor, seizures, delirium, hypothermia, cardiovascular collapse
  - Withdrawal tx: substitution of barbiturate or long acting benzo (diazepam) for abused CNS depressant with gradual tapering
  - If dependent on both opioids + barbiturates, barbiturate withdrawal is carried out first
  - May take several weeks to d/c benzo with careful monitoring

Stimulant Related Disorders – caffeine, cocaine, amphetamines/methamphetamine, pseudoephedrine, diet pills

- **Acute intoxication**: agitation / aggression, impaired judgment, euphoria, elevated blood pressure, transient psychosis, tachycardia, dilated pupils, hallucinations
- **Withdrawal s/s**: fatigue, depression, headache, profuse sweating, muscle cramps, hunger
- Tx: benzos to reduce agitation; short-term antipsychotics for psychotic sx

Tobacco Related Disorders:

- **Definition**: nicotine – changes brain to cause cravings → use / withdrawal; MC substance use disorder in the US; most preventable cause of disability and early death
- **Sx**: impariment or distress within a 12 mo period bc of tobacco use, taking tobacco in larger amounts or over a longer period of time than originally intended; having strong craving / urge to use tobacco; having strong desire to cut down; making unsuccessful efforts to do so; spending a lot of time trying to obtain / use tobacco products; use tobacco despite problems ti causes in major areas of life; using tobacco in situations where it’s hazardous; increasing amount to reach desired effect
- **Withdrawal sx**: irritability, anxiety, difficulty concentrating, increased appetite, depressed mood, insomnia; peak 2-3 days after abstinence and last 2-3 weeks.
- Those with alcohol / substance use disorders have lower rate quitting; family link
- Tx: pharmacological, behavioral, psychosocial – patch, gum, Chantix
  - Integrated / combined treatment
  - nicotine replacement therapies (patch, gum, lozenge, inhaler, nasal spray) – low cost but less effective than varenicline and bupropion; more steady delivery nicotine than cigs
  - Chantix (varenicline) – relieve craving and withdrawal, reduce reinforcing effects of nicotine – most effective of pharm interventions – BB warning for cardiovascular adverse events; may cause depressed mood, agitation, suicidality
Buproprion (zyban) – antidepressant that reduces cravings and other withdrawal effects – effective but less than Chantix; do not use with seizure disorders, current use of bupropion, MAOIs, electrolyte abnormalities, eating disorders

Other - Individual psychological intervention – counseling, motivational interviewing, CBT; Group support; Mobile technologies; Organization interventions

Sympathomimetic Toxidrome

- **Sympathomimetic toxidrome** is seen with the acute abuse of cocaine, amphetamines, or decongestants. Cocaine causes release of dopamine, epinephrine, norepinephrine, and serotonin. The greatest impact comes from the adrenergic stimulation by norepinephrine and epinephrine. Norepinephrine causes vasoconstriction by stimulating alpha-adrenergic receptors on vascular smooth muscle. Epinephrine increases myocardial contractility and heart rate through stimulation of beta-1-adrenergic receptors. In addition to causing catecholamine release, the reuptake of these neurotransmitters is inhibited. Clinically, patients are usually **hypertensive** and **tachycardic** and exhibit **mydriatic pupils**. In massive overdoses, **cardiovascular collapse** can result in shock and **wide-complex dysrhythmias**. CNS effects include **seizures**. Sympathomimetic toxidrome is sometimes difficult to distinguish from anticholinergic toxidrome. The difference is that patients usually present with dry mucous membranes with an anticholinergic overdose, whereas patients are **diaphoretic** with sympathomimetics. Treatment is usually supportive.

- **don’t use beta blockers** → this can lead to unopposed alpha-receptor stimulation and cardiovascular collapse.

**PSYCHOTIC DISORDERS**

- Loss of touch with reality: schizophrenia, bipolar disorder, depression, organic (injury, alcohol)

- **Psychosis** can be caused by both **organic (medical)** and **functional (psychiatric)** etiologies. It is critical for the clinician to exclude organic causes of psychosis before transferring the patient to psychiatric services. The delay in diagnosis and therefore treatment is potentially harmful to the patient. Unfortunately, it can be difficult to differentiate the etiologies. Patients with organic causes of psychosis tend to have recent **memory deficits**, **psychomotor retardation**, **visual hallucinations**, **emotional lability**, **disorientation** and occasional periods of lucidity. Additionally, those with organic psychosis are more likely to have a **sudden onset of symptoms**, abnormal vital signs or physical examination findings and social immodesty. In patients over 40 years of age without a prior psychiatric history, an organic cause of psychosis should always be assumed.

**Delusional Disorder**

- Presence of delusions (false beliefs) for at least 1 month; may be bizarre; no hallucinations or disorganized speech / behavior

- **persistent, nonbizarre delusions not explained by other psychotic disorders. It is a fixed false belief that has a certain level of plausibility**

- Paranoid disorders, delusions about things that could happen in real life

- Behavior is not obviously odd, functioning not significantly impaired

- **Types of delusions**
  - Erotomanic: / love another person (famous or powerful) is in love with patient
  - Somatic: patient has physical defect or medical conditions
  - Jealous: patient’s partner having an affair
  - Persecutory: patient or another person is mistreated or persecuted = MOST COMMON
  - Grandiose: inflated self-worth, power, knowledge, identity; belief that pt. is famous
  - Reference: random events take on personal significance
  - Control: some agency takes control of thoughts, feelings, behaviors
  - Nihilism: exaggerated belief in futility of everything
Doubles: family member or close person has been replaced by identical clone
Mixed: characteristics of more than one type of delusion
Parisitosis: Delusions of parasitosis (DoP) is a delusional disorder involving the firm belief by the patient that the pruritus is caused by an infestation of insects or parasites. Patients present with self-inflicted skin manifestations from scratching or digging and may bring a sample of debris, lint, or pieces of skin that they say contain the insects or parasites. Diagnosis involves excluding any true skin infestations, such as scabies, as well as ruling out systemic disease that may cause pruritus. Once a physical etiology has been excluded, diagnosis is through meeting criteria established by the Diagnostic and Statistical Manual of Mental Disorders (DSM). Initial management is by establishing a strong therapeutic alliance with the patient and respecting the patient’s autonomy in all encounters. First-line pharmacologic treatment is with antipsychotic medications.
Unspecified: delusion can’t be clearly determined or characterized
• Tx: same as schizophrenia – antipsychotics / SSRIs can decrease delusional beliefs; avoid directly challenging the patient
• First-line medications to treat delusional disorder are antipsychotics, including aripiprazole.
• The term delusional disorder refers to a condition whose core feature is persistent, nonbizarre delusions not explained by other psychotic disorders. It is a fixed false belief that has a certain level of plausibility. The delusion may emerge gradually and become chronic, and sometimes is associated with a precipitating event. Behavioral, emotional, and cognitive responses generally are appropriate, and neither mood disorders nor schizophrenic illness is present. There are several types of delusions, and the predominant type is identified to make the diagnosis. Minimal deterioration in personality or function and the relative absence of other psychopathologic symptoms have been considered important evidence for distinguishing this disorder from schizophrenia and other psychotic condition.

Schizoaffective Disorder
• Definition: meets criteria for MD episode, manic episode, or mixed episode, during which criteria for schizophrenia also are met → mixture of psychotic and mood symptoms
  • Schizophrenia + mood disorder (major depression or bipolar d/o)
• Criteria: delusions or hallucinations lasting for 2 weeks without mood disorder sx help differentiate schizoaffective d/o from mood disorder with psychotic features
• Carries better prognosis than schizophrenia but worse prognosis than mood disorder
• Tx: target psychotic and mood sx: second generation/atypical antipsychotic (paliperidone) are first line; mood stabilizer (lithium or valproate) or antidepressant can be added; psychosocial support

Schizophrenia
  • Paranoid: preoccupied with delusion of persecution or grandeur – usually tense and guarded
  • Disorganized: unorganized behavior, disorganized speech, inappropriate affect; word salad, neologism
  • Catatonic: silent, does not respond to external stimuli
  • Residual: socially withdrawn
• Hallucinations:
  • Auditory: MC – sound or a void – voice often in 3rd person or can be command hallucinations
  • Visual: simple (flashing light) or complex (face)
  • Olfactory: stench or foul smells common
  • Tactile: insects on skin or being touched
  • Somatic: sensation arising from within the body
  • Gustatory: can be apart of persecutory delusions (tasting poison in food)
• Neologisms are nonsense words invented by the patient. This is a common symptom in schizophrenia.
• Pathophysiology:
  • Positive sx: hallucinations, delusions, disorganized speech and thinking, movement disorders (catatonic behavior), caused by excess dopamine receptors in mesolimbic pathway
  • Negative sx: flat emotional affect: social withdrawal, lack of emotional expression, communication and reactivity, silent patients. Caused by dopamine dysfunction in the mesocortical pathway (decreased dopamine); serotonin (5HT) also thought to play a role
  • patients with schizophrenia have decreased CNS grey matter, increased size of ventricles, increased CNS dopamine receptors – 10% incidence in pts with 1st degree relative that is schizophrenic
• management:
1. **Antipsychotics** – dopamine receptor antagonists – 2nd generation = 1st line treatment (clozapine, risperidone, olanzapine); 1st generation (chlorpromazine / haloperidol = increased extrapyramidal sx)

**Schizophreniform Disorder**
- Fits criteria for schizophrenia but <6mo duration (last between 1 and 6 months)

**CONDUCT DISORDERS**

**ADHD**
- Short attention span, easily distractible (somtimes with hyper focus), hyperactivity, impulsivity >6 mo (onset before age 7); no association with psychosis
- **Epidemiology:** 2-20% of school age children may be affected; 20-50% continue to have dysfunctional sx as adults
- **Cause:** multifactorial- exposure to inefections and toxins, prenatal complications, familiar or genetic factors, psychosocial, neurochemical dysregulation
- **Characteristics:** hyperactivity, impulsivity, inattentiveness – attention deficit + hyperactivity; secondary sx = emotional immaturity and lability, poor social skills, motor incoordination; disruptive behavior may result in peer rejection and deflated self-image – often don’t comply with parents requests at home (explosive and irritable)
- **Dx:** comprehensive medical, educational, and psychosocial evaluations – Conners Comprehensive Behavioral Rating Scale and ADHD Rating Scale IV
  - Sx of hyperactivity, impulsivity, inattention resulting in impairment must be present before age 12; sx must occur in at least 2 settings; at least 6 sx of inattention, hyperactivity/impulsivity or both + developmentally inappropriate + present for at least 6 months
- **Tx:** CNS stimulants + behavioral therapies, social skills training, and school-based interventions (multimodal)
  - 1. **Pharm** – methylphenidate (Ritalin), dexamethylphenidate (focalin), amphetamine/dextroamphetamine (adderal) = 1st line
    - s/e: growth retardation, weight loss, labile mood, tics, insomnia
    - atomoxetine (stratera): SNRI – approved for ADD and ADHD – efficacy = stimluants and s/e are similar but less frequent – NOT a controlled substance take this if personal or family history of drug abuse
    - antidepressants (bupropion, venlafaxine, clonidine, imipramine) – can be used as adjuncts; guanfenacine (centrally active antihypertensive) – also used for ADHD
    - SYMPATHOMIMETIC DRUGS (block reuptake and increase release of norepinephrine and dopamine in extra neuronal space)
  - 2. **Behavior modification:** behavior modification, educational and classroom management, family therapy, group therapy

**Autism Spectrum Disorders**
- Spectrum of developmental disorders with probable etiology linked to combination of prenatal viral exposure, immune system abnormality *genetic factors
- Axis I developmental disorder assoc with severe, impairment of several areas of development: reciprocal social interaction skills, presence of stereotyped behavior, communication skills, may have some mental retardation
- **Characteristics:** impaired social interaction, impaired communication, repetitive stereotyped patterns of behavior and activities; 3-5x more common in boys; apparent by age 3-6 months aloof, withdrawn, lack facial expression
  - Age 3 = lack reciprocal social interaction; failure to engage in peer relationship; fail to develop language skills; don’t progress through expected developmental milestones
  - Absence of spontaneous / varied lay activities; restricted repertoire of interests; agitated and upset with routine change
  - Hyper or hypo sensory response – indifferent to pain or adverse reaction to sound / texture; fascination with lights, movement, parts of toys / objects
  - Repeated motor movements or mannerisms that are not goal directed (rocking back and forth, hand / finger flapping)
  - **Primary signs:** social interaction difficulties: significant emotional discomfort or detachment; communication difficulties (inability to communicate or chooses not to communicate in social settings); repetitive behaviors
  - **Other signs:** persistent failure to develop social relationships, failure to show preference to parents over other adults; unusual sensitivity to visual, auditory, olfactory stimuli, unusual attachments to ordinary objects
- **Treatment:**
  - Neuropsych testing, behavioral modification strategies, meds
    - M-CHAT questionnaire at 18 mo
Behavioral therapy = most effective; speech and language pathologist consulted; audiology eval; EEG
Second generation antipsychotics (risperidone, aripiprazole), conventional antipsychotics (haloperidol), neuroleptics (carbamazepine) can reduce impulsivity and irritability (self-injury and tantrums)
SSRIs can help control repetitive behaviors

Conduct Disorder

- Social and academic difficulties: lack of remorse / guilt, defies authority (causes fights, throws tantrum, fails in schools, sets fires, sets animals, sexually uninhibited)
- Age <18
- Poor prognosis 40% develop anti social personality disorder (age >18)
- MC in boys
- Characteristics: M>F; considered a precursor to antisocial personality disorder in adulthood; high comorbidity ADD/ADHD, learning disability, mood disorders, substance use disorders
- Diagnostic: basis of pattern of behavior that involves violation of basic rights of others or of social norms, with 3+ acts of: aggression toward people or animals, destruction of property, deceitfulness or theft, serious violations of rules
- Treatment:
  - multimodal (environmental and behavioral modifications, family therapy + pharmacotherapy)
  - stimulants (dextroamphetamine, methylphenidate), bupropion, clonidine, lithium, haloperidol, second generation antipsychotics, valproic acid to reduce aggressive/assaultive behaviors;
  - SSRIs may aid impulsivity and mood lability / irritability
- Conduct disorder can be distinguished from oppositional defiant disorder by the presence of physical aggression and other severe forms of antisocial behavior. Conduct disorder is characterized by a persistent pattern of serious rule-violating behavior, including behaviors that harm (or have the potential to harm) others. The patient with conduct disorder typically shows little concern for the rights or needs of others. The symptoms of conduct disorder are divided into 4 major categories: (1) Physical aggression to people and animals including bullying, fighting, weapon carrying, cruelty to animals, and sexual aggression; (2) Destruction of property, including fire setting and breaking and entering; (3) Deceitfulness and theft; and (4) Serious rule violations, including running away from home, staying out late at night without permission, and truancy. To meet the diagnosis, >3 of these symptoms must be present at least 1 year (1 or more in the past 6 months) and must impair the youth’s function at home, at school, or with peers. The onset of conduct disorder may occur in early childhood but usually occurs in late childhood or adolescence. In a majority of patients, the disorder remits by adulthood. A substantial fraction of patients develop antisocial personality disorder as adults. Early onset of conduct disorder, along with high frequency of diverse antisocial acts across multiple settings, predicts a worse prognosis and increased risk for antisocial personality disorder. Patients with conduct disorder also are at risk for the development of mood, anxiety, somatoform, and substance-use disorders in adulthood.
- Oppositional defiant disorder (ODD) and CD may have similar presentations; however, the behaviors of CD include more deliberate destruction, deceit, aggression, and serious rule violations.

Oppositional Defiant Disorder

- Persistent pattern of negative, hostile and defiant behavior towards adults; blames others – 3 components:
  - Irritable and angry mood, argumentative/defiant behavior, vindictiveness
  - no association with psychosis
- Characteristics: before age 8; 16-22% children; remit in 25% but may progress to conduct disorder; high comorbidity with substance abuse disorders, mood disorders, ADD, ADHD
- Diagnostic: at least 6 months negativistic, hostile, defiant behavior, including at least four of the following: frequent loss of temper, argumetns with adults, defying adults’ rules, delivertaely annoying others, easily annoyed, anger and resentment, spitefulness, blaming others for mistakes / misbehaviors
- Treatment: family intervention using training skills in child management for parents/ caregivers; individual psychotherapy, focusing on behavioral modification and problem solving skills; treat comorbid psych disorders with meds
- Cluster A (mad) – pt. viewed as weird or peculiar; associated with psychotic disorders
  - Schizoid, schizotypal, paranoid
- Cluster B (bad) – pt. viewed as emotional or inconsistent; associated with mood disorders
  - Antisocial, borderline, histrionic, narcissistic
- Cluster C (sad) – pt. = fearful / anxious; associated with anxiety disorders
  - Avoidant, dependent, obsessive-compulsive

**Schizoid Personality Disorder (cluster A)**
- **General characteristics:** lifelong pattern of voluntary social withdrawal, often perceived as eccentric and reclusive; reality testing is intact
  - Pt. are quiet and unsociable with constricted affect; no desire for close relationships, prefer to be alone
  - M 2x > F
- **Clinical features:** pt. neither enjoy nor desire close relationships; generally choose solitary activities; little if any interest in sexual activity with another person; indifferent to praise or criticism; emotional coldness, detachment, flattened affect
- **Treatment:** group therapy and psychotherapy; low dose short term antipsychotics or antidepressants can be given if indicated for comorbidity; risperidone or olanzapine can help with flattened emotions and SSRIs or bupropion can alleviate psychological inability to experience pleasure

**Schizotypal Personality Disorder (cluster A)**
- **General characteristics:** pervasive pattern of eccentric behavior and peculiar thought patterns beginning early adulthood; most likely to progress to schizophrenia
  - Pt. = strange and eccentric; odd behavior and social deficits cause them to have few, if any, friends
  - may become apparent in childhood / adolescence
- **Clinical features:** pt. have ideas of reference (beliefs / perception that irrelevant, unrelated or innocuous things in the world are referring to them directly
  - “magical thinking” – odd thoughts, beliefs, inconsistent with cultural norms; may believe in clairvoyance or telepathy, bizarre fantasies or preoccupations, belief in superstitions or occult
  - Unusual perceptual experiences may be noted; suspiciousness, paranoia, excessive social anxiety; inappropriate / restricted affect
- **Treatment:** psychotherapy with social skills training is treatment choice; trial of low dose second generation antipsychotics (such as risperidone or olanzapine) can help manage symptoms; antidepressants or benzodiazepines to decrease anxiety can be used if necessary

**Paranoid Personality Disorder (cluster A)**
- Pervasive distrust and suspicion of others beginning by early adulthood; pt. blame own problems on others and seem hostile and angry; M>F
- **Clinical features:**
  - Suspicion without evident that others are exploiting / deceiving them
  - Preoccupation with doubts regarding loyalty or trustworthiness of acquaintances; doubts regarding fidelity causing turmoil in relationships
  - reluctance to confide in others
  - Interpretation of benign remarks as threatening or demeaning
  - Persistently bears grudges; quick to counterattack
  - Emotionally cold with blunted affect
- **Treatment:** individual psychotherapy = key; antianxiety meds or short course antipsychotics to decrease paranoia or for transient psychosis may be needed
  - To overcome this barrier, the therapist must remember that the paranoia manifested in paranoid personality disorder is often a by-product of a fragile self-concept.
Antisocial Personality Disorder (cluster B) (> 18yo)

- **Characteristics:**
  - Behaviors deviating sharply from the norms, values, and laws of society (harmful or hostile to society)
    - Inability to conform to social norms and strong tendency to commit unlawful acts
  - Violates the rights of others – may set fires, kill cats; begin in childhood as conduct disorders
  - Hx of physical or sexual abuse / harming animals
  - Abnormal EEG may be seen
  - 3x more common in males
  - Most frequently found personality with malingering

- **Clinical manifestations:** inability to conform to social norms with disregard and violation of the rights of others, lack empathy, pattern of criminal behavior, little anxiety
  - Manipulative, deceitful, impulsive, promiscuous, spouse/child abuse, lack remorse, drunk driving!!, irritable, aggressive
  - Irresponsible, can’t sustain work

- **Management:**
  - 1. psychotherapy (establishing limits) – socially based intervention
  - 2. Pharmacologic = not helpful (could be conduct d/o in childhood)
    - Can use SSRIs, lithium, valproate, second generation antipsychotics, carbamazepine; propranolol for anxiety, impulsivity, aggression

- **The best way to diagnose antisocial personality disorder is through the patient’s history.** The Diagnostic and Statistical Manual of Mental Disorders, fifth edition (DSM-5) requires that the individual be at least 18-years-old, with evidence of conduct disorder before the age of 15

Borderline Personality Disorder (cluster B)

- **Characteristics:** unstable, unpredictable mood affect, unstable self image / mood and relationships; MC seen in women; MOOD SWINGS, moments of intense anger; always in a “state of crisis”

- **Clinical manifestations:**
  - Extreme pattern of instability in relationships but cannot tolerate being alone
  - Black and white thinking / splitting (seeing people as either all good or all bad)
  - Short and transient psychotic episodes, paranoid ideation, dissociative symptoms, especially during times of increased stress
  - Self-harm: suicide threats, self-mutilation, marked impulsivity with self-damaging behaviors (substance abuse, reckless driving, binge eating); may develop feelings of emptiness
  - High incidence of MDD; suicide rates peak during early adulthood
  - Abnormal EEG may be seen
  - F2x > M

- **Management:**
  - psychotherapy (including group therapy = tx of choice) – dialectical behavioral therapy
  - pharmacologic: short term low dose antipsychotic, antidepressants, or benzos, or fluoxetine SSRI
  - **There are no proven therapies to reduce the severity of borderline personality disorder** (BPD). The most promising psychological therapy is dialectic behavioral therapy (DBT). DBT is a multi-faceted program specifically designed to treat BPD. This approach works towards helping people increase their emotional and cognitive regulation by learning about the triggers that lead to reactive states and helping to assess which coping skills to apply in the sequence of events, thoughts, feelings and behaviors that lead to the undesired behavior. The few, small studies of DBT found improvement in many symptoms of BPD, but long-term data is lacking. Another promising therapy is psychoanalytic-oriented day hospital therapy.
  - In ED: engage in conversation and discuss sx and validate distress – have to feel they are connected to someone who they believe really cares

Body Dysmorphic Disorder

- **Characteristics:**
  - Preoccupation with imagined defect in physical appearance or exaggerated distortion of minor flaw
  - Face = MC fixation
  - Pt. feel self-conscious and fear humiliation; go to great lengths to hid or correct perceived anomaly; stress from external expectations and cultural norms
  - Visits to dermatologist and/or plastic surgeon = common
  - Age of onset = 15-20 years
- **Treatment:** serotonin-modulating drugs (fluoxetine, clomipramine) are efficacious in majority of patients – high doses SSRI 10–12 weeks
- Treat coexistent psych disorders (depression / anxiety)

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### Histrionic Personality Disorder (Cluster B)

- **characteristics:**
  - overly emotional, dramatic, seductive, excitable, high degree of attention seeking, tendency to exaggerate thoughts and feelings; self-absorbed temper tantrums / center of attention
  - flamboyant and extroverted, rapidly shifting emotions and superficiality render them unable to maintain relationships
  - easily influenced by others
  - need to be center of attention and may throw temper tantrum if attention shifts
  - pattern of excessive emotionality and attention seeking behavior
  - somatization and substance use d/o common
  - speech – impressionistic and lacking in detail
  - may employ regression and reverting to acting like child
  - PRAISEME:
    - Provocative behavior, relationships (considered more intimate than they are), attention (likes to be the center of), influenced easily, style of speech (impressionistic), emotions (rapidly shifting, shallow), made up, emotions exaggerated
- **treatment:**
  - psychotherapy (group or individual)
  - antidepressants / anxiolytics
    - pt. function fairly well so meds don’t play much role

### Narcissistic Personality Disorder (cluster B)
- **grandiose** often excessive sense of self-importance but needs praise and admiration; **inflated self image**
  - manifestations:
    - consider special, entitled, require extra special attention BUT have **fragile self esteem** (occupied with fantasies, jealous of others or believes other are envious of them; doesn’t tolerate rejection well, often becomes depressed)
    - **difficulty with aging process**
    - preoccupation with fantasies of unlimited success, beauty, brilliance
    - lacks empathy
  - treatment: difficult
    - psychotherapy = key (including group therapy treatment of choice)
    - meds rarely indicated – lithium can be used if mood swings are prominent, antidepressants (SSRI) if mood disorder present

**Avoidant Personality Disorder (cluster C)**
- **Characteristics:**
  - Desires relationships but avoids them d/t “inferiority complex” (intense feelings of inadequacy, very sensitive to criticism, fears rejection and humiliation); low self esteem / fear of rejection
  - Extreme sensitivity to rejection, inadequacy → interpersonal withdrawal and total avoidance
  - Great restraint with intimate relationships due to fear of rejection
  - Shy, timid, lacks confidence

- **Management:**
  - First line = psychotherapy → establishing limits – social skills training, group therapy, assertiveness training
  - Pharmacologic: beta blockers for anxiety / SSRI depression; benzos for short term anxiety

**Dependent Personality Disorder (Cluster C)**
- **Characteristics:** dependent, submissive behavior
  - difficulty disagreeing with others for fear of loss of support or approval
  - lack self-confidence, avoid positions of responsibility, have dislike of being alone; passive, self-doubtful, reliant on others to take care of them
  - depression may ensue
  - social and occupational functioning is impaired
  - uncomfortable when alone

- **manifestations:** constantly needs to be reassured, relies on others, will not initiate things, intense discomfort when alone, may volunteer for unpleasant tasks

- **treatment:**
  - psychotherapy, especially insight oriented, behavioral, group, and family therapy, and assertiveness training
  - anxiolytics and antidepressants may be useful to target symptoms (benzos / SSRIs)

**Obsessive Compulsive Personality Disorder (cluster C)**
- Pervasive pattern of orderliness, perfectionism, inflexibility

- **Characteristics:** rigid, stubborn, emotionally constricted, insist others submit to their ways → difficulty with interpersonal occupational relationships; perfectionism interferes with relationship capacity, change in routine threatens to upset perceived stability → extreme anxiety
  - Egosyntonic = not distressing to the patient (OCD = egodosynic)
  - Excessive devotion to work and productivity to exclusion of leisure activities; reluctance to delegate tasks unless those tasks are done the way they want
  - Miserly spending or hoarding may be seen

- **Tx:** psychotherapy and group / behavior therapy
  - SSRIs help manage anxiety / depression; clomipramine is effective as 2nd line

**Obsessive Compulsive Disorder**
- Obsessions = persistent and recurrent thoughts, images or impulses that are intrusive and inappropriate and cause significant anxiety

- Compulsions = ritualistic, repetitive that pt. are compelled to engage in to relieve anxiety caused by obsessions and reduce distress; excessive with no realistic connection to events pt. is trying to avoid

- May or may not have insight and compulsions are egodosynic (distressing to the patient) = more likely to seek tx

- 2/3 dx <25; 1/3 = adolescence
• **Working Alliance Inventory** is helpful while initiating and during treatment. The Working Alliance Inventory contains 36 (long form) or 12 (short form) self-reported items.

• Types of obsessive compulsions: contamination (hand washing/avoid contaminated objects) > pathologic doubt (forgetting to lock door/repetitive checking) > intrusive thoughts (obsessive thoughts without compulsion—sexual/aggressive) > need for symmetry/order/arrange objects → extreme precision/slowness > other: religious, hoarding, nail biting, skin picking, trichotillomania (hair pulling out), counting/repeating phrase

• **Factitious Disorder**

  - Intentionally fake signs/symptoms of medical or psychiatric symptoms; primary motivation is assume the sick role; begins in early adulthood and carries poor prognosis; pt. seek hospital admission under different names by feigning different illnesses; when confronted with ruse → angry/abruptly sign out
  - Ex. Swallowing forks/knives

  - Obtaining reliable past medical hx is unlikely; usually familiar with disease process that they’re feigning but true disease processes must be ruled out

  - **Tx:** early recognition is paramount to prevent dangerous procedures; confront pt. in non-threatening manner; no specific psychiatric intervention has been notably effective but psychoterhapy is suggested; SSRIs may be useful to reduce impulsive tendencies seen in acting out factitious behavior

• **Factitious disorder imposed on self**

  - Formerly munchausen syndrome

  - Factitious disorder imposed on self. This is a psychiatric disorder in which the individual feigns disease in an attempt to gain attention, sympathy, or reassurance. There is often a longstanding history of doctor and hospital shopping, frequent hospitalizations, and extensive medical records. They are generally well spoken, intelligent and able to communicate in medical jargon. They often present on the weekend and after regular office hours in an attempt to limit access to medical records and personal physicians. Individuals often want to be admitted to the hospital and once admitted are difficult to discharge home. The normal serum lactate and lack of a post-ictal state essentially rule out true seizure activity and support the fact the patient is faking his seizure episodes.

  - Factitious disorder. Factitious disorder is characterized by falsified general medical or psychiatric symptoms. Patients deceptively misrepresent, simulate, or cause symptoms of an illness or injury in themselves, even in the absence of obvious external rewards such as financial gain, housing, or medications. Symptoms may develop after an identifiable psychosocial stress or as part of a pattern of general life (i.e. this is the way the patient deals with life events). Symptoms can be both psychological and physical. If the patient admits to producing the symptoms, they would not be included in the factitious category. This patient presents with volitional tremors and pseudoseizures that are characterized by general shaking but preserved cognitive function.

  - Falsification of physical or psychological s/s or disfunction f injury or disease, associated with identified deception

  - Presnts himself or herself to others as ill, imapred, injured

  - Deceptive behavior evient even in absence of obvious extrenal rewards

  - Behavior not better explained by another mental disorder, such as delusional

  - Can be single or recurrent episodes

• **Illness Anxiety Disorder (formerly hypochondriasis)**

  - General characteristics: preoccupation with belief of having or fear of contracting serious illness; not of delusional intensity; normal bodily sensations misinterpreted as manifestations of disease; sx last 6 mo or more and impair functioning; onset is typically in early middle adulthood
Pt. exaggerate significance of every ache or bowel change and monitor bodies for evidence of disease
- Commonly coexistent with anxiety and depression
- Pt. fear persists even though medical investigation reveals no cause
- Course is episodic and may be exacerbated by life stressor

**Treatment:** group and insight oriented psychotherapy can be helpful, but pt. are usually resistant to psychiatric care; discuss mechanisms for coping with stress without reinforcing perceived illness behavior is important
- Regularly scheduled appointment with practitioner are recommended to provide reassurance
- SSRIs used if pt. has coexistent anxiety or depression

**Somatic Symptom Disorder**

- **General characteristics**
  - Pt. presents with any vague physical complaints for 6 mo or more involving many organ systems that can’t be explained by general medical condition or substance use; numerous visits to health care providers as are diagnostic tests / procedures; no medical disorder found
  - Pt commonly complain of symptoms related to GI tract or reproductive or neurologic systems; may also complain of pain; increased stress = worsening sx
  - F>M and more often in low socioeconomic groups; onset common in early adulthood and 50% pt. have comorbid mental disorders; course of illness = chronic and debilitating; goal is to not reinforce false beliefs, but to improve function
- **Treatment:** regularly scheduled visits monthly with health care provider
  - Pt. resistant to seeing mental health care provider; group and individual psychotherapy is beneficial to develop coping strategies
  - Secondary gain should be minimized and medications avoided

- **Somatization disorder** is characterized by physical complaints from various organ systems. Diagnostic criteria include a history of multiple physical complaints starting prior to age 30 years resulting in the patient seeking treatment from many different medical providers. The physical complaints cause significant impairment in the patient’s life, including occupational and social functioning. Symptoms must consist of four pain symptoms, two gastrointestinal symptoms, one sexual symptom and one pseudoneurologic symptom not fully explained by a confirmed medical condition. Impulsive and demanding behavior, such as requesting specific diagnostic testing, may occur with patients who meet criteria for this disorder, however there is no evidence that the patient is being deceptive. Treatment focuses on behavior modification including regularly scheduled, brief visits to the medical provider without a diagnostic focus
- The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) does not use the term somatization, and has eliminated the category of diagnoses called somatoform disorders. For patients with prominent somatic symptoms that cause distress and impair psychosocial functioning, DSM-5 has replaced the category of somatoform disorders with a category called somatic symptom and related disorders.

**Malingering**

- malingering, which is to purposefully feign physical symptoms for external gain. The most common goals of people who malinger in the emergency department are obtaining drugs and shelter. In the clinic or office, the most common goal is financial compensation. According to the DSM-5, malingering should be suspected in the presence of any combination of the following: medicolegal presentation, marked discrepancy between the claimed distress and the objective findings, lack of cooperation during evaluation and in complying with prescribed treatment or presence of an antisocial personality disorder.

**Anorexia Nervosa**

- **general characteristics**
  - distorted body image, instense fear of becoming fat despite being underweight → self-imposed starvation
  - severity based on BMI - >17 = mild, 16-16.99 = moderate, <15-15.99 = severe, <15 = extreme
  - losing weight = desired achievement of self control, gaining weight = unacceptable lack of discipline; egosyntonic (deny seriousness of low body weight)
  - may exercise excessively; commonly have food related obsessions (hoarding food, collecting recipes)
  - 90% = female ages 15-30ki8, MC in developed countries and in professions that require thinness
  - Two types
    - Restricting: eats very little and does not binge or purge
    - Binge and burge

**EATING DISORDERS**
- **Symptoms:** Emaciation, orthostatic hypotension, bradycardia, hypothermia, dry skin, lanugo, peripheral edema, amenorrhea/delayed menarche, salivary gland hypertrophy, dental erosion/loss of tooth enamel, calluses or abrasions on back of hand from induced vomiting, constipation, leukopenia, electrolyte abnormalities (hypochloremia, hypokalemia, elevated BUN, metabolic alkalosis, arrhythmias. Osteoporosis and increased likelihood of fracture are of concern due to decreased estrogen, increased cortisol, inadequate calcium and vitamin D intake, increased amylase.
  - Total cholesterol may be increased due to increased production of cardioprotective high-density lipoprotein.
- **Treatment:** Rarely seek tx; family members usually bring it up.
  - Multidisciplinary approach
    - First goal: restore nutritional state; hospitalization often indicated if pt. more than 20% below expected body weight; 10% mortality rate; correct fluid and electrolyte abnormalities and gradual weight restoration crucial
    - Outpatient management: behavioral therapy, family therapy, supervised weight gain programs — add 500 calories more than amount needed to maintain present weight and increase gradually by spreading feedings to 6/day
    - Antidepressants can be used esp when depression present — amitryptaline, paroxetine, mirtazapine — NOT BUPROPION (LOWERS SEIZURE THRESHOLD) in pt. with electrolyte disturbances
    - Meds don’t play major role
    - Can give olanzapine to assist with weight gain
      - Elderly patients with dementia related psychosis treated with antipsychotics are at increased risk of death compared with placebo
- **Anorexia nervosa** is characterized by restriction of food intake resulting in low body weight, intense fear of gaining weight or becoming fat, and disturbance of body image. It occurs most often in adolescent females and is often accompanied by depression and other comorbid psychiatric disorders. For low-weight patients with anorexia nervosa, virtually all physiologic systems are affected, ranging from hypotension and osteopenia to life-threatening dysrhythmias, often requiring emergent assessment and hospitalization for metabolic stabilization. **Sinus bradycardia is almost universally present in patients with anorexia nervosa.** It is hypothesized that this is due to vagal hyperactivity resulting from an attempt to decrease the amount of cardiac work by reducing cardiac output. As cachexia progresses, patients with anorexia nervosa lose strength and endurance, move more slowly, and demonstrate decreased performance in sports. Overuse injuries and stress fractures can occur. Bradycardia, orthostatic hypotension, and palpitations may progress to potentially fatal dysrhythmias. The focus of initial treatment for patients who have anorexia nervosa with cachexia is restoring nutritional health, with weight gain as a surrogate marker. Feeding tubes may be needed in severe cases when the patient has a high resistance to eating. Refeeding syndrome can occur in a malnourished individual when a rapid increase in food intake results in dramatic fluid and electrolyte shifts, and is potentially fatal.
- **Hypophosphatemia** is the hallmark and predominant cause of refeeding syndrome. Refeeding syndrome can be fatal and patients are most at risk during the first two weeks of nutritional supplementation. The syndrome is caused by fluid and electrolyte shifts that occur secondary to nutritional rehabilitation. During episodes of starvation, phosphate stores are depleted. When carbohydrates are reintroduced during aggressive nutritional supplementation, insulin triggers cellular uptake of phosphate which results in low serum phosphate levels. **Extreme hypophosphatemia can lead to myocardial dysfunction and respiratory failure.**
- **Avoid bupropion:** Bupropion is an atypical antidepressant that enhances central nervous system noradrenergic and dopaminergic release. Bupropion also has the potential side effect of neuropsychiatric symptoms and patients should be monitored closely when treatment is initiated. **Bupropion is contraindicated in patients with a seizure disorder or a history of anorexia nervosa.** Bupropion is often used in patients who are concerned about gaining weight after quitting. Insomnia, agitation, and dry mouth are the most common side effects of bupropion. MOA not fully understood.

**Bulimia Nervosa**
- Characteristics: binge eating + vomiting / laxatives / diuretics / exercise to avoid gaining weight
  - Occur 1 day / week for 3 months
  - Causes emotional distress / loss of control
  - Maintain normal body weight or may seem overweight; rapid fluctuations in weight = characteristic
  - Severity: mild = 1-3 episodes / week, moderate = 4-7; severe = 8-13; extreme: >14
  - F > M, onset age 15-30; more prevalent than anorexia; more common to seek treatment
  - Egodystonic (upsetting to pt.)
  - High achievers, respond to societal pressure to be thin, increased rate anxiety and mood disorders, bipolar I, impulse control, and history of sexual abuse
- **s/s:** dental erosion, esophagitis, calloused or abraded knuckles, hypochloremic, hypokalemia, metabolic alkalosis, hypomagnesium, hypocalcemia, salivary gland hypertrophy, cardiac arrhythmias, elevated amylase, gastric distention
- **Treatment:**
  - First line = CBT
  - Prognosis = better than anorexia bc more likely to seek treatment (egodystonic / less denial)
• 1. Restore nutritional status
  • Antidepressants (SSRIs – fluoxetine) = useful; TCAs and MAOIs may be effective but s/e limit use so not first line
  • Avoid bupropion d/t lower seizure threshold
  • Behavioral psychotherapy used with family therapy; group therapy considered; holistic approach
  • Hospitalization usually not necessary except with SI or metabolic / electrolyte disturbances d/t severe purging

• Bulimia nervosa is an eating disorder characterized by recurrent episodes of binge eating and inappropriate compensatory behavior such as self-induced vomiting or laxative abuse. For diagnosis, the behaviors must occur at least once per week for 3 months. Individuals feel out of control with their behaviors and are overly concerned with their physical appearance and weight. Treatment for bulimia nervosa includes psychotherapy, nutritional rehabilitation, pharmacotherapy and management of medical complications. The selective serotonin reuptake inhibitor (SSRI) fluoxetine is the only SSRI approved for use in treating bulimia nervosa.

• Hypokalemia, contraction alkalosis

**Binge Eating Disorder**

- **Characteristics:** >20% over ideal body weight or BMI >30; emotional distress from eating binges without purging / restricting to control weight – loss of control
- **Diagnostic criteria:** recurrent episodes at least once per week for 3 months; eating larger amount of food in 2 hour period than most average people would consume
  - 3+ following: eating faster than normal, eating until feeling uncomfortably full, eating to excess, even when not hungry, eating alone out of embarrassment and feeling disgusted, guilty or depressed after the episode
  - episodes not associated with compensatory weight loss behavior and pt. not fixated on body image
  - severity: mild = 1-3 episodes / week, moderate = 4-7; severe = 8-13; extreme: >14
- **treatment:** behavior modification, food diaries, development of new eating patterns (eating slowly, not eating between meals or when not seated) = beneficial; low-calorie balanced diet and establish exercise regimen = important; group therapy provides education and is motivational
  - pharmacotherapy: underlying depression = common → SSRI (paroxetine, sertraline, citalopram may help binges)
    - sympathomimetics i.e. amphetamine dextroamphetamine, phentermine, phendimetrazine, benzphetamine to suppress appetite
    - orlistat (pancreatic lipase inhibitor) to decrease fat absorption from GI trac used as add-on; s/e = oily stool leakage
  - surgical: gastric bypass / gastroplasty – beneficial for markedly obese

**SEXUAL DISORDERS**

**Exhibitionistic Disorder:**
- **presentation:** pt. will present as 23 y/o male who goes to city park during summer months in overcoat; enjoys walking around park and exposing genitals to strangers then running way
- **diagnostic criteria:**
  - showing genitals to unsuspecting person over a period of at least 6 mo, recurrent and intense sexual arousal from exposure and acting on sexual urges with nonconsenting person
  - or sexual urges / fantasies cause clinically significant distress or impairment in social, occupational, or functioning
  - specify whether: sexually aroused by exposing genitals to prepubertal children, physically mature individuals, or both
  - remission: not acted on urges for at least 5 years while in uncontrolled environment
- **treatment:**
  - psychotherapy: insight oriented, behavioral
  - pharmacologic: SSRIs for impulse control, antiandrogens for paraphilic activity

**Female sexual interest/arousal disorder:**
- **presentation:** 33 yo F with CC trouble having intercourse; completely disinterested in sex and not receptive to patner’s attempts to initiate foreplay; never achieves orgasm
- **diagnostic criteria:** must not be caused by medical, substance, medication disorders
  - lack of, or significantly reduced sexual interest / arousal as manifested by at least 3+:
    - absent/reduced interest sexual activity, absent/reduced sexual/erotic thoughts or fantasies, no/reduce indication of sexual activity / unresponsive to partner’s attempts to initiate, absent/reduced sexual excitement/pleasure during sexual activity in almost all or 75-100% sexual encounters, absent/reduced
sexual interest/arousal in response to any internal or external sexual/erotic cues, absent/reduced genital or nongenital sensation during sexual activity in almost all or 75-100% sexual encounters

- persisting minimum 6 mo
- cause distress
- specify whether lifelong or acquired, generalized or situational, mild (mild distress), moderate (moderate distress), severe (severe distress)

**treatment:** sildenafil/tadalafil (off-label), testosterone (off-label)

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**Fetishistic disorder:**

- **presentation:** 29 yo female brings boyfriend to couples therapist bc she’s uncomfortable with his behavior. Found him clutching her feet during intercourse and he insists on being able to see her feet while they engage in sexual acts

- **diagnostic criteria:**
  - sexual arousal obtained by specific objects over a period of at least 6 mo, recurrent and intense sexual arousal from either use of nonliving objects or highly specific focus on nongenital body parts, manifested by fantasies, urges, or behaviors
  - fantasies / behaviors cause distress / impairment
  - fetish objects not limited to articles or clothing used in crossdressing or devices designed for purpose of tactile genital stimulation
  - specify: body parts, nonliving objects, other
  - in full remission: for at least 5 years

- **treatment:** insight oriented behavioral therapy; SSRIs for impulse control / if concomitant depression

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**Male hypoactive sexual desire disorder:**

- **presentation:** 53 yo male complaining of lack of desire for sex with wife for a year causing distress; putting strain on relationship, prior – having sex 1-2x per month, very active, no significant PMHx

- **diagnostic criteria:** lack of absence of sexual fantasies / desire for sexual activity – must cause market distress / interpersonal difficulties and not accounted for by another mental disorder, drug, medical condition, or asexuality
  - persistently / recurrent deficient or absent sexual/erotic thoughts or fantasies and desire for sexual activity;
  - minimum duration 6mo causing significant distress
  - specify: lifelong vs acquired, generalized vs situational, mild, moder, severe distress

- **treatment:** testosterone supplementation effective in short-term but long-term safety unclear

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**Pedophilic disorder:**

- **presentation:** 33 yo male gymnastics teacher insists that all students take a shower after class, supervises them showering and becomes sexually aroused

- **diagnostic criteria:** sexual arousal by prepubescent children (<age 13) over period of at least 6 mo – recurrent, intense sexually arousing fantasies, sexual urges, or behaviors involving sexual activity with prepubescent child / children
  - has acted on these urges or urges // fantasies cause marked distress
  - individual is at least 16yo old or 5 years older than child / children
  - specify: exclusive (only attracted to children) vs noexclusive; sexuall attracted to males, females, both; limited to incest

- **treatment:**
  - insight-oriented, behavioral therapy
  - SSRIs have some role in impulse controle esp. in depression; antiandrogens

- **Pedophilic disorder** is a paraphilic disorder characterized by a patient ≥ 16 years old who has recurrent sexual fantasies, urges, or behaviors directed toward a prepubescent child or young adolescent. Most pedophiles are male. In most cases, the adult is known to the child. Family dysfunction, divorce, and a personal history of abuse are common. Child pornography use is a reliable indicator of attraction to children and may be the only sign of pedophilic disorder. Diagnosis is made by clinical presentation including evidence that the patient has either acted on their urges or is greatly distressed by them. Therapy consists of counseling and pharmacotherapy. First-line pharmacotherapy is libido reduction with medroxyprogesterone IM, which blocks testosterone synthesis by blocking pituitary follicle-stimulating hormone and luteinizing hormone production. The gonadotropin-releasing hormone agonist leuprolide also reduces testosterone synthesis but is more expensive than medroxyprogesterone.

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**Sexual masochism disorder:**
- **Presentation:** 23 yo male concerned that his behavior has resulted in inability to maintain relationship; requires his partners to strangle him and humiliate him to achieve / maintain erection
- **Diagnostic criteria:** Arousal from being threatened or hurt during sexual activities over a period of at least 6 mo, recurrent / intense sexual arousal from humiliation, beaten, bound, made to suffer and these cause clinically significant distress / impairment in social, occupational, other important areas of functioning
  - Specify: asphyxiophilia (achieving sexual arousal related to breathing restriction), in controlled environment vs full remission (5 years no behaviors)
- **Treatment:** Insight oriented behavioral therapy; SSRIs have some role impulse control esp with depression; antiandrogens

**Voyeuristic disorder:**
- **Presentation:** 20 yo male reported by others for spying through windows of female dormmates
- **Diagnostic criteria:** Observing unsuspecting persons naked or performing sexual activities over period of at least 6 mo, recurrent / intense sexual arousal from observing an unsuspecting person who is naked in the process of disrobing, or engaging in sexual activity as manifested by fantasies, urges or behaviors
  - Individual has acted on these sexual urges with nonconsenting person or sexual urges / fantasies cause clinically significant distress
  - Person is 18+ y/o
- **Treatment:** Psychoanalytic group psychotherapy and shock aversion attempted with limited success
  - Some evidence shows pornography can be used
  - Anti-psychotics / anti-depressants
  - Some success using tx methods for OCD

**OTHER**

**Uncomplicated Bereavement**
- **Definition:** Normal response to major loss; usually clinician’s discretion to differential MDD from typical grief reaction
  - Duration depends on suddenness of loss, relationship of survivor to deceased and age or physical condition of person who has died
  - Normal grief sx resolve within 1 year – most severe sx occur within first 2 months
  - Some pt. do develop MDD – dx not made until grief sx fail to resolve; sx such as worthlessness, SI, impairment of overall function suggest MD episode
- **General characteristics:** shock, confusion, sadness, numbness, guilt; illusions (briefly seeing / hearing deceased), deny aspects of death
- **Treatment:** social contact and reassurance; pt. not helped by antidepressants
  - Benzos (short course) to help with insomnia
- Majority of individuals do not seek professional intervention after loss of loved one
- Kubler Ross stages of grief: (may not be linear)
  - Denial → anger → bargaining → depression → acceptance
  - Women are more likely to experience all stages of grief

**Persistent Complex Bereavement Disorder**
- Intense symptoms of depression and guilt that persist beyond 12 months following the death of a loved one is indicative of **persistent complex bereavement disorder**. Not only do symptoms persist beyond 12 months, but they are generally severe in nature and interfere with daily functioning. According to the DSM V, persistent complex bereavement disorder, also called complicated grief disorder, has overlapping symptoms with major depressive disorder and posttraumatic stress disorder (PTSD), but is currently considered an independent condition.

**Conversion Disorder**
- **General characteristics:** 1+ neurologic complaints that can’t be explained clinically
  - Sx not intentionally produced and may be motor (involuntary movements, tics, blepharospasm, weakness), sensory (paresthesia and or anesthesia, tunnel vision, deafness), seizure activity or mixed (psychogenic vomiting, syncope, globus hystericus)
  - MC sx are shifting paralysis, blindness, mutism
  - Display of unexpected lack of concern and indifference to their symptoms (la belle indifference)
  - Sx tend to be episodic, lasting for days to a month and may remit for a period of time, only to recur during times of stress
  - Most commonly diagnosed during adolescence and young adulthood and is more common in females than males; catastrophic event typically occurs before onset of disorder or will worsen it; with men, often associated occupational or military accident
- **Treatment:** psychotherapy such as insight oriented or behavioral therapy is 1st line treatment
  - Goal of tx is to improve function; spontaneous remission rate is high so even without intervention most patients will improve
  - Avoid medication – hypnosis, short term anxiolytics and relaxation therapy may help
  - Some pt. have responded to amobarbital interviews to uncover underlying psych factors

**Dissociative Disorders (loss of self)**
- Dissociative amnesia: loss of memory of traumatic event
- Dissociative fugue: loss of identity and travel to new location
  - Subtype of dissociative amnesia in DSM-5 and is characterized by sudden unexpected travel or wandering in a dissociated state. Dissociative amnesia is a potentially reversible memory impairment that primarily affects autobiographical memory. Patients with the disorder cannot recall important personal information and it usually occurs after traumatic or stressful event such as physical injury, sexual abuse or combat. A subset of patients with generalized dissociative amnesia present with dissociative fugue, involving apparently purposeful travel or bewildered wandering that is associated with amnesia for identity or for other important autobiographical information.
- Dissociative identity: two or more distinct personalities

**ABUSE**
**Elder Abuse**

- Physical, sexual, psychological, emotional, financial
- Forms: physical or sexual abuse – bruises, puncture wounds, fractures, buts, lack of eyeglasses / hearing aids, injuries from restraints, excessive drugging; violation of basic rights (opening mail)
- Be aware of previous hx of abuse by caregiver, conflicting accounts of accidents by caregiver, unwillingness to implement treatment plans, inappropriate defensiveness by caregiver; caregiver won’t allow patient’s responses to questions
- Most states have same reporting requirement for suspected elder abuse
- Up to two million elderly people are abused or neglected each year in the US. There are several categories of elder abuse including: physical abuse, sexual abuse, neglect, emotional or psychological abuse, abandonment, and financial or material exploitation. Unlike child abuse, interventions cannot be made against the abused person’s wishes. Adults have the right to refuse intervention even if that means returning to a dangerous situation. However, in most states, emergency physicians are mandatory reporters of suspected elderly abuse or neglect and **adult protective services should be informed.**

**Child Abuse**

- Definition: health care providers required to alert appropriate authorities; best to consult mental health professional or family social services; must protect child from future abuse
- Physical signs: any injury that can’t be adequately explained / not consistent with hx; bruises, lacerations, soft-tissue swelling, dislocations, fx, spiral fx
  - Burns: donut shaped, stocking-glove distribution, symmetrically round,
  - Bruises / injuries that form regular patterns on face, back, butt, thighs; retinal hemorrhages, hyphema should alert suspicion of shaken baby syndrome
  - Other: internal hemorrhages, abdominal injuries, bite markes
  - Retinal hemorrhages are present in up to 75% of cases and are virtually pathognomonic for shaken baby syndrome
- General characteristics: psychiatric disturbance as result of abuse → anxiety, aggressive or violent behaviors, PTSD, depression, suicide, substance abuse, poor self-esteem, dissociative disorders, paranoid ideation, failure to thrive
  - Corporal punishment within reason = not considered abuse – only if parents derives pleasure from it
  - Neglect = when adults allows minor to engage in harmful behavior or remain unattended (alcohol consumption); in some states leaving a child <13 = considered neglect
    - Most common type of abuse = neglect
- Sexual Abuse
  - ~25% women and 12% men report hx of being sexually abused as children; common ages of abuse = 9-12 years old
  - suspicion: evidence of STD, bruises / pain / itching/ trauma of genitals, detailed knowledge about sexual acts at young age, child initiates sexual acts with others / exhibits sexual knowledge through pla
- Factitious disorder imposed on another – form of child abuse
  - USUALLY PERPETRATED BY MOTHER – sx fabricated or clinical signs are induced in child, resulting in prepeated visits to health care provider for relief
  - Formerly munchaeusen by proxy
  - Factitious disorder imposed on another is characterized by the production or feigning of physical or psychological symptoms in another person, usually a child but may also be an adult under the care of the person with the disorder. Common presentations of this disorder include bleeding, seizures, poisoning, apnea, altered mental status, diarrhea, vomiting, fever, rash, hypoglycemia, hematuria, or recurrent infections often with unusual organisms. Warning signs that raise the possibility of this disorder include unexplained, persistent, or recurrent illnesses, discrepancies among the history, clinical findings, and patient’s general health, **symptoms and signs that occur only in the caregiver’s presence,** a caregiver who is extremely attentive and always in the hospital, or a caregiver who appears less worried about the patient’s illness than about the medical staff. Ninety-eight percent of...
Perpetrators are biological mothers from all socioeconomic groups. Many have a background in health professions or social work. Depression, anxiety, and somatization are common in the perpetrator population and many have a history of an abusive experience in the past. During clinical assessment of the victim in a case of factitious disorder imposed on another, clinicians should have a high index of suspicion. The provider should document inconsistencies of the caregiver’s story with the patient’s condition, lack of objective diagnostic evidence, lack of witnessing any symptoms, caregiver’s response to negative testing, and whether treatment is provided for objective reasons or to meet the caregiver’s demands. Treatment of factitious disorder imposed on another involves treating the victim, the perpetrator, and the family. These patients should universally be admitted to the hospital when the diagnosis of factitious disorder imposed on another is suspected in order to observe the caregiver-patient interaction, closely observe the suspected perpetrator, and determine the temporal relation between the symptoms and the perpetrator’s presence.

- MC done with biological mother to child
- Aka the old muncheausen by proxy

Intimate Partner Abuse / Domestic Abuse
- 24% women and 12% men experienced domestic violence in their lifetime
- Increases during pregnancy and postpartum
- More common among black, Hispanic, native American women
- When confronted with pt. who may be a victim: 1. Immediate medical attention to address physical sequelae, 2. Recognition of suspected abuse / engagement of pt. with non-threatening questioning to confirm whether abuse has occurred 3. Provision of contact information for referral agencies and make referral immediately
- Precautions: present options; woman who leaves abusive partner has 70% greater risk of being killed by batterer than woman who stays
- Battered victims have suffered blow to their eg defenses may not be assertive enough to believe that their rights have been violated
- Not uncommon to find battered women who believe they deserved beating
- Treatment:
  - Medical attention to address physical needs; recognition of abuse + non-threatening questioning; contact numbers for referral agencies; present options
  - Victim and children: open-ended questions → more direct; supportive psychotherapy in safe environment
  - Abuser: referral for therapy, treatment for substance abuse / concurrent psychiatric problems, gradual reuniting with family

Rape
- Definition: act of sexual aggression perpetrated on spouse, known partner, strangers
- Approach: hx and physical exam including genital and rectal examinations should be completed as soon after event as possible
  - Rape = psychiatric emergency and legal situation; all procedures = documented, clothing saved, samples taken
  - Rape kit: history, how specimen samples are collected and under what conditions and how samples should be handled to ensure evidence handled properly
  - Explain purpose of procedure and inform what is being done
- Prevention of STD and pregnancy: prophylactic abx therapy and pt. should be given options of emergency contraception
- Counseling: pt. should talk to mental health professional ASAP + follow-up counseling

DRUGS

Anti-depressants / Anxiolytics → continue minimum 3-6 weeks to determine efficacy

SSRIs:
- Indication: depression = MC / first line therapy, anxiety = second most common → first line agents
  - Continue these drugs for 6-12 months after they are symptom free, they take 1-2 months to begin working.
  - Easy dosing, less s/e, low toxicity in cases of overdose (bc don’t affect NE, ACI, histamine, DA)
- Examples: Fluvoxamine (Luvox), Fluoxetine (Prozac), Paroxetine (Paxil), Sertraline (Zoloft), Citalopram (Celexa), Escitalopram (Lexapro)
• **Mechanism:** Selectively block pre-synaptic re-uptake of serotonin → increased serotonin CNS activity
• Prozac has 72 hour half life. Less likely to cause withdrawal.
• All these drugs undergo extensive hepatic metabolism.

**SE (Primary concerns):**
  - Nausea, headache, sexual dysfunction (decreased libido / inorgasmia), sleep disturbances; Anxiety, restlessness, tremor, weight gain (esp with paroxetine, less with sertraline - Fat parrot, thin in the dessert)

**SE (others):**
  - Suicide risk, mania/hypomania, QT prolongation, Hyponatremia, Serotonin Syndrome, antiplatelet effects, SIADH

**Ask about manic episodes because it’s possible someone is bipolar and you think they’re unipolar. Giving SSRI’s may be harmful then and exacerbate the mania.**

**Avoid citalopram in pt. with long QT syndrome**

**Serotonin Syndrome:**
  - Vague constellation of symptoms:
    - Autonomic; Diaphoresis, shivering, tachycardia, hyperthermia
    - CNS; Agitation, hallucinations, seizure, coma
    - GI; Nausea, vomiting, diarrhea
    - Neuromuscular; Weakness, hyperreflexia, myoclonus, incoordination
  - **Tx:** cyproheptadine (5HT-2 antagonist)

The patient is suffering from serotonin syndrome likely due to an interaction between her antidepressant medication, fluoxetine and dextromethorphan, a cough suppressant found in many over-the-counter cough and cold medications. Fluoxetine is a selective serotonin reuptake inhibitor (SSRI).

Serotonin syndrome results from excessive serotonin accumulation in the synaptic cleft and manifests as a triad of altered mental status, autonomic instability, and neuromuscular abnormality. Serotonin syndrome often occurs as the result of a drug-drug interaction between medications that increase the amount of serotonin in the synaptic cleft, however can occur following an overdose with an SSRI.

- Clinical presentation: Hyperthermia, hypertension, hallucinations, dizziness, ataxia, tremors, sweating, diarrhea and dilated pupils.

**SSRI discontinuation Syndrome**
  - Especially with paroxetine and sertraline which have shorter half lives
  - Flu like symptoms: Headache/N/V/D, taper them (it isn’t rebound depression!)

| Fluoxetine (Prozac) | -Approved in kids over 8  
|                    | -Longest t1/2, less risk of SSRI discontinuation syndrome |
| Sertraline (Zoloft) | -Approved in kids over 8  
|                     | -Least associated with weight gain |
| Citalopram (Celexa) |  |
| Escitalopram (Lexapro) |  |
| Paroxetine (Paxil) | -Most associated with weight gain  
|                     | -Most associated with cardiac abnormalities in pregnant women |

**SNRIs:**

- **Examples:** Venlafaxine (Effexor), Desvenlafaxine (Pristiq), Duloxetine (Cymbalta), Milnacipran (Savella)*, Levomilnacipran (Fetzima)
  - Since SNRIs also inhibit reuptake of norepinephrine, hypertension (dose related) is also a s/e

- **MOA:** These inhibit the reuptake of BOTH serotonin and norepinephrine and dopamine reuptake

- **Indicated** for pain, first line agents in pt. with significant fatigue or pain syndromes in association with depression; 2nd line agents in pt. with no response to SSRI

- **Interestingly, ADHD drugs increase NE so these theoretically could be useful for someone with ADHD and depression but they’re not indicated for that.**

- **s/e:** similar to SSRI including hyponatremia and noradrenergic s/e: HTN / dizziness

| Venlafaxine (Effexor) |  |
**Atypicals**

- **Trazodone**: *Serotonin Modulator*: Antagonizes postsynaptic receptors SHT-2, but also inhibits serotonin reuptake  
  - **MOA**:  
    - Alpha 1 blockade—can lead to vasodilation → Priapism  
    - Avoid in SSD and multiple myeloma because those can lead to occlusive crises  
    - H1 blocker: sedating  
    - Inhibit serotonin reuptake  
  - **s/e**:  
    - IS ASSOC with sexual dysfunction and serotonin syndrome since it inhibits its reuptake  
    - The only atypical that is assoc with serotonin syndrome and sexual side effects  
  - Trazodone is the one we should remember. If we wanted to treat depression we would have to use 400mg so you would sleep all day. For some reason, you don’t develop a tolerance so when you find a dose that works, keep doing it.  
  - Avoid with benzos and barbs

- **Wellbutrin / Zyban (bupropion hydrochloride)**:  
  - **MOA**: inhibits neuronal uptake of dopamine and NE  
    - inhibits reuptake of dopamine. This can satisfy cravings because dopamine works in the gratification pathway. Schizophrenia patients have excess dopamine so giving these would be a bad idea- unless it’s well managed.  
  - **Ind**: depression (zyban for smoking cessation)  
    - As effective as nicotine replacement for SMOKING cessation  
  - **s/e**: seizures, agitation, anxiety, restlessness, weight loss, HTN, HA; less GI distress / sexual dysfunction compared with SSRIs  
    - Structurally, bupropion looks like an amphetamine and is stimulating  
    - No sexual side effects, can precipitate seizures in people with eating disorders used to suppress appetite or with nicotine cessation.  
  - **Cl/cautions**: seizure d/o – avoid abrupt withdrawal, bulimia, anorexia, MAOI use, pt. undergoing drug/ETOH detox

- **Remeron (Mirtazapine)**  
  - **Tetracyclic compounds**: Alpha-2 ANTAGONIST, antagonizes the presynaptic alpha 2 neurons which leads to increased serotonin and norepinephrine in the synapse, also blocks SHT-2 and SHT-3 receptors  
  - POTENT H1 blocker which is why it leads to sedation and weight gain  
  - **First line for MDD + insomnia**  
  - No sexual side effects  
  - MOA: enhance central noradrenergic and serotonergic activity; histamine receptor blockade  
  - Indication: depressed; fewer sexual dysfunction s/e compared to other classes  
  - **s/e**: sedation, dry mouth, constipation, weight gain, agranulocytosis  
  - **Cl**: use w MAOI

**Tricyclic Antidepressants: expect 4-6 weeks for efficacy**

- **Mechanism**: inhibit neuronal reuptake or serotonin and NE → SHT, NE, alpha 1, anticholinergic, histamine, Na+  
  - Block H1 Histamine Receptor  
  - Anticholinergic  
  - Alpha-1 Antagonist  
  - Fast Na+ Channels on myocardium

- **Indications**:  
  - Depression, insomnia, diabetic neuropathic pain, migraine, post-herpetic neuralgia, migraine, incontinence  
  - Used less often d/t severe s/e profile and severe toxicity in overdose  
  - Amitriptyline for Migraine Prophylaxis  
  - Clomipramine (Anafranil) for OCD (not first line)

- **Examples**: Amitriptyline (Elavil), Nortriptyline, Imipramine, desipramine

- **Side effects**: anticholinergic, sedation, weight gain, prolonged QT interval  
  - Dry mouth, constipation, urinary retention, blurred vision, confusion; weight gain, sedation; orthostasis; ECG changes, sexual dysfunction, hematologic abnormalities
Non-depressed pts experience sleepiness; depressed pt. feel elevated mood

Overdose: sinus tach, wide complex tachycardia, neuro sc, ARDS (d/t fast Na+ channels on myocardium)

Cl/caution: use of MAO inhibitors, recent MI, seizure hx

Alpha-1 Block: orthostatic / postural hypotension

inhibition of fast Na+ Channels: QRS prolongation >100 ms → Arrhythmia
  - QT Prolongation → Torsades de Pointe
  - Decreased contractility
  - Decreased conduction
  - Tx with Sodium Bicarbonate
    - Mechanism of Sodium Bicarbonate:
      1. Favors unionized form, not active in the body
      2. Increases extracellular sodium concentration
    - The 3 Cs of Anticholinergics: Cardiac (sodium), Coma (antihistamine), Convulsion (Gaba-a block)

MAOI's:

- MOA: blocks breakdown of neurotransmitters (DA, serotonin, E, NE) by inhibiting monamine oxidase
- Ind: refractory depression; effective in many types of affective / anxiety d/o
- s/e: Hypertensive Crisis if administer with sympathomimetics or foods high in tyramine
  - aged or fermented cheese, wine, beer, aged foods, smoked meats, chocolates, coffee, tea
  - prevents breakdown of tyramine → HTN
- other s/e: insomnia, anxiety, orthostasis, weight gain, sexual dysfunction

- CI: MAOI + SSRI = serotonin syndrome; MAOI + TCA = delirium and hypertension
- Rarely used
- Effect usually lasts 10-14 days
- Who takes it? People who don’t take other meds bc there are a lot of drug-drug interactions
- Examples:
  - Non-selective MAO A & B: Phenelzine (Nardil), Tranylcypromine (Parnate),
  - Selective MAO B: Selegiline (Emsam patch) which has MAO-B selectivity = less chance HTN crisis induced by tyramine bc of selectivity.

Some tx considerations:
- If diarrhea:
  - TCA or Paroxetine may be preferred
- If sexual dysfunction:
  - Bupropion or Mirtazapine may be preferred
- If difficulty sleeping or poor appetite:
  - Mirtazapine or Paroxetine may be preferred
- If h/o cardiovascular disease:
  - Caution use of TCAs, SNRIs, MAOIs
- Risk for overdose:
  - Avoid TCAs
  - History of seizures: Avoid Bupropion

Benzodiazepines

- Mechanism: Bind to allosteric GABA-A receptor to increase frequency of Cl- channel opening to hyperpolarize the neuron and lead to CNS depression
  - Different allosteric site than barbiturates and alcohol, same one as the non-benzodiazepine sedatives (zolpidem, eszopiclone, zaleplon)
- Types: Long acting and Short Acting
- The long acting drugs chlordiazepoxide (diazepam) will have active metabolites! Lorazepam doesn’t have active metabolites
- All (Short and long acting) are metabolized by the LIVER, use short acting if cirrhosis/liver failure
- Antidote for overdose = Flumazenil (competitive antagonist at GABA-A)
- Indications:
  - IV benzodiazepine for status epilepticus (seizure >30 min) and alcohol withdrawal seizure (use long acting)
  - Conscious sedation for procedures (endoscopy and colonoscopy)
    - Muscle relaxation, sedation, and anterograde amnesia (helps forget discomfort)
  - UMN spasticity (MS/Stroke/spinal cord trauma/Tetanus)
  - Anxiety (not first line, use SSRI/SNRI)
Panic Disorder (Acute, long term SSRI/SNRI)

- Side Effects:
  - Tolerance: Downregulation of GABA-A Receptors
  - Physical dependence—autonomic hyperactivity/seizure/psychosis during withdrawal
  - Dose related CNS depression
  - Anterograde amnesia (more difficult to learn new information)
  - Paradoxical Agitation in the Elderly in addition to falls and ataxia
  - Do not administer with anticholinergics, first generation antihistamines, barbiturates, or other sedatives, neuroleptics, or alcohol
  - Less REM and less Delta sleep

<table>
<thead>
<tr>
<th>Long Acting</th>
<th>Short Acting</th>
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</thead>
<tbody>
<tr>
<td>Lorazepam, Chlordiazepoxide - linrimum, Diazepam</td>
<td>Oxazepam (Fast as an Ox, serax)</td>
</tr>
<tr>
<td>Triazolam, Alprazolam, Midazolam</td>
<td>(All AM ( olam))</td>
</tr>
</tbody>
</table>

Non-Benzodiazepine Sedatives

- Zolpidem (ambien), Zaleplon, Eszopiclone
  - Also bind to the same Benzo GABA-A allosteric site (different site than barbs/etoh)
  - Less anxiolytic and anticonvulsant effects, more specific than benzodiazepines
  - All are also metabolized by liver just like Benzos
  - Zolpidem >10 mg can lead to falls/ataxia in women
    - Confusion/ataxia in elderly
  - Use Flumazenil in case of OD

<table>
<thead>
<tr>
<th>Long Acting t1/2 = 1-2 hours</th>
<th>Short Acting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eszopiclone (Helps to stay asleep)</td>
<td>Zolpidem, Zaleplon (Helps to Fall Asleep)</td>
</tr>
</tbody>
</table>

- There is no tolerance/dependence/withdrawal symptoms
- Remalteon (rozarem)
  - Mechanism: Binds to melatonin receptors (Melatonin receptor agonist of MT-1 and MT-2) in the suprachiasmatic nucleus
  - No GABA effect
  - No change in the sleep architecture

Barbiturates

- Bind to allosteric GABA-A, keep Cl- channels open longer (Benzos inc frequency)
- Longer t1/2 than benzodiazepines make them more addictive (exception being thiopental)
- Thiopental: Often used for rapid sequence intubation <30 s to onset and then lasts for 5 minutes due to redistribution into the muscle and fat
- Phenobarbitol: Used for seizures in neonates (Both focal and generalized seizures), leads to hypotension and hyporespiration which is why it is not first line in other cases
- Primidone: Used for essential tremor, metabolized to phenobarbital (can also beta-block an essential tremor)
- Side Effects:
  - T1/2 is 75-100 hrs and they have cumulative effects
  - Severe hypotension and respiratory depression
  - **ALWAYS avoid barbiturates in the elderly
  - **CYP-450 Metabolism and inducer** (chronic alcoholic Mona steals phen phen and never refuses greasy carbs = Chronic alcoholism, modafinil, st john wart, phenytoin, phenobarbital, nevirapine, rifampin, griseofulvin, carbamazepine)
  - Can dec conc of warfarin/other drugs

Anti-psychotics

First Generation “Typical”

- **Mechanism:** blocks CNS dopamine D2 receptors Central, Postsynaptic D2 Blockade
- **Ind:** psychotic disorders (schizophrenia, psychosis, mania, MDD with psychotic features), delirium, delirium secondary to Alzheimer’s / Parkinsons, positive sx, emesis, agitation and aggression (IM Haldol historically), Motor tics and Tourettes (not first line)
- **S/e:** due to decreased dopamine:
• **EPS**: rigidity, bradykinesia, tremor, akathisia (restlessness), dystonic reactions

<table>
<thead>
<tr>
<th>Side Effect</th>
<th>Time</th>
<th>Tx</th>
</tr>
</thead>
</table>
| **Acute Dystonia** (intermittent, spasms, sustained involuntary contractions (trismus, protrusions of tongue, facial grimacing, torticollis, difficulty speaking) – d/t disruption in DA, ACh balance | Hours | Diphenhydramine IV
Benztropine (anticholinergic agent)
Sx resolve in 10 min of IV; benzos may be used |
| Akathesia | Days | Beta Blocker
Benzodiazepine |
| Parkinsonism: rigidity, tremor – d/t decreased dopamine | Weeks | Diphenhydramine
Benztropine |
| TD – repetitively involuntary movements mostly involving extremities and face (lip smacking, teeth grinding, rolling of tongue) | Months-Years | None///Valbenzene (Ingreza) (new) |

- All are extremely lipophilic, huge volume of distribution, half life is going to be 20-40 hrs
- ---If it ends in Azine it is STAR GAZING: Antipsychotic

- **Other s/e**:
  - **Neuroleptic malignant syndrome**: life threatening disorder d/t D2 inhibition in basal ganglia: mental status changes, extreme muscle rigidity, tremor, autonomic instability (tachycardia, tachypnea, hyperthermia/fever**, profuse diaphoresis, incontinence, respiratory difficulty, BP changes, leukocytosis – MC within 90d initiation/dose increase
    - Stop offending agent
    - Tx: hyperthermia with cooling blankets / ice to axilla and groin + dantrolene, ventilatory support
    - Dopamine agonist: bromocriptine, amantadine, levodopa/carbidopa
    - Differentiate from serotonin syndrome due to lead pipe rigidity
  - QT prolongation / Torsades de pointes, cardiac arrhythmias, sedation, anticholinergic S/E (constipation and dry mouth >> urine retention / visual changes), orthostatic hypotention (d/t alpha 1 block), sedation (histamine H1 antagonism), dermatitis, blood dyscrasias, increased prolactin (d/t dopamine block), weight gain, reduces the seizure threshold
  - Amenorrhea d/t hyperprolactinemia
- C/I and caution with Haldol: Parkinson disease, anticoagulant use; sever cardiac disorders

<table>
<thead>
<tr>
<th>High Potency</th>
<th>Low Potency</th>
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</thead>
<tbody>
<tr>
<td>Haloperidol (Haldol)</td>
<td>Chlorpromazine (Thorazine)</td>
</tr>
<tr>
<td>Fluphenazine</td>
<td></td>
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<tr>
<td>Trifluperazine</td>
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</table>

- High potency drugs have more extrapyramidyl side effects but less anticholinergic, antihistaminic, and alpha 1 blocking activity

**Second Generation “Atypical”**

- Pneumonic: Quiet, only whispering is appropriate
  - Quetiapine, Olanzapine, Risperidone, Aripiprazole, Clozapine, Ziprasidone
- MOA: blocks dopamine D4 receptors, serotonin 5HT2, alpha 1 antagonism, antimuscurinic, and Histamine H1 blocking
- IND: first line for psychotic disorders; clozapine useful in pt. who have resistance to other anti-psych
  - Additional 5-HT2A antagonism helps with targeting both positive and NEGATIVE symptoms of schizophrenia.
  - Tourettes Syndrome: Third line 1) tetrabenazine/ 1)clonidine/guanfacine), Risperidone in particular
  - OCD: if you ADD risperidone to an SSRI
  - Depression: Treatment resistant, risperidone in particular
- **S/E**:
  - **fewer extrapyramidial side effects** since they have less D2 blocking / weakly bind to D2
  - The trade off is **weight gain and metabolic dysregulation**
    - Olanzapine (Zyprexa) and Clozapine are the worst
    - Ziprasidone is the most weight neutral but associated with QTc prolongation more than the others from K+ blocking (She is a cutie and skinny)
    - Risperidone is the highest potency, **most D2 blocking**, which means it is the most associated with extrapyramidyl side effects and hyperprolactinemia
Sedation, orthostatic hypotension, urinary retention/dry mouth/blurry eyes (anti-muscarinic)
- The most sedating are Quetiapine and Clozapine
- Clozapine is associated with the most anticholinergic side effects
- Mild increase in prolactin levels, hyperglycemia, hyperlipidemia, weight gain, NMS
- All decrease seizure threshold, Clozapine is the worst culprit
- Clozapine associated with fatal myocarditis and cardiomyopathy
- **CI/cautions:** DM, clozapine causes agranulocytosis (monitor CBC weekly/monthly); seizures, myocarditis, QT prolongation, DM and marked weight gain with olanzapine

<table>
<thead>
<tr>
<th>Drug (-pine)</th>
<th>Specifics</th>
</tr>
</thead>
</table>
| Clozipine (Clozaril) | - After failed 2 other atypicals, risk of agranulocytosis  
- Only one that actually dec suicidality  
- Highest anticholinergic side effects  
- Highest weight gain besides olanzapine  
- Fatal myocarditis and cardiomyopathy  
- Decreases seizure threshold more than others  
- One of the most sedating (most antihistamine) besides seroquel |
| Olanzipine (zyprexa) | - Highest weight gain |
| Quetinepine (seroquil) | - Most sedating besides clozipine |

**Benzisoxazoles:**
- MOA: partial dopamine D2 receptor and serotonin 5-HT1A receptor antagonist, serotonin 5-HT2 receptor antagonist
- **IND:** psychotic disorders (schizophrenia, bipolar), Risperdal used for tourette’s
- S/E: EPS, increased prolactin, sedation, weight gain, hypotension
- **Patients taking a second-generation antipsychotic need to be carefully monitored for the development of metabolic syndrome, as weight gain, dyslipidemia and diabetes mellitus are side effects of these agents.** Both short- and long-term monitoring of weight, blood pressure, lipid profile, fasting glucose and waist circumference is recommended for patients taking any antipsychotic medications.

<table>
<thead>
<tr>
<th>Drug</th>
<th>Specifics</th>
</tr>
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</table>
| Risperidone | - Highest potency = highest extrapyramidal side effects and hyperprolactinemia  
- Useful for tourettes if tetrabenzyne and alpha 2 blockers aren’t working  
- Use adjective to SSRI for OCD  
- Depression  
- Most risk of NMS |
| Ziprasidone | - Least associated with weight gain  
- Most associated with QT prolongation |

**Quinolinones 3rd Generation**
- MOA: exact mechanism unknown; blocks dopamine D2 receptors, serotonin 5-HT1 and 5HT2 receptors
- **Ind:** psychotic disorders
- **Ex:** Aripiprazole (abilify)

**Mood Stabilizers**

**Lithium, Valproic Acid, Lamotrigine, Carbamazepine, Atypical Antipsychotics**

**Lithium**
- MOA: increases NE and 5HT receptor sensitivity
  - It is a small molecule, easy to remember it is filtered by the kidney entirely
- **IND:** bipolar d/o acute mania (Stabilizes mood)
- S/E: hypothyroidism, sodium depletion, increased urination and thirst (must drink 8-12 glasses water/day), diabetes insipidus, seizures, arrhythmias, headache, GI: N/V/D, weight gain, tremor, hyperparathyroidism/hypercalcemia
Toxicities:
- Teratogen: Ebstein’s anomaly of the heart (atrialization of the right ventricle, ASD, dysplastic tricuspid valve)
- Idiopathic Hyperparathyroidism, Increased Calcium
- Reversible Hypothyroidism
- Nephrogenic Diabetes Insipidus (no response to ADH)
- Monitor: narrow therapeutic index, monitor EEG changes
  - Narrow therapeutic index 0.6-1.2
- Toxicity is a risk for using non ASA NSAIDS, Thiazides

<table>
<thead>
<tr>
<th>Acute Lithium Toxicity</th>
<th>Chronic Lithium Toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>GI disturbances:</td>
<td>Neurologic Symptoms:</td>
</tr>
<tr>
<td>N/V/D</td>
<td>Tremor, Confusion, Ataxia</td>
</tr>
</tbody>
</table>

**Anticonvulsants - may help suppress impulsive and aggressive behavior**

Valproic Acid (Depakote)
- Binds voltage gated sodium channels to prolong inactivation, also potentiates GABA
- Most common side effect = Nausea and Vomiting
- Appetite Increase and Weight Gain
- Tremor at high doses, ataxia, avoid in elderly
- Hepatotoxic
- Acute Pancreatitis
- Associated with neural tube defects
- CYP450
- Range: 50-100
- >125 = toxic

Lamotrigine (lamictil)
- Voltage gated sodium channels
- **10% develop a rash** → SJS→ TEN if more than 30% of body (worse in kids)
- Diplopia
- CYP450
- Useful as mood stabilizer***

Carbamazepine (tegretol)
- Blocks voltage gated sodium channels to prolong inactivation
- **Specifically indicated, first line, for trigeminal neuralgia V2/V3**
- Sometimes used as a mood stabilizer***
- Side effects:
  - Dose related ataxia and diplopia
  - SIADH
  - Transient leukopenia, agranulocytosis and aplastic anemia rare
  - CYP450 Inducer
  - DRESS syndrome 2-8 weeks after start using =
    - Fever, facial edema, generalized LAD< morbilliform skin rash
  - Teratogen: Hypoplastic nails and digits, hyotelerism, long philthrum/ upper lip, maxillary hypoplasia, neural tube defects
  - SJS and TEN in the first ten weeks associated with the HLAB1502 allele (in Asians)

**OTHER THERAPIES**

**CBT:**
- focuses on a person’s thoughts and beliefs and how it influences their actions, and ways to change their thinking to become more positive and healthy.
- Cognitive behavioral therapy allows a patient to expose those fears, analyze why they are present, and teaches them ways to cope in anxiety-provoking situations. By educating a patient, teaching self-monitoring of emotions, exposing a patient to their fear, and re-learning behavioral techniques, cognitive behavioral therapy is effectively able to decrease the symptoms of panic disorder.

**DBT:**
- DBT is a multi-faceted program specifically designed to treat BPD. This approach works towards helping people increase their emotional and cognitive regulation by learning about the triggers that lead to reactive states and helping to assess which coping skills to apply in the sequence of events, thoughts, feelings and behaviors that lead to the undesired behavior. The few, small studies of DBT found improvement in many symptoms of BPD, but long-term data is lacking. Another promising therapy is psychoanalytic-oriented day hospital therapy.
- Good for borderline personality d/o
- Omega-3 fatty acids (B), second-generation antipsychotics (C) have been shown to be helpful for some symptoms of borderline personality disorder but not for overall severity. Their benefits are based on single-study results and side effects were not addressed in the studies. Selective serotonin reuptake inhibitors (SSRIs) (D) are not recommended for borderline personality disorder unless there is a concomitant mood disorder.