Textbooks: Kaplan & Sadock Psychiatry, Crash Course Psychiatry, First Aid for Psychiatry Clerkship

Common Problems in Psychiatry
Mood Disorders: Depression, Anxiety, Bipolar Disorder, Obsessive-Compulsive Disorder, Suicide, Para-Suicide
Childhood: ADHD, Eating Disorders
Elderly: Dementia, Delirium
Psychoses: Schizophrenia
Behavioral: Alcohol, Illicit and Prescription Drug Addiction, Tobacco Abuse, Weight Loss Counseling, Stress
Management, Dysfunctional Family Issues
Women's: Postpartum Depression, PMDD
Disorders: Personality Disorders, Somatoform Disorders

Note: The Greek letter “psi” is often used to denote psychiatry, psychology, or psychiatric patient.

How To Succeed In Clerkship – First Aid For The Psychiatry Clerkship (Stead, Stead, & Kaufman)

Why Spend Time On Psychiatry: Many of your patients, despite true medical illness, will benefit more from your “bedside manner” than from your prescriptions. The time you spend in this clerkship will enhance your ability to discern which of your patients require this extra attention. Providing it is the right thing for the patient and, in the long run, will require less of your energy.

Respect For Patients: If you are in a city hospital and working in an inpatient ward, you will meet some people with severe mental illness. Sometimes you may want to laugh, and other times you may want to get away from them. Whatever your reaction, maintain professionalism and show the patients respect. This rule should extend to your discussions with residents and attendings; do not burst into laughter in conference, for example, while describing a patient’s tendency to talk to his penis. This can be very challenging.

Respect For Psychiatry: One thing an attending hates most is a medical student who does not take the rotation seriously. Saying things like “This isn’t real medicine” or “I like more scientific stuff” may drive a psychiatrist into a rage that results in a deadly evaluation. Regardless of your feelings, keep such thoughts to yourself.

Maintain Boundaries With Your Patients: It is your job to show compassion, patience, and understanding to your patients. Some might decide that you are the best doctor in the world and the only one who they will talk to. They will demand to talk to you when something does not go their way. This is a trap. Do not play the good guy when the attending decides to postpone the discharge date. True, you have to be caring, but you also have to show a unified front and make it clear that you are part of the treatment team and support the decision.

Professional Dress: Dress conservatively; long pants and long collared shift for men, long pants or knee-length skirt for women. For men, a tie may be a part of dress code or may not be due to safety risk. Don’t make scrubs your uniform; only wear scrubs when appropriate such as an overnight shift.

Be Pleasant: It can be stressful to be around psychiatric patients. Smooth out your experience by being nice to be around. Smile a lot and learn everyone’s name. If you do not understand or disagree with a treatment plan or diagnosis, do not “challenge.” Instead, say “I’m sorry, I don’t quite understand, could you please explain...” Be empathetic toward patients.

Be Aware Of The Hierarchy: The way in which this will affect you will vary from hospital to hospital and team to team, but it is always present to some degree. In general, address your questions regarding ward functioning to interns or residents. Address your medical questions to attendings; make an effort to be somewhat informed on your subject prior to asking attendings medical questions.

Be Respectfully: Address patients as Sir, Ma’am, or Mr., Mrs., or Miss. Try not to address patients as “honey,” “sweetie,” and the like. Although you may feel these names are friendly, patients will think you have forgotten their name, that you are being inappropriately familiar, or both. Address all physicians as “doctor,” unless told otherwise.

Take Responsibility: Know everything there is to know about your patients: their history, test results, peak to consultants and family. Never deliver bad news to patients or family members without the assistance of your supervising resident or attending.

Patient’s Rights: 1) All patients have the right to have their personal medical information kept private. This means do not discuss the patient’s information with family members without that patient’s consent, and do not discuss any patient in hallways, elevators, or cafeterias. 2) All patients have the right to refuse treatment. This means they can refuse treatment by a specific individual (you, the medical student), or of a specific type (no electroconvulsive therapy). Patients can even refuse life-saving treatment. The only exceptions to this rule are if the patient is deemed to not have the capacity to make decisions or understand situations, in which case a health care proxy should be
sought, or if the patient is suicidal or homicidal. 3) All patients should be informed of the right to seek advanced directives on admission. Often, this is done by the admissions staff, in a booklet. If your patient is chronically ill or has a life-threatening illness, address the subject of advanced directives with the assistance of your attending. 

Volunteer: Be self-propelled, self-motivated. Volunteer to help with a procedure or a difficult task. Volunteer to give a 20-minute talk on a topic of your choice. Volunteer to take additional patients. Volunteer to stay late.

Be A Team Player: Help other medical students with their tasks; teach them information you have learned. Support your supervising resident whenever possible. Never steal the spotlight or make a fellow medical student look bad. 

Keep Patient Information Handy: Use a clipboard, notebook, or index cards to keep patient information, including a miniature history and physical, and lab and test results, at hand.

Organized Presentation: “This is a [age]-year-old [gender] with a history of [major history such as bipolar disorder] who presented on [date] with [major symptoms, such as auditory hallucinations] and was found to have [working diagnosis]. [Tests done] showed [results]. Yesterday, the patient [state important changes, new plan, new tests, new medications]. This morning the patient feels [state the patient’s words], and the psychiatric and physical exams are significant for [state major findings]. Plan is [state plan].”

Survival Guides (Psychiatry & Behavioral Science) – Student Consult

Mental state examination is the standard way of examining the psychiatric patient (although clearly there might be reasons for carrying out a medical examination as well). Here is a list of everything that you should look for in the mental state examination.

* Appearance and behavior: Restlessness, dress, are they tense, shy, over-familiar, aggressive?
* Speech: Is there any pressure of speech, sudden changes in subject or expression, abnormal form of speech or rate?
* Mood: Depression, anxiety, “is life worth living?”
* Thought content: What are the patient’s preoccupations? Delusions.
* Abnormal experiences: Hallucinations, pseudo hallucinations, illusions, abnormal body sensations.
* Cognitive state: Orientation (time, place, person). Attention and concentration (serial sevens). Memory (Recent, repeat three objects; Distant, ask three objects at the end of exam). General knowledge.
* Insight: What does the patient think is wrong and what do they thing about their treatment and the future?

Do’s & Don’ts: Talk to patients. Be sensible about your own safety (i.e. sit the door side of the patient). Try to be exposed to the wide range of psychiatric problems, including outpatients, inpatients, patients in high security wards and emergency care. If you are unhappy being with a patient, leave the room.

Schizophrenia: Positive and negative symptoms. Negative symptoms are thought of as neglecting what a normal person would do, remembered as: alogia, anhedonia, asociality, affective blunting, concentration deficit. Positive symptoms are what a normal person would not do, such as delusions, hallucinations, bizarre/disorganized behavior.

* Paranoid schizophrenia shows marked positive symptoms and can be quite afraid.
* Disorganized schizophrenia shows disorganized speech, behavior and flat or inappropriate affect.
* Catatonic has marked psychomotor disturbances present.
* Undifferentiated is the most common and does not clearly meet criteria for paranoid, catatonic or disorganized.

Management: antipsychotic drugs, typically dopamine blockers, some atypical drugs also have serotonin blockade. 

Depression: an affective disorder (i.e. a disorder of mood). Mood and affect are actually different and can be thought of as mood being the emotional climate and affect as being the emotional weather.

Symptoms (SIG E CAPS): sleep disturbances, loss of interest, guilt, loss of energy, loss of concentration, change in appetite, psychomotor retardation, suicidal ideations, and depressed mood. Symptoms must last at least two months.

Management: cognitive behavioral therapy (CBT), interpersonal therapy, psychoanalytic therapy. Antidepressants can be used but have to be used at an adequate dose for an adequate length of time.

Psychiatric Medications:

Neuroleptics (antipsychotics): Used to treat schizophrenia.

* Atypicals = clozapine, olanzapine, quetiapine, risperidone, ziprasidone.
* Clozapine can cause agranulocytosis.
* Typical = chlorpromazine, thioridazine, haloperidol, loxapine, trifluoperazine.
* Thioridazine prolongs the QT interval.
* Typical can cause extrapyramidal side effects, tardive dyskinesia, and neuroleptic malignant syndrome.

Antidepressants: Used to treat depressive disorders.

* Can lead to mania if used in patients with bipolar disorder.
* Selective serotonin reuptake inhibitors (SSRIs) = citalopram, fluoxetine, paroxetine, sertraline.
* Commonly cause gastrointestinal distress (abdominal pain, nausea, vomiting, diarrhea) and impotence (reversible).
* Tricyclic antidepressants (TCAs) = amitriptyline, clomipramine, imipramine, nortriptyline.
* Monoamine oxidase inhibitors (MAOIs) = phenelzine, tranylcypromine.
* Others: Can cause serotonin syndrome if given with SSRIs. If given with foods containing tyramine, MAOIs can lead to hypertensive crisis. Trazodone may cause priapism. Mirtazapine can cause agranulocytosis.

Mood stabilizers: Used to treat bipolar disorders.
* Carbamazepine, lithium, olanzapine, valproic acid.
* Carbamazepine can cause aplastic anemia, agranulocytosis, and neural tube defects.
* Lithium can cause Ebstein’s anomaly if taken during pregnancy.
* Valproic acid can lead to elevated liver enzymes, so you must get baseline liver function tests (LFTs) before beginning treatment.

Anxiolytics: Used to treat anxiety disorders.
* Benzodiazepines = alprazolam, chlordiazepoxide, clonazepam, diazepam, lorazepam.
* Non-benzodiazepines = buspirone.
* Do not give buspirone to patients with bulimia nervosa. There is some evidence that buspirone may lead to increased impulsivity and aggressiveness in patients with bulimia nervosa.

Stimulants: Used to treat attention deficit hyperactivity disorder (ADHD) and narcolepsy.
* Modafinil, Ritalin.

Types of Psychotherapy:
Psychoanalysis: To make major personality changes by identifying and working through unconscious conflicts via free association and dream interpretation.
* Treats: People with internal conflict or who can get symptomatic relief of a problem by understanding it.
* Does not treat: Older people, people with low IQ, antisocial personality disorders, and psychotic disorders.

Supportive: To evaluate a patient’s situation and help him make changes that will make it better.
* Treats: Patients with coping problems and patients with serious psychiatric illness, such as bipolar disorder or schizophrenia.

Interpersonal: To improve interpersonal skills.
* Treats: Outpatient, nonbipolar, nonpsychotic depressive disorders.

Group: To alleviate symptoms of emotionally ill patients and change their interpersonal relations.
* Treats: Patients with personality disorders.

Family: Help families function better.
* Treats: Dysfunctional families.

<table>
<thead>
<tr>
<th>Drug of Abuse</th>
<th>Intoxication</th>
<th>Withdrawal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol</td>
<td>Disinhibition, slurred speech, ataxia</td>
<td>Tremor, tachycardia, hypertension, nausea, DTs</td>
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<tr>
<td>Opioids</td>
<td>CNS depression, nausea/vomiting, constipation, miosis</td>
<td>Anxiety, insomnia, anorexia, mydriasis, diarrhea</td>
</tr>
<tr>
<td>Amphetamines</td>
<td>Psychomotor agitation, impaired judgment, mydriasis, hypertension, euphoria, delusions, hallucinations</td>
<td>Depression, lethargy, headache, hunger, hypersomnolence</td>
</tr>
<tr>
<td>Cocaine</td>
<td>Euphoria, psychomotor agitation, impaired judgment, mydriasis, hallucinations (including tactile)</td>
<td>Depression, hypersomnolence, fatigue</td>
</tr>
<tr>
<td>Phencyclidine (PCP)</td>
<td>Aggressiveness, impulsiveness, nystagmus, psychosis, delirium</td>
<td>Recurring intoxication symptoms, severe violence</td>
</tr>
<tr>
<td>Lysergic acid diethylamide (LSD)</td>
<td>Anxiety, depression, visual hallucinations, flashes, mydriasis</td>
<td>-</td>
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<tr>
<td>Marijuana</td>
<td>Euphoria, hunger, paranoid delusions, impaired judgment, hallucinations, dry mouth</td>
<td>-</td>
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<tr>
<td>Benzodiazepines</td>
<td>Amnesia, ataxia, somnolence, respiratory depression</td>
<td>Rebound anxiety and insomnia, seizures, tremor</td>
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Defense mechanisms:
Mechanisms used by people to cope with the struggles that they face in life.
* Acting out: Handling emotional conflict through actions instead of feelings Affiliation: Dealing with emotional conflict by turning to others for support
* Aim inhibition: Accepting partial fulfillment of desires. For example, a student wants to be a physician, but finding it academically difficult, 'decides' that all he really wants is to be a physician’s assistant.
* Altruism: Handling emotional conflict by dedicating oneself to meeting the needs of others. For example, a woman’s husband dies, and she begins to spend all her time counseling others.
* Avoidance: Refusal to encounter difficult situations
* Compensation: Overemphasizing one area in an attempt to compensate for failure in another.
* Conversion: Emotional conflicts presenting as physical symptoms. Devaluation: Attributing exaggerated negative qualities to yourself or others.
* Displacement: Shifting emotions from one object/idea to another. For example, an employee is angry at his boss, but suppresses his feelings until he get’s home, and beats his children for behavior that would normally be tolerated.
* Fixation: Stopping personality development at a stage prior to maturity.
* Projection: Attributing one’s thoughts or impulses to someone else. For example, a woman who doesn’t like a co-worker becomes convinced that the co-worker is the one who doesn’t like her.
* Sublimation: Using an activity to replace an unacceptable wish.

*Stages of Dying:*
  - denial
  - anger
  - bargaining
  - depression
  - acceptance.

**Article – Acute Care For Alcohol Intoxication (Yost, Postgrad Med 2002;112:6)**

Multiple factors, such as trauma and concomitant use of other drugs, can confuse the diagnostic pictures and affect the choice of therapy. CDC and NCHS estimate 52% of U.S. drank alcohol in the past month, 16% are binge drinkers consuming 5+ drinks on the same occasion in the past month. An estimated 20-25% of Emergency Department patients have been drinking.

Legal intoxication level varies by state, but in general it is a blood alcohol content (BAC) of 80 to 100 mg/dL (0.08, 0.10). The average clearance rate in both adults and children is 18 to 20 mg/dL per hour. Elderly drinkers have a higher BAC than younger abusers of the same weight for any given amount of alcohol consumed.

Ingestion of large volumes of high concentration alcohol (>40%, 80 proof) or concomitant consumption of fatty foods or drugs that impede GI motility can result in acute nausea, vomiting, or other signs of gastric inflammation. Acute alcohol consumption has been linked with tachyarrhythmias, particularly idiopathic atrial fibrillation. Ethanol inhibits gluconeogenesis, which can result in hypoglycemia. Ethylene glycol and other alcohols may contribute to an increased osmolar gap.

Estimated BAC can be calculated by an increase of 22 mOsm/L for every 100 mg/dL rise in serum alcohol. Intoxication is associated with thrombocytopenia; habitual drinkers may show evidence of leukopenia. As many as 90% of alcoholics younger than 30 years use another drug in addition to alcohol. Mental status changes noticed to be markedly uncharacteristic of a patient’s previous intoxication pattern are often a warning sign that more aggressive assessment is needed for head injuries, electrolyte abnormalities, adverse reactions to illicit or prescription drugs, or other causes of mental deterioration.

Disulfiram (Antabuse) reaction includes flushing, nausea, vomiting, vertigo, headache, abdominal pain, diaphoresis. Other drugs with disulfiram-like reaction include metronidazole (Flagyl), cephalosporins, chlorpropamide (Diabinese), sulfonimides, and chloral hydrate (Aquachloral Supprettes).

Alcohol clearance can be decreased by verapamil and high-dose cimetidine (Tagamet). Alcohol intoxication treatment includes IV hydration, symptomatic nausea control, and electrolyte correction (e.g. hypomagnesemia). Glucose may be needed and thiamine supplementation may be needed for chronic drinkers. Pre-mixed IV solutions (e.g. rally pack, banana bag) include 1L D5 1/2NS, 2g Mg, 1mg folate, 100mg thiamine. Alcohol may compound hypotension in trauma and mask injuries due to decreased pain sensation.

Each episode of acute intoxication in a pregnant patient presents an opportunity for risk counseling. Fetal alcohol syndrome (FAS) incidence is about 10% for women who drink 6-7 alcoholic drinks per day. The rapid absorption of alcohol through intestinal mucosa gives gastric lavage limited value in patients with delayed presentation of intoxication; it may be useful if done within minutes of ingestion. Extended liability may hold physicians responsible for premature discharge of intoxicated patients who subsequently cause harm to themselves or others; physicians need to be prepared to contact local law enforcement if a patient with unresolved mental status changes insists on leaving the hospital or office and driving away.

In previously untreated patients who presented with intoxication to urgent ambulatory settings, almost 50% of those referred for alcohol intervention kept their treatment appointment.

**Article – Suicidal Ideation (Gliatto & Rai, Amer Fam Phys 1999;March 15)**

Many patients who commit suicide saw their primary care physician within several months prior to death, and many of these physicians were unaware of the patients’ intentions or that the patient had previously attempted suicide. Epidemiologic factors for suicide: male (4:1), white, Native American, age greater than 65 years, widowed, divorced, living alone, presence of stressful life events, and access to firearms.
Psychiatric disorders associated with suicide: major depression, substance abuse (particularly alcohol), schizophrenia, panic disorder, borderline personality disorder, and impulsive/antisocial behavior in children.

History and symptoms for suicide: previous attempt, hopelessness, anhedonia, insomnia, severe anxiety, impaired concentration, psychomotor agitation, and panic attacks.

The best predictor of completed suicide is a history of attempted suicide.

Evaluating a patient with suicidal ideation: ask about a history of psychiatric illness and substance abuse, ask about a history of suicidal ideas and attempts, use the CAGE questionnaire to screen for alcohol abuse, perform a mental status examination with emphasis on mood, affect, and judgment.

Suicide among medically ill patients, including those with AIDS, rarely occurs in the presence of a comorbid psychiatric disorder, such as major depression.

Asking patients about suicide will not give them the idea or the incentive to commit suicide. Most patients who consider suicide are ambivalent about the act and will feel relieved that the clinician is interested and willing to talk with them about their ideas and plans. On approach is, “Sometimes when people feel sad or depressed or have problems in their lives, they think about suicide. Have you ever thought about suicide?”

Delineate extent of suicidal ideation: When did you begin to have suicidal thoughts? How often do you think about suicide? What makes you feel better? Do you have a plan to end your life? What stops you from killing yourself? Ascertained plans for furtherance and lethality: Do you own a gun or have access to firearms? Do you have access to potentially harmful medications? Have you imagined your funeral and how people will react to your death? Have you “practiced” your suicide? Have you changed your will or life insurance policy or given away your possessions?

The most common psychiatric disorders associated with completed suicide are major depression and alcohol abuse.

**Suicidal Ideation**

<table>
<thead>
<tr>
<th>Patient expresses suicidal ideation</th>
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<tr>
<td>Patient has a suicide plan</td>
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<tr>
<td>Patient has access to lethal means, has poor social support and poor judgement and Cannot make a contract for safety</td>
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<tr>
<td>Hospitalize</td>
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<tr>
<td>Treat with antidepressants, refer for alcohol rehabilitation, and individual and/or family therapy</td>
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Occasionally, patients may not allow the clinician to contact their families. When someone’s life is in danger, confidentiality may be breached. Legal consultation may be advisable if there are any questions about infringing on a patient’s autonomy. The grounds for involuntary commitment are: 1) imminent danger to self or others and 2) an inability to care for one’s self. Most states allow for 48 to 120 hours of involuntary hospitalization.

Outpatients: One technique that is frequently employed is to ask the patient to sign or verbally agree to a “no-harm contract.” Such a contract is not legally binding; it serves mainly to solidify the therapeutic alliance.

Antidepressants are more effective than placebo in decreasing suicidal ideation, and serotonin reuptake inhibitors (SSRIs) may act more rapidly in this regard. Tricyclic antidepressants should be avoided due to lethal potential. Safe agents are fluoxetine (Prozac), sertraline (Zoloft), fluvoxamine (Luvox), and venlafaxine (Effexor).

Patients with a plan, access to a lethal means, recent social stressors, and evidence of a psychiatric disorder should be hospitalized.

**Article – Depression In Adolescents (Son & Kirchner, Amer Fam Phys 2000;62:2297-2308,2311-2)**

About 2% of prepubertal children and 5-8% of adolescents have depression. A structured clinical interview and various rating scales, such as the Pediatric Symptom Checklist, are helpful in determining depression. Psychotherapy appears to be useful in most children and adolescents with mild to moderate depression. A growing body of evidence has confirmed that children and adolescents not only experience a whole spectrum of mood disorders but also suffer from the significant morbidity and mortality associated with them.
Major depressive disorder, treated with psychotherapy or medication (SSRI, TCA), involves 5 to 9 of these criteria: depressed/irritable, recurrent thoughts of death, diminished interest/pleasure, weight loss/gain, psychomotor agitation/retardation, fatigue or energy loss, feelings of worthlessness, diminished concentration, insomnia. Bipolar disorders should be treated with psychotherapy and medication (lithium, anticonvulsants). Adolescents may exhibit more anhedonia, hypersomnia, weight change, and substance abuse than younger children. 90% of children with major depressive disorder reach remission by 18 months to two years after onset. About half of children diagnosed with dysthymic disorder are still struggling with their symptoms at 18-24 months. Because of its relatively good sensitivity and specificity and its ease of administration, the Pediatric Symptom Checklist can be a valuable screening tool. Specificity is 68% in middle-class, 100% in lower socioeconomic status. Testing should include a CBC (to rule out anemia or infection), electrolytes, creatinine, BUN (to rule out electrolyte disorder or renal disease), LFT (to rule out hepatitis and drug effects), TFT (to rule out thyroid disorders), EEG (to assist in ruling out a seizure disorder), and an ECG as a baseline if TCA therapy is being considered. The high placebo response in children confounds many studies of the effectiveness of antidepressants in children. SSRIs dominate the pharmacotherapy of depression by primary care clinicians because of their relative safety. As in geriatrics, the adage, “Start low and go slow,” is a useful guideline in determining dosage levels for antidepressant medication in children.

Article – Generalized Anxiety Disorder (Gliatto, Amer Fam Phys 2000;62:1591-600,1602)

Patients with generalized anxiety disorder experience worry or anxiety and a number of physical and psychologic symptoms. Treatment consists of pharmacotherapy and various forms of psychotherapy. The benzodiazepines are used for short-term treatment, but because of the frequently chronic nature of generalized anxiety disorder, they may need to be continued for months to years. Buspirone and antidepressants are also used for the pharmacologic management of patients with generalized anxiety disorder. Patients must receive an appropriate pharmacologic trial with dosage titrated to optimal levels as judged by the control of symptoms and the tolerance of side effects. Psychiatric consultation should be considered for patients who do not respond to a trial of pharmacotherapy. Generalized Anxiety Disorder (GAD): Excessive anxiety and worry (aprehensive expectation), occurring more days than not for at least six months, about a number of events or activities (such as work or school performance). Characteristics of GAD: excessive physiologic arousal (muscle tension, irritability, fatigue, insomnia), distorted cognitive processes (poor concentration, unrealistic assessment of problems), poor coping strategies (avoidance, procrastination, poor problem-solving skills).

If panic attacks are present, treat for panic disorder. If symptoms of major depression are present, treat depression. Generalized anxiety disorder is distinguished from other medical and psychiatric conditions and normal worrying principally by the long duration of the anxiety and the resultant impairment in daily functioning. Neurologic and endocrine diseases, such as hyperthyroidism and Cushing's disease, are the most frequently cited medical causes of anxiety. The clinician should inquire about herbal products, drugs of abuse, and vitamins. Patients with generalized anxiety disorder may respond to psychologic or pharmacologic therapies or a combination of both approaches. Benzodiazepines are the most frequently used anxiolytics. Benzodiazepines from shortest half-life to longest: oxazepam (Serax, 9hr), alprazolam (Xanax, 14hr), lorazepam (Ativan, 14hr), chlordiazepoxide (Librium, 20hr), diazepam (Valium, 40hr), clonazepam (Klonopin, 50hr), clorazepate (Tranxene, 60hr). Benzos like oxazepam (Serax) are useful for elderly patients or those with liver disease. Benzos like clonazepam (Klonopin) should be used in younger patients without concomitant medical problems. Abused benzos are the ones most rapidly absorbed: diazepam, lorazepam (Ativan), and alprazolam (Xanax). Buspirone is commonly used as a treatment modality, although benzodiazepines are the most widely used for GAD.

Kaplan Videos (2001) – Psychiatry with Alina Gonzalez Mayo, MD

Mental Status Exam: Overview

* Used to describe the observations and impressions of the patient during the interview. Most useful tool in psych. 
* Don’t sit behind a desk when talking with a patient; it creates a boundary and a power issue. Also, never stand and talk to the patient while they are sitting down; it is an issue of power. Ideally, sit diagonally from the patient.
* When interviewing violent or potentially violent patients, the clinician should be between the patient and the door.
* The best way to get a diagnosis or confirm a diagnosis is the mental status exam.
* General description, Appearance: grooming, poise, clothes (e.g. inappropriate attire), body type (e.g. disheveled).
* If patient has inappropriate attire for the weather (poor judgment), think about psychoses such as schizophrenia.
* If patient is wearing dirty clothes, hair not really combed, think about mood disorder/depression.
* If patient is wearing bright ridiculous clothes and tons of jewelry, think about mood disorder/mania and histrionic.
* General description, Behavior: quantitative and qualitative aspects such as tics, restlessness.
* Psychomotor agitation (e.g. restlessness) seen in mania and anxiety, as well as schizophrenia.
* Psychomotor retardation (e.g. stooped posture) seen in patients with depression, as well as catatonic schizophrenia.
* Akathisia is generalized restlessness, seen in the “thorazine shuffle.” Described as “ants in your pants.” Must be recognized as distinct from psychomotor agitation. Example would be schizophrenic patient with akathisia getting more medication, which makes the problem worse. Treatment of choice is lowering the dose of the drugs, beta blockers and benzodiazepines can also be used.
* General description, Attitude: cooperative, frank, seductive, etc.
* Mood and Affect, Mood: emotions perceived by the patient (depressed, anxious, angry).
* Mood and Affect, Appropriate: patient’s present emotional responsiveness (blunted, flat, labile).
* Use the terms congruent and incongruent when describing mood and affect. If patient says they are depressed but laughing, this is incongruent.
* Changes in affect occur typically in psychotic disorders such as schizophrenia, and sometimes mood disorders.
* Parkinson disease gives “mask-like facies,” a problem with affect.
* Mood and Affect, Appropriateness: in reference to the context of the subject.
* Speech: the physical characteristic of speech (relevant, coherent, fluent); Important in detecting aphasias.
* In depression, there is a decreased speech with barely audible tone.
* Patients with manic or bipolar disorder will have pressured speech, going at “a thousand words a minute.”
* Alogia (poverty of speech) is seen in schizophrenia, when the patient gives brief and empty replies to questions.
* Perceptual disturbances: experiences in reference to self or the environment (hallucinations, illusions).
* A hallucination is a false sensory perception without any sensory stimuli. Auditory hallucinations are seen in psychotic disorders, visual hallucinations seen with drugs or organicity (tumor, trauma), tactile hallucinations seen with drugs, and olfactory hallucinations seen with seizure disorders. A common auditory hallucination/illusion seen in the general public is turning around on a busy street because you think someone called your name. A real hallucination would be turning around in an empty room because you thought someone called your name.
* For hallucinations, if auditory pick schizophrenia, for visual pick drugs, for tactile pick drugs or delirium tremens (DTs), for olfactory pick seizure disorder, gustatory hallucinations are rare.
* Formation (insects or ants crawling on skin) seen in cocaine intoxication and alcohol withdrawal (DTs).
* Temporal lobe seizures (complex partial) give foul-smelling hallucinations, such as burning rubber.
* Schizophrenics who hallucinate have auditory (2/3 of patients) or visual (1/3 of patients) hallucinations.
* An illusion is a sensory misperception in the presence of sensory stimuli.
* Thought, Form: the way in which a person thinks (flight of ideas, loose associations, tangentiality).
* Loose associations are a rapid shifting of topics without a connection, seen in psychosis.
* Flight of ideas is a rapid shifting of topics with connection (there is a trigger), seen in mania.
* Tangentiality is going off topic, never reaching the point. Circumstantiality reaches the point, eventually.
* Thought, Content: what the person is actually thinking about (delusions, paranoia, suicidal ideas).
* Delusions are fixed false beliefs, either bizarre (schizophrenia) or non-bizarre (delusional disorder). If a patient has a delusion, do not confront the patient. If the patient says they are Santa Clause, don’t tell them they aren’t because they may get agitated and even aggressive toward you.
* A bizarre delusions means no one in their right mind would believe you. Example, “The FBI and CIA are after me because they know I’m selling nuclear secrets to the foreign government because I made a nuclear bomb at home.”
* A non-bizarre delusion would be a patient saying, “Doctor, I think my wife is trying to poison me.”
* Sensorium and Cognition: Folstein Mini-Mental Status Exam (MMSE). Testing alertness and level of consciousness (awake, clouding of consciousness), orientation (time, place, person), memory (recent, remote), concentration and attention (serial 7’s from 100, spelling backwards), capacity to read and write (read a sentence and do what it says, write a sentence), visuospatial capacity (copy a figure of interlocking pentagram), abstract thinking (proverb interpretation), and fund of information (calculating ability, name past presidents).
* MMSE top score is 30, score of 23-24 or lower is indicative of dementia.
* Patients with dementia tend to lose orientation to time, then place, then person. So initially they may think the year is a decade behind or that it is summer when it is winter. Next they will have trouble determining where they are located currently. Last, they forget who their significant others are.
* Dissociative disorders are good with time and place, but not person. Such as dissociative amnesia or fugue, they forget who they are. First documented case was Ansel Bourne, whose name was used for the movie Borne Identity.
Most famous recent memory test is “what did you have for breakfast.” However, this is not a good question unless you know what the patient actually had for breakfast. Remote memory can be tested by birth date or phone number.

Depressed patients have trouble concentrating, so they have trouble with serial 7’s or serial 3’s. Once they take 7 from 100 and say 93, ask “what is 7 from that?” instead of saying “what is 93 minus 7?” because they may have forgotten that they said 93.

If patient cannot copy a complex figure (example shown here), this is called constructional apraxia. It typically affects the parietal lobe on the non-dominant side.

For calculating ability, say to patient that you have $5 and go to the store to get a loaf of bread. The bread is $1.39. How much money will the cashier give you back?

Executive functioning problems are seen with frontal lobe pathology (e.g. rock-paper-scissors).

Impulse Control: estimated from history or behavior during interview. Poor impulse control would be a patient who starts shouting obscenities during an interview or gets mad and punches another patient.

Judgment and Insight: ability to act appropriately and self-reflect. Common question is to say to the patient that you find an envelope on the street and the envelope is sealed and stamped. Paranoid patients might say they wouldn’t touch it due to anthrax. Poor judgment would be to throw the letter away. Antisocial with good judgment would be to open the letter and check for money then throw away the envelope.

Reliability: your impression on the patient’s ability to assess their situation.

Testing posterior columns can be done with a turning fork at the wrists and ankles.

Parietal lobe can be assessed by the ability to identify objects based on touch with their eyes closed (stereognosis).

Cerebellum can be assessed with tremor, rapid alternating movements, and Romberg test.

Basal ganglia pathology can involve rigidity with limb movement and involuntary movements.

Posterior fossa lesions can be assessed by asking the patient to roll their eyes upward (Parinaud sign).

Frontal lobe can be assessed by repeatedly executing a motor sequence.

Spinothalamic tract can be tested by temperature and sharp versus dull

**Mental Status Exam: Interviewing Techniques**

- Ask open-ended questions, allowing the patient to speak in their own words and as much as possible. “Can you tell me about the voices?” Avoid closed-ended questions that are very specific and would result in a yes or no answer.
- A review of systems (ROS) would involve mostly closed-ended questions. “Are you hearing voices?”
- Facilitation means helping the patient continue by providing verbal and nonverbal cues. “Yes, continue.” Silence is also a form of facilitation; it implies you are there for the patient and listening to them.
- Confrontation should be avoided as it makes the patient angry. “You’re angry today, what’s wrong with you?”
- Facilitation should be used instead; “You seem upset, would you like to talk about it?”
- Confrontation is a good technique for substance abusers, as they might not be accepting the fact.
- Reassurance, if truthful, will increase compliance.
- Leading questions should be avoided. This is basically putting words into the patient’s mouth. This is especially bad for malingering patients. A good example is homeless patients who use hospitals for shelter. They might be told, “Just go to the hospital and say you’re hearing voices.” On admission, don’t say “Are the voices telling you to hurt yourself?” The patient, if malingering, will probably say, “Oh yea, they sure are” but might not have been; they were prompted. You could be sly and say things like, “Are you right or left handed? Right-handed people tend to hear voices more in their left ear, and left-handed people tend to hear voices more in their right ear.” Then ask where the patient hears the voices, if malingering they will grab onto those bits of information that you know aren’t true. You can ask several of these questions and document the responses, which can help differentiate malingering from true psychological pathology. Another example would be with a patient faking knee pain, then saying there is a nerve that connects the two knees so pressure on the opposite knee would activate the pain. Malingering patients would then take this information and pretend to be in pain on palpation of the opposite knee.

- A 20yo male presents to your office complaining of auditory hallucinations for approximately 7 months in duration. He reports hearing his father’s voice, and at times his mother’s voice as well. The patient appears distressed by the hallucinations and wants your help. Which of the following would be the most appropriate statement at this time? Answer is open-ended question. “Tell me about the voices.”

- A 30yo woman comes to see you after her Father’s death approximately 3 weeks ago. Since then she has complained of depressed mood and feelings of hopelessness. While in your office, she beings to cry. Which of the following would be the next step in the management of this patient? Answer is offer tissue and remaining silent. This shows caring and facilitation. The wrong answer is almost always referring to psychiatry.
Psycbic Structures: Freud Structure Model of the Psyche

* Id: drives (instincts) present at birth. The two drives are sex and aggression.
* Ego: defense mechanisms, judgment, relation to reality, object relationships, developed shortly after birth.
* Superego: conscience, formed during latency period.
* In cartoons with devil and angel on the shoulders, the devil is id and angel is superego. The ego is what keeps everything in balance.
* Antisocial personality disorder has a defective superego (superego lacunae). It allows for doing certain things, like stealing and lying, without remorse.
* If “drive” or “instinct” is in the question, answer is id. If “conscious” or “morality”, answer is superego.
* If question says “object relationships” or “judgment” then pick ego.

Psycbic Structures: Defense Mechanisms

* The ego’s way of warding off anxiety.
* All defense mechanisms are unconscious (except suppression), discrete, dynamic and irreversible, and adaptive.
* Projection: attributing your own wishes, thoughts, and feelings to someone else. If someone is cheating on their spouse, they may accuse their spouse of cheating. Seen in paranoid personality disorder.
* Denial: used to avoid becoming aware of some painful aspect of reality. A new widow may make dinner for their dead husband at the normal time in which he’d come home from work. “I didn’t have a heart attack” even in the face of an ECG with ST elevation, elevated cardiac enzymes, and an IV in their arm. What is the next step in the management of the patient? Answer is not to refer to psych, confronting denial, interpreting with dream analysis, or even find out the patient’s view on death. The correct answer is to do nothing. The patient’s defense mechanisms are there to help them, this patient is in the hospital getting treatment. If the denial does not interfere with treatment, we leave it alone. If it does interfere, we have to find out why.
* Splitting: external objects are divided into all good or all bad. Seen in borderline personality disorders.
* Blocking: temporary block in thinking. “I can’t seem to remember his name.” This is mostly due to stress.
* Regression: returning to an earlier stage of development. Considered the least mature defense mechanism. Birth of a sibling or divorce is stressful for a 7yo child. Regression would be bed-wetting and thumb sucking. Adults may regress, such as in severe trauma, into the fetal position. Usually adults will act like children, constantly buzzing the nurse and asking for blankets/food/juice. Temper tantrums are also regression.
* Somatization: psychic derivatives converted into bodily symptoms. Seen in somatoform disorders, hypochondriasis, body dysmorphic, conversion, etc. The patient’s blame convinces them there is something physically wrong with them; they will come in and get massive work-ups with no findings.
* Elderly patients may presents with somatic disorders when they actually have underlying depression.
* Introjection: features of the external world are made part of self. Example is a 5yo who watches Superman then goes and grabs their bed-sheet and pretends to fly. Another example is a resident who dresses like the attending; the important part is this is an unconscious act. If conscious, it is called imitation.
* Displacement: an emotion or drive is shifted to another that resembles the original in some aspect. An example is being angry at one person and taking it out on another person. It can also be relate to phobias, example is a woman who has never seen a live snake but dreams about snakes being all over her bed. May be interpreted as a fear of penises, not snakes. Could be related to a history of sexual abuse.
* Repression: unconsciously forgetting. Usually in the case of very bad memories. An example would be a patient being sure they were never abuse, but medical history shows treatment for STDs at young ages (e.g. 2yo).
* Suppression: conscious forgetting. Patient would say they don’t remember being raped. Later they may say they were, but they don’t want to talk about it.
* Intellectualization: excessive use of intellectual processes to avoid affective expression or experience. Biggest fears are the unknown, such as death or the ocean. The more we learn about something, the more our fear decreases. Example is patient told they have cancer. They go to the bookstore and buy a ton of books on cancer and reading.
* Isolation: separation of an idea from the affect that accompanies it. Patient has just experienced something horrible (young daughter hit and killed by a car), but the patient talks about it without any emotion (father does not cry).
* Rationalization: when excuses are used to justify things that are unacceptable. I need to have six drinks every night because work is so stressful. I didn’t pass the test because the professor wrote horrible questions.
* Reaction Formation: unacceptable impulse is transformed into its opposite. Example would be someone who wants to start fires, but instead becomes a firefighter. Another would be someone who wants to kill babies, but instead becomes a pediatrician. Seen often in obsessive-compulsive disorder (OCD). Most common obsession is fear of contamination; original impulse might be the want to touch everything.
* Undoing: acting out the reverse of an unacceptable behavior. Example is spilling salt on the table, then throwing it over your shoulder to undo the bad luck. Undoing for OCD about contamination is hand washing. Another example is Jimmy Swaggart who preached about sins of the flesh, but was caught multiple times doing just that.

* Acting Out: emotional or behavioral outburst. A child having a temper tantrum (age appropriate).

* Humor: permits the feelings and thoughts without discomfort. Example would be a very overweight comic talking about being overweight and getting kicked out of buffet restaurants.

* Sublimation: considered the most mature of all defenses. This is doing exactly what you want to do (unacceptable) but in an acceptable way in society. Example is someone who wants to stab and dismember people, then becoming a pathologist or surgeon. Someone who likes pornography would become a censor. Another example would be someone who wants to set fires then becoming a special effects expert in Hollywood.

* A nurse, working in a hospice, has been ignoring an elderly female patient who has terminal cancer. When asked why she has been ignoring the patient, the nurse replied, “She wants to be left alone.” Which of the following defense mechanisms best explains her response? Answer is projection, not rationalization.

**Psychiatric Tests**

* Intelligence Quotient (IQ) measures academic performance, is MA/CA * 100, mean = 100, SD = 15.

* Adults: Wechsler Adult Intelligence Scale Revised (WAIS-R). Used for people ages 17 and older.

* Children: Wechsler Intelligence Scale for Children Revised (WISC-R) and Stanford Binet test. WISC-R is good for children from age 6 and up (ages 6 to 18). Stanford Binet was the first test created and is good for children who are very young, mentally retarded, or of superior intelligence.

* Personality tests are objective or projective. Objective tests use simple stimuli, such as a question. The most widely used objective test is the Minnesota Multiphasic Personality Inventory (MMPI).

* MMPI is a test with a series of true and false questions, over 500 questions. This test has a lie scale as well as a validity scale. So, it can tell if the person is “faking good” or “faking bad.”

* Projective tests use ambiguous stimuli, meaning no right or wrong answer. These types of tests require a great deal of clinical training to administer.

* One common projective test is the Rorschach (inkblot) test; patient says what they see.

* Another is the thematic apperception test (TAT); patient tells story based on a picture.

* Another is the sentence completion test; “walking home today I ____”

* Last type of test is the drawing test, which is good for assessing child abuse.

**Mood Disorders: Major Depression**

* 70yo female was recently admitted after her son informed the doctor that his mother had been doing very poorly since her husband’s death many months ago. Since then, the patient reports a 30lb weight loss, decreased concentration, feelings of helplessness, and hopelessness, decreased energy, decreased mood, and decreased sleep.

* Major depression is a mood disorder lasting more than two weeks and involving depressed mood or anhedonia.

* Risk factors: women (possible hormonal bias, stresses, or diagnosis bias), age > 40, no relationships, divorce.

* Have been studies where man and woman go to doctor saying same things; woman gets diagnosed as major depression and man as adjustment disorder. Men have higher risk of suicide so the implication here is that men may not receive the treatment they need for depression.

* Major depression is linked to serotonin, norepinephrine, and dopamine (all decreased). Most of the drugs to treat depression are a combination of serotonin and norepinephrine or purely serotonin.

* Metabolite of serotonin is 5-HIAA, which would be decreased in suicide and aggression (disinhibition). Alcohol is involved in 50% of the cases of homicide (perpetrator or victim).

* Other risk factors of major depression include family history and exposure to stressors (e.g. death of spouse).

* Behaviorists mention “learned helplessness” in depression. Meaning if you realize there is no way out then you just give up. Also known as the animal model of depression; from an experiment with a fully electrified cage where the cat attempts to get out but finds all sides are electrified; the cat gives up.

* Depression symptoms are depressed mood and anhedonia most of the day. Weight changes occur as well, typically losing weight. Sleep disturbances occur, most sleep less. Psychomotor retardation, fatigue, loss of energy, feelings of worthlessness, feelings of guilt, concentration trouble (serial 7s, serial 3s).

* What is the next step in a depressed patient? Answer is inquire about thoughts of suicide.

* Lab tests are not very diagnostic, but used for depression. These are dexamethasone suppression test and thyrotropin releasing hormone.
* Dexamethasone suppression test, meant to suppress cortisol. Give patient dexamethasone and check the patient’s cortisol the next day, expecting a drop. If the cortisol goes up, this is a positive test.
* Thyrotropin releasing hormone, given to patient the measure thyroid-stimulating hormone (TSH) expecting an increase in TSH. If there is a blunted response, this is a positive test. Depression can mimic hypothyroidism.
* Major depression with psychotic features has worse prognosis than major depression alone. Example is woman who has two months of feeling hopeless, can’t sleep, thinks about killing herself, has lost 30lbs…and has been hearing her dead sister’s voice telling her to join her.
* Major depression with atypical features would be patient with depressed mood, anhedonia, but has slept 10 hours a day, gained 30lbs, eats a ton, and constantly thinks about death.
* Treatment involves talking about suicide. This does not put thoughts into the patient’s head about suicide. These patients should get special observation. Medications include antidepressants such as SSRIs (serotonin), TCAs (serotonin and norepinephrine), and MAOIs (all neurotransmitters).
* Medication should be the one with the least amount of side effects, which is SSRI, increases compliance.
* Electroconvulsive therapy (ECT) may be used as well. It is a safe procedure and usually used for suicidal patients. Public should be educated about the safety and efficacy of ECT. Everyone thinks about the scene from One Flew Over The Cuckoo’s Nest with Jack Nicholson being strapped to a table and held down by four men. ECT today is painless and the patient’s do not remember the experience.
* When asked what is the best treatment for depression, answer is ECT. Answer is not medication, although medication is used as a first line. ECT will reduce suicide risk.
* Individual psychotherapy is also indicated for depression, which can help the patient deal with life stressors. Cognitive therapy is used as well, which is meant to change behavior patterns. It involves homework so the patient must be willing to get the therapy. Example would be changing the patient’s thoughts from “I’m a bad person” to “I’m a good person that bad things sometimes happen to. Bad things happen to everyone, it’s a fact of life.”
* Ideally for treatment, medication and therapy together are always better than either alone.
* ECT does not have absolute contraindications. Relative contraindications are increased intracranial pressure. It is safe for patients with previous MI, with pacemaker insertion, and even patients who are pregnant.
* DDx includes hypothyroidism (order TSH), Parkinson disease, dementia, medications (e.g. beta blockers), pseudodementia, tumors (CT scan, which is not routinely ordered), cerebrovascular accidents (in particular, right-sided CVAs associated with apathy), other mood disorders, substance disorders (e.g. cocaine withdrawal), and grief.

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**Mood Disorders: Bipolar Disorder**

* A 19yo college student is taken to the school counselor after he fails several classes. The patient is enrolled in numerous classes, most of which have conflicting times. His grades are poor and he seems undisturbed by this. He is also enrolled in numerous organizations, such as the chess club, drama club, student government, sports, and at least two fraternities. His speech is pressured and he has psychomotor agitation. This is typical of patients with mania.
* Bipolar disorders is a mood disorder in which the patient typically experiences manic symptoms for at least 1 week that cause significant distress or impairment in his/her level of functioning.
* Bipolar affects men and women equally and it has a mean age of onset of about 30 years. More prevalent among high socioeconomic status and those who did not finish college. Considered to be the illness with the greatest genetic linkage. Coexisting disorders may include anxiety, alcohol dependence, and substance-related disorders.
* First “break” or manic episode often seen during college.
* Mood disorders (e.g. major depression) has a gender bias, more toward women. Psychotic disorders (e.g. schizophrenia) have a race bias, more toward African Americans.
* Many experts say that if a patient is bipolar then it is assumed the patient is using drugs. A common drug used is alcohol for self-medication of manic episodes.
* Physical exam is usually within normal limits, but might have some psychomotor agitation and pressured speech.
* Treatment includes assessing patient safety to determine need for hospitalization, pharmacotherapy including mood stabilizers (lithium, valproic acid, carbamazepine), benzodiazepines, and antipsychotics (for mood stabilizer non-responders or in an emergency situation), and psychotherapy as indicated.
* DDx includes schizophrenia, personality disorders, CNS infections, tumors, hyperthyroidism, and medications (e.g. caffeine, amphetamines, and other stimulants).

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**Mood Disorders: Cyclothymia**

* Mrs. McDonald has experienced a 12-year history of periods of feeling great followed by periods of feeling lousy. During her feeling-great periods, she experiences increased sexual drive, euphoric mood, and increased irritability. During her feeling-lousy periods, she experiences insomnia, fatigue, and low self-esteem.
* Cyclothymia is a chronic disorder characterized by many periods of depressed mood and many periods of hypomanic mood for at least 2 years. It is considered a milder form of Bipolar II Disorder.

* Difference between mania and hypomania is how the symptoms affect functioning. Mania would affect functioning. Example, a hypomanic person would go to the department store for a dress and come back with 5, a manic person would empty their bank account at the store. A hypomanic person would have increased sexual drive with their partner, while a manic person would be stopping strangers on the street to ask for sex.

* If you would hospitalize the person, the answer is mania.

* Bipolar I is mania and major depression. Bipolar II is hypomania and major depression.

* Many cyclothymics have interpersonal and marital difficulties. They often also have borderline personality disorder and are more often women. Family history of bipolar disorder is seen. Alcohol and substance abuse are commonly seen when they are in the hypomanic phase.

* Treatment is mood stabilizers, benzodiazepines, or antipsychotics. Psychotherapy as indicated.

* DDx includes seizures, drugs, some medications, and personality disorders.

Mood Disorders: Dysthymia

* Mr. Smith complains of poor appetite, low energy, poor concentration, and difficulty in making decisions, which affects his ability to complete his assignments at work. These symptoms have occurred for more than 2 years.

* Dysthymia is a chronic disorder characterized by a depressed mood that occurs most of the time and lasts for at least 2 years. Dysthymia is a mild form of major depression and lasts a long time. Major depression typically lasts 1 year, with a reduction or termination of symptoms at that time. Treatment for major depression is to prevent suicide.

* Dysthyemic disorder more common in women, younger than 64 years old, unmarried, and from low-income families. Typically have other psychiatric disorders such as anxiety, substance abuse, and/or borderline personality. Treatment usually does not include hospitalization. Patients may benefit from long-term individual insight-oriented psychotherapy to help them overcome their long-term sense of despair and resolve conflicts from childhood. If medications are indicated, SSRIs, TCAs, or MAOIs. Best option is SSRI due to side-effect profile.

* DDx is major depression; pay attention to the duration of symptoms. Also minor depressive disorders.

Mood Disorders: Seasonal Affective Disorder

* A young woman from Minnesota complains of depressed mood and sleep disturbances every winter. Her symptoms resolve in the spring and summer. Another example would be a patient from the northern climate who relocates to a warmer climate and no longer has depression.

* A disorder characterized by depressive symptoms found during winter months and absent during summer months.

* Thought to be caused by a defect in the metabolism of melatonin (decreased MSH). Treatment is phototherapy, or sleep deprivation. Chemical reaction occurs when light hits retina.

Mood Disorders: Questions

* 50yo woman is taken to the hospital after neighbors find her wandering the streets mumbling to herself and gesturing. When approached, she begins to cry and expresses thoughts about hurting herself. Examination reveals scratch marks on both her forearms and questionable lacerations on her throat. When questioned, she reports feeling depressed since her husband died 5 months ago. She reports a decrease in concentration and feelings of helplessness, hopelessness, and anhedonia, which resulted in her quitting her job and staying at home. She now has begun to hear her husband’s voice telling her to “join” him. Which of the following would be the next step in the management of this patient? Answer is to assess for thoughts about suicide, not start medication, not ECT, not refer to psychiatry.

* Assuming you decide to being treatment, which of the following is most indicated as the initial treatment? Here the patient has depression and psychoses, but the psychosis is the worst so that is treated. If the patient had mania and depression, we treat the mania. Answer here is risperidone first, not fluoxetine or phenelzine.

Mood Disorders: Grief & Postpartum Depression

* Grief is also known as bereavement, so if they are in the same answer choice then don’t pick either.

* Depression is also known as pathological grief, so if they show up together as answer then don’t pick either.

* If you have depression symptoms for up to a year after the death of a loved one, we call it grief. If longer than one year, it is depression. Grief symptoms tend to wax and wane. Depression symptoms are unremitting.

* Patients with grief usually return to baseline period within two months.

* Treatment for grief is supportive psychotherapy, could be 1:1 or group therapy.

* “Baby blues” (postpartum blues) occurs, in theory, due to hormones after pregnancy. Postpartum depression or psychoses are usually related to an underlying disorder and the stress of childbirth precipitates the disorder.
* First baby is considered the most traumatic, so you tend to see postpartum psychoses from the first baby onward. Postpartum depression tends to occur with the second baby. Thus, psychoses are worse for prognosis.

* The baby blues starts immediately after birth and does not last longer than two weeks.

* Postpartum depression or psychoses typically occur one month after birth and the symptoms may continue.

* Women with postpartum blues tend to care a lot for their babies. However, in postpartum depression and psychoses, the mother may have thoughts to hurt their children. Postpartum psychoses mothers are the most likely to kill their babies. Typical example would be a mother waking up her husband and saying that the baby is trying to control her mind, or when washing the baby I felt two little horns growing.

* A common reason these mothers kill their children is because the mothers are miserable, and thus they do not want their child to be miserable as well; the mothers may see the killing as an act of love for their child.

* Treatment for baby blues is self-limiting, so no treatment needed.

* Treatment for postpartum depression, which is thought to be an underlying depression, is antidepressants.

* Treatment for postpartum psychoses, which is thought to be an underlying bipolar disorder, is antidepressants and mood stabilizers, or even antipsychotics.

* Final step in treatment is looking into the mother’s thoughts about the child to determine if the child is at risk.

**Mood Disorders: Death & Dying**

* Death and dying based on the stages identified by Elisabeth Kubler-Ross. She believed dying patients did not follow a regular series of responses that could be easily identified. She believed most individuals experience stages that are common reactions to death.

* These stages are not specific to death and dying, they may occur after being fired or after a car accident.

* There are five stages of death and dying, which do not have to occur in any specific order.

* 1) shock and denial, 2) anger, 3) bargaining, 4) depression, 5) acceptance.

* A 32yo female was recently diagnosed with breast cancer. Which of the following would you expect to see first? Answer is any of the above, not shock and denial, not anger, not any other stage, they don’t have to be in order.

**Schizophrenia**

* Schizophrenia is a thought disorder that impairs judgment, behavior, and ability to interpret reality.

* Symptoms must be present for a period of at least 6 months to be able to make a diagnosis.

* Thought disorders affect everything in one’s life; a lot of patients (up to 1/3) will never return to pre-morbid state.

* Onset is earlier for men, usually at age 15 to 25. Women age 25 to 35.

* Schizophrenia associated with high levels of dopamine and abnormalities in serotonin.

* Newer atypical antipsychotics clozapine, risperidone, olanzapine target both dopamine and serotonin.

* Many believe the family may be the cause of the patient’s schizophrenia, use to have the term schizophrenogenic mother, believed the woman spoke in a mixed message; treating someone in one way and treating them a different way, e.g. treated like a baby but spoke to like an adult (double bind theory). This double bind theory has fallen out.

* Families that are “High EE” (high expressed emotion) are very involved, critical, and intrusive.

* If family is High EE, if patient leaves the hospital then their relapse rate is very high, so likely to return to hospital.

* Increased number of schizophrenics born in the winter and early spring, so some believe it may be viral in origin.

* Schizophrenia is more prevalent in the low socioeconomic status (SES) groups, either as a result of downward drift (were in high SES, got schizophrenia, then ended up in low SES) or social causation (more stress in low SES).

* Schizophrenia is genetic; proved in concordance studies with monozygotic (47%) and dizygotic twins (12%), also with one schizophrenic parent (12%) and two schizophrenic parents (40%). Bipolar 50% if both parents are bipolar.

* Hallucinations are likely and are usually auditory (2/3) or visual (1/3). Typically they hear bad voices, patient told they are evil, terrible, worthless, “why don’t you kill yourself.”

* Command hallucinations are worrisome and most patients will not listen to these voices telling them to kill themselves or others. Worse scenario is that the voice(s) is someone the patient knows and looks up to, such as a family member, dead relative, or deity of some form (e.g. God).

* Delusions are mostly bizarre. Speech and behavior disorganized. Catatonic behavior may be seen.

* Negative symptoms seen, flat affect, anhedonia, cognitive defects, social withdrawal.

* Schizophrenics usually have social and occupational dysfunction, no friends, lost job.

* Physical exam will likely be unremarkable. May have saccadic eye movement, which is an abnormality in smooth eye pursuit. You see irregular or jerky movements with following objects. Also seen in REM sleep.

* Patients may be hyper-vigilant, constantly scanning the room.

* On CT scan (or MRI), look for lateral and third ventricular enlargement, reduction in cortical volume (associated with the presence of negative symptoms, neuropsychiatric impairment, increased neurologic signs, and poor
* A 50yo homeless man is taken to the hospital after he was hit by a motor vehicle. Staff questions him and notes that his thoughts are illogical. He appears to have poor grooming, emotional blunting, and loose associations. This is schizophrenia, undifferentiated type. Patient meets schizophrenia criteria but does not meet criteria for a specific type; meaning no psychomotor disturbances, no thoughts of grandeur, no bizarre thoughts.

* A 24yo man is brought to the ED by his parents after they found him covering the windows with aluminum foil because “they” were after his ideas. When asked who “they” are, he looks up at the sky and points to a faraway planet. This is schizophrenia, paranoid type. Themes are of grandeur or persecution.

* A 15yo boy while at a summer camp is taken to a nearby hospital after counselors notice a quick deterioration in his behavior. His roommates noticed him talking to himself as well as exhibiting bizarre behavior such as grimacing and laughing inappropriately. This is schizophrenia, disorganized type.

* DDX includes substance-induced (psychostimulants, hallucinogens, alcohol hallucinosis, barbiturate withdrawal, do a urine drug screen to rule out), epilepsy (temporal lobe), and other psychotic disorders (schizoaffective, schizophriniform, brief reactive psychosis, delusional disorder).

* Cocaine and amphetamine use dopaminergic tracts, thus give paranoia, hyper-vigilance, etc. Cocaine will stay in the body for about two days.

* Malingered and factitious disorder, assess whether the patient is in control of the symptoms and whether there is an obvious gain. Mood disorders, look at duration of mood symptoms, these tend to be brief in schizophrenia.

* Medical causes include HIV, steroids, tumors, CVAs.

* Personality disorders, look at duration of symptoms as well as patient’s level of functioning.

* Schizotypal has illusions, magical thinking, odd beliefs. The difference is schizotypal is functioning.

* Schizophrenia types: paranoid, disorganized, catatonic, residual, and undifferentiated.

* Positron emission tomography (PET scan) will show hypoactivity in the frontal lobes and hyperactivity of the basal ganglia relative to the cerebral cortex. Most important is no areas of pickup (red, yellow) in frontal lobe.

* Frontal lobes deal with personality, abstract thinking (concrete answers to a proverb), higher order functioning.

* IQ scores will be lower, maybe due to low intelligence at the preset or as a result of the disease, unknown why.

* Problems with frontal lobes and sometimes temporal lobes.

* For personality test, want to give a projective test (e.g. inkblot) to get bizarre answers.

* Treatment involves determining if this patient is safe; will they kill themselves or others.

* Use medications that affect dopamine, the antipsychotics. Atypicals are considered first line because they have the least side effects; this is the answer for exams. In real life, cost plays a large factor so typicals may be used instead.

* The lower number of side effects improves compliance, so you want to assure compliance.

* Atypicals help with both positive and negative symptoms. Typicals only affect positive symptoms.

* Clozapine is used if the patient does not respond to typicals or atypicals (treatment resistant schizophrenia).

* Psychoanalysis (intrusive therapy, 3-5 times per day for the rest of your life) is not used for schizophrenia.

* Supportive psychotherapy (least intrusive, won’t ask about parents/dreams/etc., asks patient how they’re doing, did they get a job, how to fill out an application) is the classic therapy used for schizophrenics.

* Sick patients get least intrusive therapy (supportive psychotherapy) and well/healthy patients get psychoanalysis, where you sit with the therapist and basically free associate, saying everything that’s on your mind.

* IQ scores will be lower, maybe due to low intelligence at the preset or as a result of the disease, unknown why.

* Frontal lobe relative to the cerebral cortex. Most important is no areas of pickup (red, yellow) in frontal lobe.

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* Psychoanalysis (intrusive therapy, 3-5 times per day for the rest of your life) is not used for schizophrenia.

* Supportive psychotherapy (least intrusive, won’t ask about parents/dreams/etc., asks patient how they’re doing, did they get a job, how to fill out an application) is the classic therapy used for schizophrenics.

* Sick patients get least intrusive therapy (supportive psychotherapy) and well/healthy patients get psychoanalysis, where you sit with the therapist and basically free associate, saying everything that’s on your mind.

* DDX includes substance-induced (psychostimulants, hallucinogens, alcohol hallucinosis, barbiturate withdrawal, do a urine drug screen to rule out), epilepsy (temporal lobe), and other psychotic disorders (schizoaffective, schizophriniform, brief reactive psychosis, delusional disorder).

* Cocaine and amphetamine use dopaminergic tracts, thus give paranoia, hyper-vigilance, etc. Cocaine will stay in the body for about two days.

* Malingered and factitious disorder, assess whether the patient is in control of the symptoms and whether there is an obvious gain. Mood disorders, look at duration of mood symptoms, these tend to be brief in schizophrenia.

* Medical causes include HIV, steroids, tumors, CVAs.

* Personality disorders, look at duration of symptoms as well as patient’s level of functioning.

* Schizotypal has illusions, magical thinking, odd beliefs. The difference is schizotypal is functioning.

* Borderline personality disorder can have short-lived psychotic episodes with stress.

* Schizophrenia types: paranoid, disorganized, catatonic, residual, and undifferentiated.

* A 24yo man is brought to the ED by his parents after they found him covering the windows with aluminum foil because “they” were after his ideas. When asked who “they” are, he looks up at the sky and points to a faraway planet. This is schizophrenia, paranoid type. Themes are of grandeur or persecution.

* Paranoid type is most common, latest age of onset, better prognosis.

* A 15yo boy while at a summer camp is taken to a nearby hospital after counselors notice a quick deterioration in his behavior. His roommates noticed him talking to himself as well as exhibiting bizarre behavior such as grimacing and laughing inappropriately. This is schizophrenia, disorganized type.

* Disorganized type will be “strange” in all aspects, inappropriate affect, disorganized speech, poor contact with reality, marked regression to primitive disinhibited behavior (howling at moon, walking around naked, masturbating in public). Tend to be younger than 25yo, thus worst prognoses.

* While working in a psychiatric unit, you notice a 43yo female who has been hospitalized for many years due to mental illness. While on the ward, she remains mute and does not respond to questions. While in groups, she stares at the wall and stays in a fixed position until the group ends. You learn she was hospitalized many years ago because she believed others were reading her mind and sending her messages. This is schizophrenia, catatonic type.

* Catatonic type has psychomotor disturbances, ranging from severe retardation to excitation. There is extreme negativism, peculiarities of voluntary movements, and commonly mutism.

* Term “waxy flexibility” is for catatonic patients who you can move into positions and they will stay that way.

* “Tasmanian devil” is similar to catatonic type, comes into room and swirls around then falls over.

* A psychiatrist evaluates a 19yo male after the young man complains to his friends of hearing voices that ask him questions and talk to him. When asked what the voices talk to him about, he is not sure, but he knows that the voices are coming from outside his head and are not heard by others. He also presents with loose associations and frequent derailment. This is schizophrenia, undifferentiated type. Patient meets schizophrenia criteria but does not meet criteria for a specific type; meaning no psychomotor disturbances, no thoughts of grandeur, no bizarre thoughts.

* A 50yo homeless man is taken to the hospital after he was hit by a motor vehicle. Staff questions him and notes that his thoughts are illogical. He appears to have poor grooming, emotional blunting, and loose associations. This is schizophrenia, undifferentiated type. Patient meets schizophrenia criteria but does not meet criteria for a specific type; meaning no psychomotor disturbances, no thoughts of grandeur, no bizarre thoughts.
schizophrenia, residual type. There is an absence of prominent delusions, hallucinations, disorganized speech/behavior, or catatonic behavior. Will not have positive symptoms.

* Also called “burned out” schizophrenia, seen in older patients. Hallmark is negative symptoms only.

**Other Psychotic Disorders**

* Mrs. Jones is evaluated at a nearby clinic after she was noticed acting inappropriately at work. According to her coworkers, she began to act strangely 3 months ago. She began wearing a hard hat to work and when asked why, she replied, “I will not let you read my mind.” She also believed that others were talking about her and routinely asked them to stop. On several occasions, she had to be escorted out of the room because she started to argue with others whom she believed were controlling her mind. Answer is schizophreniform disorder (less than 6 months).

* Schizophreniform involves hallucinations (usually auditory), delusions, disorganized speech, negative symptoms, social and occupational dysfunction, and most importantly is lasting less than 6 months (better prognosis).

* Schizophreniform risk factors include affective symptoms. Suicide is a risk.

* Treatment involves determining if the patient is safe, to themselves and to others.

* Use antipsychotic medications for 3-6 months and individual psychotherapy.

* A 25yo female is found walking nude in the shopping mall. When asked why, she replies, “I am making it easy for others to have sex with me since I know they all want me.” She states she heard a voice telling her she was irresistible. When she speaks, she cannot focus on one topic at a time and frequently jumps from one topic to another. Her mood is described as euphoric and her affect labile. Answer is schizoaffective disorder.

* Symptoms include mood disorder and schizophrenia. Sometimes called a “wastebasket diagnosis.”

* Prognosis: major depression > schizoaffective > schizophrenia

* Treatment for schizoaffective disorder involves antipsychotics (first) and antidepressants (second).

* Mr. Smith has been married for approximately 10 years and during most of those years, he believed his wife was trying to poison him and get his money. He frequently complains of stomach pains, which he believes are due to the poison in the food. His thoughts are logical and coherent. He denies any hallucinations. His wife, an independently wealthy woman, does not understand her husband’s logic since she has more money than he does. This is delusional disorder. These patients do not have impairment in level of functioning.

* Delusional disorder types include erotomania, jealous, grandiose, somatic, mixed, persecutory, unspecific.

* Erotophobia type is the one that makes the news, such as the guy who jumped over Madonna’s fence because he thought he was her boyfriend, or a girl named Billy Jean who thought Michael Jackson wrote that song for her, or the woman who broke into Brad Pitt’s house and was found wearing her sneakers and sweatpants then at the trial when being taken away said “Don’t worry Brad, I know you’ll be waiting for me when I get out.”

* Most common type of delusional disorder is persecutory. Erotomania is most dangerous if stalker.

* Delusional disorder seen mostly in women, married, employed, around age 40, associated with recent immigration and with low SES.

* If medical, condition in either limbic system or basal ganglia.

* Treatment is to rule out medical problems or hospitalize if they are making threats. These are difficult to treat.

* Pharmacotherapy and individual psychotherapy to gently confront the patient’s delusions.

* A 35yo female Chinese immigrant is brought in by neighbors after she was found wandering in the streets yelling out someone’s name. She appears disheveled and grossly disorganized. You learn that she arrived in the U.S. several days ago and upon her arrival, witnessed the death of her 3yo son. While in the waiting room, she appears to be responding to internal stimuli. This is brief psychotic disorder. Symptoms last 1 day but less than 30 days.

* Brief psychotic disorder has hallucinations, delusions, disorganized speech, grossly disorganized behavior.

* Brief psychotic < 1 month < schizoaffective < 6 months < schizophrenia

* Treatment for brief psychotic disorder is hospitalization and antipsychotics or benzodiazepines for agitation.

* A 23yo female was seen today after she complained that her neighbors were talking about her. According to the neighbors, her behavior started 3 weeks ago after she was involved in a car accident. Since then, she has been following the neighbors for several days and harassing them at work. She believes that the neighbors are putting poisons in her food and want to kill her. When asked why, she is unable to give a clear explanation but insists that what she is saying is true. She states that the voice in her head tells her it is true and that you should stop asking questions. While in the waiting room, you observe her to be dressed bizarrely and laughing inappropriately. Which of the following is most indicated in the management of this patient? Answer is risperidone, not haloperidol, clozapine, lorazepam, or fluphenazine diaconate. Patient has brief psychotic disorder. In the hospital, patients will get haloperidol because it works fast and comes in IM preparation, but the side effects are worse.

* If her symptoms do not improve within the next week, which of the following is she at greatest risk of developing. Answer is schizophreniform disorder, not schizophrenia (more than 6 months).
**Somatoform Disorders**

* A group of disorders characterized by the presentation of physical symptoms with no medical explanation(s). The symptoms are severe enough to interfere with the patient’s ability to function in social or occupational activities.
* These patients miss work, call in sick, get fired, don’t have many friends, won’t go out for fun because they are going to the hospital to get tests or procedures.
* Somatization disorder is a patient with multiple physical symptoms affecting multiple organs.
* Somatization disorder affects women more than men, inversely related to SES, usually begins by age 30, male relatives tend to have antisocial personality disorder, female relatives tend to have histrionic personality disorder.
* Need 8 symptoms, 4 pain, 2 GI symptoms, 1 pseudo-neurological, and 1 sexual. Basically they will have everything on a review of systems without you prompting them. Again, seen in lower SES.
* Patient will have a long, complicated medical history. Will likely have interpersonal and psychological problems.
* If you find nothing on the exam or with tests, they will think you’re a bad doctor and go elsewhere.
* Commonly associated with major depression, personality disorders, and drug disorders.
* Treatment involves having a single identified physician as the primary caretaker (minimize referrals). The answer in somatoform disorders is never telling the patient “there is absolutely nothing wrong with you” because you are never absolutely sure, don’t give false hope.
* Treatment also involves limiting visits, such as once a month, “regular office visits.”
* Treatment of choice is psychotherapy, not medications.
* DDx includes MS, myasthenia gravis, SLE, AIDS, thyroid.
* Conversion disorder is a disorder in which the individual experiences on or more neurologic symptoms that cannot be explained by any medical or neurologic disorder.
* Typically, these are patients who have experienced a stressor and will usually have symptoms involving either voluntary muscle or sensory control (hears bad news and becomes deaf, sees bad things and becomes blind).
* Example: woman slapped by husband and two hours later she cannot move her legs; conversion disorder.
* Associated with passive aggressive, histrionic, antisocial disorders.
* Voluntary muscle disorder is usually paralysis, could be weakness, tics, jerks. Pseudo-seizures may be seen.
* Primary gain: keeps internal conflicts outside patient’s awareness.
* Secondary gain: benefits received from being sick.
* La bella (“the beautiful”) indifference: patient seems unconcerned about impairment.
* Identification/modeling: patient usually models their behavior on someone who is important to them.
* Important note about conversion disorder, if the patient is blind, they will still not be injured due to their blindness; meaning they won’t walk into walls or trip on things. Unconsciously, they are convinced they are blind. These patients are not trying to lie to you, they are not trying to deceive you, they truly believe they are blind.
* Treatment is psychotherapy. Another option is amobarbital (Amytal) interview. “Truth serum.”
* DDx includes dementia, tumors, basal ganglia disease, optic neuritis, schizophrenia, factitious, malingering.
* Hypochondriasis is a disorder characterized by the patient’s belief that he/she has some specific disease.
* Somatization patient will bombard you with symptoms, hypochondriasis patient will look at big picture, “Doctor, I have blurry vision, I know I have a brain tumor.” Even if CT is negative, they’ll go elsewhere for the MRI/tests.
* Hypochondriasis seen mostly between ages 20 and 30, men and women equally affected.
* Symptoms include preoccupation with diseases despite reassurance, not delusional, lasts at least six months.
* Treatment is individual psychotherapy, or pharmacotherapy (SSRIs, TCAs, MAOIs).
* Giving patients placebos is not allowed; it is not considered ethical.
* DDx includes brain damage, anorexia, narcissistic personality disorder, OCD, schizophrenia, delusional disorder.
* Pain disorder is a disorder in which the presence of pain is the patient’s main complaint.
* Seen more frequently in women, 4th and 5th decades of life.
* Pain in one or more anatomic sites (headache, backache) and is distressing to the patient.
* Symptoms are not faked. As far as the patient is concerned, these are true symptoms.
* Tend to have long history of surgeries and medical admissions. Are preoccupied with pain. Many are depressed.
* Discussion of probably psychological origin of the pain with the patient early in the treatment, antidepressants, biofeedback, nerve blocking, hypnosis, individual psychotherapy (best).
* Body Dysmorphic disorder is a patient who believes some part of their body is misshapen, abnormal, or defective.
* These patients end up in plastic surgery many times. Some plastic surgeons will have a patient fill out questionnaires, since no matter what is done the patient will come back thinking there is something wrong with them which leads to malpractice lawsuits.
* Body Dysmorphic disorder is linked to serotonin, so treatment is SSRI's and individual psychotherapy.
* Symptom production means the patient knows where the symptoms are coming from.
* Symptom motivation means the patient knows what is driving the symptoms forward.
* Patients with somatoform disorders do not know they are the cause of their problems; symptoms are unconscious. So there is no conscious symptom production or symptoms motivation.

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**Factitious & Malingering Disorders**

* Factitious disorder is a disorder characterized by the conscious production of signs and symptoms of both medical and mental disorders. It used to be called Munchausen disease.
* A 2yo girl is hospitalized after the mother complained she had multiple episodes of apnea in the middle of the night. The mother was given an apnea monitor to take home and when she returned there were numerous episodes registering on the monitor. In the hospital, there were no episodes registering on the monitor. However, shortly after her mother’s visit, there were numerous episodes recorded on the monitor. This is factitious disorder by proxy.
* These patients will do things like sticking their finger to put blood in their urine.
* Goal of patients with factitious disorder is to be in the hospital and will do anything possible to be admitted.
* These patients will do horrible things, put foreign objects anywhere, swallow ground glass, inject themselves with insulin, give themselves infections, and so on.
* Seen more commonly in men and tend to be hospital and health care workers. History reveals childhood abuse.
* May have a gridiron abdomen from the multiple surgeries. Typically demand treatment in the hospital.
* All tests return negative, patients tend to accuse doctors and threaten litigation.
* Become angry when confronted (i.e. don’t confront these patients).
* Treatment is management and must be aware of countertransference.
* DDx includes other somatoform disorders, antisocial personality, histrionic personality disorder, schizophrenia, drug use, malingering, and Ganser syndrome (near miss answers, “the sky is red,” “cats have 5 legs”).
* Factitious disorder (Munchausen) by proxy are sometimes found out when hospitals have hidden cameras in the patient’s room. Well-known case of a mother injecting fecal matter into her child’s IV.
* In factitious disorder, symptom production is conscious but symptom motivation is unconscious.
* Malingering is characterized by the conscious production of signs and symptoms for an obvious gain.
* In malingering disorder, both symptom production and motivation are conscious.
* Gain might be money, such as claiming whiplash in a minor crash to sue insurance company or get disability.
* Another gain is shelter and food (hospital), patient claims chest pain, hearing voices, wanting to kill self.
* Risk factors are men in prison, factory, and military settings.
* Most express subjective symptoms, tend to complain a lot, tend to exaggerate the complaints.
* Are preoccupied with the rewards instead of getting rid of the symptoms.
* Important note, one must avoid confronting the patient. Allow the physician-patient relationship to work.
* A 45yo female presents to your office and demands to be seen immediately. She schedules appointments to see you on a regular basis as well as irregularly. She routinely goes to the Emergency Department when she knows you are in the hospital. She calls your service every night and demands you call her at home. Her frequent complaints include headache, shortness of breath, double vision, burning on urination, weakness in her arms and legs, tingling in her fingers, and palpitations. All of her medical workup has been negative so far. Which of the following would be the next step in the management of this patient? Answer is somatization disorder. Answer is schedule regular office visits, not a trial of lorazepam, not tell the patient nothing is wrong with her, and not confront the patient.

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**Impulse Control Disorders**

* Impulse control disorders are a group of disorders in which patients are unable to resist an impulse.
* Both impulses and compulsions are meant to reduce anxiety. Main difference is how we feel about ourselves once we engage in the act. Impulses are related to serotonin, thus these disorders may involve violence.
* Impulses are ego-syntonic; “I made a mistake, big deal, I’ll try again tomorrow.” Compulsions are ego-dystonic; meaning you feel awful that you had to come back home to check if the stove was left on or awful that you have to wash your hands with bleach.
* Intermittent explosive disorder is characterized by discrete episodes of failure to resist aggressive impulses that result in serious assaultive acts or destruction of property.
* The police recently arrested a 24yo psychiatric inpatient after he beat up another patient, causing severe injury to the other patient’s head and neck area, and requiring more than 100 stitches. When asked why the man assaulted the other patient he replied, “he took my potato chips.” This is intermittent explosive disorder.
* In this disorder, the act is out of proportion in regard to the stressor.
* Affects men > women, may be genetically linked, history may include seizures/head trauma, and low levels of 5-HIAA, limbic system or testosterone abnormalities.
* Neurological exam may show soft signs, EEG tends to be normal, psychological test may be normal, may have poor work history, and problems with marriage and law.
* Treatment includes anticonvulsants, antipsychotics, SSRIs, and beta-blockers (for chronic violence, large dose).
* Psychotherapy should be done in a group setting. DDx includes epilepsy (episodes of violence).
* Kleptomania is a disorder characterized by the recurrent failure to resist impulses to steal objects that the patient does not need. Key point is that the patient does not need the objects.
* A 22yo woman was recently seen at her college graduation hoarding food in her purse and briefcase. When asked why she replied, “I might be hungry later.” She appeared to be of average height and weight but with poor dentition.

**Study Notes – Psychiatry**

- 25yo woman has a history of over 20 arrests for stealing small items. She comes from a wealthy family and her parents do not understand her behavior. At home she has numerous salt and pepper shakers, napkin rings, ashtrays, and more. This is kleptomania, an ego-syntonic disorder.
- More common in women, symptoms may be linked to stress, may be associated with mood disorders, OCD, brain disease, mental retardation, and eating disorders. Up to 1/4 of patients with bulimia nervosa have kleptomania.
- Treatment is insight-oriented psychotherapy, behavioral therapy, systemic desensitization, pharmacotherapy.
- Systematic desensitization involves replacing anxiety with relaxation, going from least anxiety to most anxiety.
- When patient has the urge to steal something, they can practice relaxation techniques.
- Systematic desensitization is the therapy of choice for phobias. Patient gives a hierarchy of fear or anxiety, then practices relaxation techniques to make it through each of the levels until all levels are mastered.
- DDx for kleptomania includes antisocial personality disorder, malingering, mania, schizophrenia.
- Pyromania is a disorder characterized by deliberate fire-setting on more than one occasion.
- A 19yo mentally retarded boy is arrested after he is found setting the neighbor’s garbage cans on fire. Neighbors have observed him in the past starting fires in his own backyard, staring at them for hours, and watching them burn.
- In arson, fire is set for monetary gain (e.g. torching business for insurance claim). In pyromania, fire is set to relieve anxiety or get pleasure.
- Risk factors for pyromania are men > women, mild retardation, history of alcohol use.
- Patients may set a little fire, set off the alarm, and watch the fire trucks come. This is ego-syntonic (no remorse). Tend to show resentment toward authority figures/parents. Many become sexually aroused by fire.
- This disorder is very difficult to treat; anything that is gratifying, people do not want to get rid of it.
- Treatment may involve putting patient in prison (and hoping they don’t set the prison on fire).
- DDx includes brain dysfunction, antisocial personality disorder, conduct disorder, mania, schizophrenia.
- Pathologic gambling is a disorder characterized by persistent and recurrent gambling behavior that includes a preoccupation with gambling, a need to gamble with more money, attempts to stop gambling and/or to win back losses, illegal acts to finance the gambling, or loss of relationships due to gambling.
- Mike is a 40yo married man, father of two, who was fired from his job due to embezzlement (theft) of company funds. He disappeared with the company payroll cash, when found he did not have the money on him and admitted to losing it while gambling. His wife left him two months ago and he has not seen his wife or children since then. This is very similar to alcoholism.
- Patient may attempt to make bets during simple conversation. “I’ll bet you $10 Joe will say…”
- More common in men, alcohol dependence, may be predisposed by death, may be predisposed by poor parenting, divorce, may be linked to mood disorders/OCD/ADHD/agoraphobia.
- These patients will appear overconfident (“I’ve got the sure win”) and may commit suicide after losing.
- Treatment is gamblers anonymous (GA) and pharmacotherapy.
- Trichotillomania is a disorder characterized by pulling one’s own hair.
- Mary, a 20yo woman, is rushed to the hospital after she complains of severe abdominal pain. She appears thin, withdrawn, and is missing lots of hair from her scalp and eyebrows. A physical exam reveals an intestinal obstruction (bezoar). This is trichotillomania. The obstruction is due to eating her hair (not all do this).
- This affects women more, associated with OCD, obsessive-compulsive personality disorder, depressive disorder.
- Most commonly affected area is scalp. Alopecia areata is loss of hair at same time, so clear and clean bald spot. With trichotillomania there will be irregular bald spots (short broken hairs along with long hairs).
- May have associated head banging, nail biting, and gnawing.
- Treatment is behavioral modification techniques, pharmacotherapy, and maybe dermatologist consult and wig.
- Pharmacotherapy includes SSRI since this disorder is linked to serotonin.
- DDx includes alopecia areata, tinea capitus, OCD, and factitious disorder.
- A 22yo woman was recently seen at her college graduation hoarding food in her purse and briefcase. When asked why she replied, “I might be hungry later.” She appeared to be of average height and weight but with poor dentition.
Personality Disorders
* A personality disorder is a maladaptive pattern of behavior. There are three clusters, Weird, Wild, Worried:
  * Cluster A: peculiar thought processes, inappropriate affect. “Weird” (odd)
  * Cluster B: mood lability, dissociated symptoms, preoccupation with rejection. “Wild” (dramatic, emotional)
  * Cluster C: Anxiety, preoccupation with criticism or rigidity. “Worried” (anxious, fearful)
* Personality disorders are ego-syntonic. These patients have been doing this their whole life and usually don’t think there is anything wrong, thus do not want to have treatment. These are pervasive and inflexible.
* Tend not to give personality disorder diagnosis among adolescents.
* You must be 18 or older to be given the antisocial personality disorder. Under 18, it is conduct disorder.
* Personality disorders are the product of the interaction of inborn temperament with subsequent developmental environment. Meaning, it is unknown if this is genetic or environmental, probably both.
* Risk factors include innate temperamental difficulties, adverse environmental events.
* More males tend to have antisocial and narcissistic personality disorders.
* More women tend to have borderline and histrionic personality disorders.
* Treatment is psychotherapy. Intensive and long-term psychodynamic and cognitive therapies are treatments of choice for most personality disorders. Use of mood stabilizers and antidepressants is sometimes useful for Cluster B personality disorders.

Personality Disorders: Cluster A
* Paranoid personality disorder involves distrust and suspiciousness. Individuals are mistrustful and suspicious of the motivations and actions of others and are often secretive and isolated. They are emotionally cold and odd. Associated features include social isolation, brief episodes of psychosis with persecutory delusions, and preexisting sensory impairment. Defense mechanism is projection.
* Paranoid personality disorder may be seen in immigrants and deft patients.
* Schizoid personality disorder involves detachment and emotionality. Individuals are emotionally distant. They are disinterested in others and indifferent to praise/criticism. Associated features include social drifting and dysphoria.
  * When differentiating paranoid personality disorder from schizophrenia, look at level of functioning, psychosis, and duration. Personality disorders are long term. Schizophrenia will have a start point (e.g. 3 years ago). Schizophrenics basically don’t function. Paranoid personality disorders function though the annoyance.
* Schizoid is basically a loner; goes to movies alone, goes to restaurant alone, goes on vacation alone.
* Schizoid is not afraid of being close, not afraid of rejection, just happy being alone. Thus, may have a job working at home or during night security, not a job involving seeing customers.
* Schizotypal personality disorder involves discomfort with social relationships, thought distortion, eccentricity. Individuals are socially isolated and uncomfortable with others.
  * Unlike schizoid personality disorder, they have peculiar patterns of thinking (“magical thinking”), including ideas of reference and persecution, odd preoccupations, odd speech and affect, and illusions.
  * Schizotypal, everything about them is bizarre, how they talk, how they look; been like this all their life and can function; however when they become stressed they will jump to the psychosis side and then back.

Personality Disorders: Cluster B
* Histrionic personality disorders is usually characterized by colorful, exaggerated behavior and excitable, shallow expressions of emotions, uses physical appearance to draw attention to self, sexually seductive, and is uncomfortable in situations where he or she is not the center of attention. (e.g. Marilyn Monroe, Charo “cuchi-cuchi”)
* Borderline personality disorder usually characterized by an unstable affect, mood swings, marked impulsivity, unstable relationships, recurrent suicidal behaviors, chronic feelings of emptiness or boredom, identity disturbance, and inappropriate anger. If stressed, may become psychotic. Main defense mechanism is splitting.
  * Borderline may use drugs, be very impulsive (alcoholism, gambling), may say “I don’t feel like I’m alive” and thus may make suicidal gestures (e.g. superficial cutting); want to feel physical pain to know that I’m here.
  * Borderline personality disorder patient usually have a history of child abuse. Have short-lived psychotic episodes.
  * Antisocial personality disorder usually characterized by continuous antisocial or criminal acts, inability to conform to social rules, impulsivity, disregard for the rights of others, aggressiveness, lack of remorse, and deceitfulness. These have occurred since the age of 15 (i.e. conduct disorder), and the individual is at least 18 years of age.
* Hallmark of this disorder is someone who is unable to conform themselves to the rules of society.
* Narcissistic personality disorder usually characterized by a sense of self-importance, grandiosity, and preoccupation with fantasies of success. This person believes he/she is special, requires excessive admiration, reacts with rage when criticized, lacks empathy, is envious of others, and is interpersonally exploitative.
* Narcissistic injury is when patient starts to get older, loses hair, gets a little belly, then is prone to depression. Actors are prone to this personality disorder, as are doctors and other respected professionals. Example is doctor who introduces himself at a party as “Doctor Jones” when everyone is using first names, hangs an extra stethoscope on their rearview mirror when driving, gets “MD” or “DO” on their driver’s license, and wears a giant caduceus chain around their neck outside their shirt to constantly advertise their status.

Personality Disorders: Cluster C

* Avoidant personality disorder is characterized by lack of social inhibition, feelings of inadequacy, and hypersensitivity to criticism. They shy away from work or social relationships because of fears of rejection that are based on feelings of inadequacy. They feel lonely and substandard, and are preoccupied with rejection.
* Cluster C tends to have social phobias.
* If you criticize someone and they get angry, probably diagnosis is narcissistic. If you criticize someone and they don’t care, probably diagnosis is schizoid. If you criticize someone and they freak out (sensitive), probably diagnosis is avoidant personality disorder.
* Dependent personality disorder is characterized by submissive and clinging behavior related to a need to be taken care of. Individuals are consumed with the need to be taken care of. They have clinging behavior and worry unrealistically about abandonment. They feel inadequate and helpless, and avoid disagreements with others. They usually focus dependency on a family member or spouse, and desperately seek a substitute should this person become unavailable.
* Associated features include self-doubt, excessive humility, poor independent functioning, mood disorders, anxiety disorders, adjustment disorders, and other personality disorders.
* These patients may get a promotion at work, but will decline the promotion so they can be in a position where they are constantly told what to do, thus not assuming a leadership role.
* Dependent personality disorder associated with abusive relationships; they don’t leave when others would.
* Obsessive-compulsive personality disorder (anal-retentive, anally fixated) involves individuals who are preoccupied with orderliness, perfectionism, and control. They are often consumed by the details of everything and lose their sense of overall goals. They are strict and perfectionistic, overconscientious, and inflexible. They may be obsessed with work and productivity, and are hesitant to delegate tasks to others.
* Other traits include being miserly and unable to give up possessions. This personality disorder should not be confused with OCD, a separate disorder. Associated features include indecisiveness, dysphoria (mood down), anger, social inhibition, and difficult interpersonal relationships.
* People with OCD do not function well. People with obsessive-compulsive personality disorder are able to function. In OCD, there is a relatively normal period then the problem.
* Personality disorders are treated with psychotherapy. OCD would be treated with pharmacotherapy.

Sleep Stages

* Two major stages of sleep are rapid eye movement (REM) and non-rapid eye movement (NREM).
* Mnemonic: at night, BATS Drink Blood: Beta, Alpha, Theta, Sleep spindles, Delta, Beta.
* In NREM, there is a slowing of the EEG rhythms, high muscle tone, an absence of eye movements, and thought-like mental activity. The brain is inactive, while the body is active.
* NREM has 4 stages (stages 1-4).
* NREM Stage 1: Theta wave, disappearance of alpha. Alpha is a “drowsy wave.” 5% of total sleep time.
* NREM Stage 2: Sleep spindles and K complexes. 45% of total sleep time; the longest of all sleep stages.
* NREM Stage 3: Delta wave, a slow wave. 12% of total sleep time.
* NREM Stage 4: More delta wave, 50% of this stage is delta. 13% of total sleep time.
* In REM, there is an aroused EEG pattern, sexual arousal (erections), saccadic eye movements, generalized muscular atony (except middle-ear and eye muscles), dreams, and the brain is active with the body being inactive.
* To test for impotence, one could do a penile nocturnal tumescence test; expect tumescence during REM.
* REM has a “sawtooth wave.” 25% of total sleep time.
* Stages 3 and 4 has delta sleep, so it may be called “delta sleep” or “slow wave sleep” or “deep sleep.” It will be the most difficult to wake someone who is in stages 3 and 4. Stages 3 and 4 tend to disappear in the elderly.
* REM is the easiest to arouse. Stage 2 is the longest. Waking up in the morning occurs out of either REM or stage 2; you can differentiate by dreams. If you wake up and remember a dream, you woke up from REM. If you wake up and don’t remember a dream, you were in stage 2.

* REM gets longer and longer as night progresses. The first REM will be about 10-15 minutes and by the end of the night REM will last 20-45 minutes. So there is more REM in the 2nd half of the night.

* REM latency is the period lasting from the moment you fall asleep to the first REM period. It lasts about 90 minutes in most individuals. However, several disorders will shorten REM latency; these disorders include depression (about 60 minutes) and narcolepsy (about 10 minutes).

* Sleep latency is the time needed before you actually fall asleep. Typically less than 15 minutes in most individuals; however it may be abnormal in many disorders such as insomnia.

* From infancy to old age, total sleep time decreases; infant may sleep 16 hours/day, adolescent 8-10 hours/day.

* REM percentage decreases with age. NREM decreases as well; basically everything decreases in the elderly.

* Mnemonic: SAND, (“sand man”), for neurotransmitters of sleep.

* Serotonin increases during sleep and initiates sleep.

* Acetylcholine increases during sleep and is linked to REM sleep.

* Norepinephrine decreases during sleep and is linked to REM sleep.

* Dopamine increases during sleep and is linked to arousal and wakefulness.

* Tryptophan is a precursor to serotonin. It increases total sleep time. Turkey and milk have tryptophan.

* Dopamine agonists (e.g. bromocriptine) will produce arousal. Dopamine antagonists (e.g. haloperidol) will decrease arousal (produce sleep).

* Benzodiazepines suppress stage 4 and, when used chronically, increase sleep latency. This is why benzodiazepines should not be given for more than 2 weeks. In reality, these people may be on the drug chronically.

* Alcohol (and barbiturate) intoxication suppresses REM. Chronic alcoholism will constantly suppress REM.

* Barbiturate (and alcohol) withdrawal causes REM rebound.

* Major depression shortens REM latency, increases REM time, suppresses the delta wave (stages 3 and 4), causes multiple awakenings, and causes early morning awakening.

* If you haven’t slept in a long time and are very tired, you might have a dream as soon as you fall asleep. Your body is trying to make up for the lost REM time. REM and stage 4 are very important, so if we are sleep deprived your brain will cause more of those stages.

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**Sleep Architecture**

* Top of chart (shown) is awake or lightest sleep.

* Bottom of chart is deepest sleep, delta, stages 3 and 4.

* Each of the shaded blocks are REM periods.

* From awake to stage 1 is sleep latency about 15 minutes.

* From stage 1 to first REM is REM latency, about 90 minutes.

* As shown, there is more REM later in the night.

* Stages 3 and 4 decrease as the night progresses.

* In a patient with insomnia, the change we would expect on the sleep architecture chart is an increased sleep latency. Thus, the very first part (the awake portion) will be increased.

* In a patient with depression, the change we would expect on the sleep architecture chart is a decreased REM latency, a disappearance of the delta portions of the graph, more awakenings, and less than 8 hours of sleep.

* In a patient with narcolepsy, we would expect to see a shift of the REM latency way to the left. Meaning, the patient goes into REM within 10 minutes so the first REM cycle will be near the beginning.

* In alcohol or barbiturate intoxication, we would expect to see few (if any) REM periods.

* In alcohol or barbiturate withdrawal, we would expect to see many REM periods.

* In benzodiazepine withdrawal after chronic use, we would see insomnia and thus increased sleep latency.

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**Sleep Disorders**

* A 35yo man was recently hospitalized for the 10th time after he crashed his car into a post. When questioned, he did not remember the cause of the accident and had just had his license suspended. His friends reported occasions when he fell asleep during dinner and during conversations with him. This is narcolepsy.

* The question may not be as straightforward. For example, it could say the man crashed his car after leaving a bar and the police noted alcohol on his breath. His license has been suspended. His friends report he has been fired from...
numerous jobs because of falling asleep on the job. Upon awakening, the patient feels refreshed. The note about feeling refreshed is the clue that this is narcolepsy and not alcoholism.

* Narcolepsy is a disorder characterized by excessive daytime sleepiness and abnormalities of REM sleep for a period of greater than 3 months. REM sleep occurs in less than 10 minutes. Patients feel refreshed upon awakening.
* These people can fall asleep at any time. They will therefore have poor work history and may have a revoked drivers license. The most common symptom is the “sleep attacks,” seen in 80% of patients.
* Cataplexy is the pathognomonic sign, consisting of a sudden loss of muscle tone, which may have been precipitated by a loud noise or intense emotion. If short episode, the patient remains awake.
* Cataplexy is differentiated from syncope because syncope involves a loss of consciousness on top of the muscle tone loss. Cataplexy does not involve a loss of consciousness.

* Hypnagogic and hypnopompic hallucinations are associated with narcolepsy.
* HypnaGOGic occur when the patient GOes to sleep (most common), hypnopompic occur on awakening.
* Sleep paralysis most often occurs during awakening, where the patient is awake but unable to move.
* Patients report falling asleep quickly at night.
* A common hypnopompic hallucination is dreaming that you fell off a building then waking up startled.
* Hypnopompic speech refers to waking up and babbling nonsensically for a short period.
* Treatment involves forced naps at a regular time of day. It may also include medications; psychostimulants are preferred. Cataplexy can be treated with antidepressants; TCAs are preferred.
* TCAs are REM suppressants. Cataplexy is the beginning of REM.

* An overweight man reports having difficulties in his marriage because of his snoring at night. During the day, he reports feeling tired and waking up with a dry mouth and headache. This is sleep apnea.

* Sleep apnea is cessation of breathing for more than 10 seconds occurring at night. This can be lethal. Considered pathological if patient has 5 or more episodes an hour or more than 30 episodes during the night. In severe cases, there may be more than 300 episodes in a night.
* Usually seen in obese, middle-aged men, sometimes associated with depression, mood changes, and daytime sleepiness. Spouses typically complain of partner’s snoring and of partner’s restlessness during the night.
* Obstructive sleep apnea is muscle atonia in the oropharynx; nasal, tongue, or tonsil obstruction.
* Central sleep apnea is lack of respiratory effort. Mixed is central that prolongs as the airway collapses.
* Treatment of sleep apnea is treating the underlying condition. For obstructive, weight reduction or surgery.
* Treatment for central sleep apnea is respiratory stimulants (medroxyprogesterone).
* Most patients receive continuous positive airway pressure (CPAP) device.
* While studying for an important exam, a second year medical student has been unable to sleep for the past several days. At night he lies awake and imagines himself doing poorly on the exam and failing medical school. During the day he is tired and falls asleep during his classes. This is insomnia.

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* Sensation of not falling asleep is the most common complaint in the elderly.
* 70yo patient complains he sleeps 7pm to 3am every day. What should you tell this patient? Answer is to adjust the schedule, so tell the patient to go to bed later as 8 hours is normal. Answer is not tell the patient to work out at night, tell the patient to drink less coffee, give benzodiazepines, or sleep with the air conditioner on.
* Insomnia is a disorder characterized by difficulties in initiating or maintaining sleep.
* Most commonly prescribed medication for the elderly (since insomnia is most common) are benzodiazepines. However, elderly should not be given benzodiazepines because it increases confusion and disorientations.
* Most patients with insomnia have the insomnia due to something else, such as anxiety, depression, or worry.
* Most people who complain about insomnia do not actually have insomnia; they may just have sleep problems.
* Example: an elderly patient saying they have insomnia but when asked they say they wake up often in the middle of the night to urinate. So, you should really be looking at their prostate instead of giving benzodiazepines.
* Tell the patient to put a journal next to their bed and write down every time they wake up during the night or early in the morning. What you’ll find is most patients are actually sleeping through the night.
* Typically associated with some form of anxiety or anticipatory anxiety (e.g. before a big exam).

* If due to a psychiatric disorder (e.g. depression), seen more frequently in women.
* Other conditions include PTSD, OCD, and eating disorders. Treat the underlying disorder first.
* Predominant complaints in difficulty initiating or maintaining sleep, affects the patient’s level of functioning, and there is frequent yawning and tiredness during the day, sometimes with eating disorders.
* Treatment is to consider good sleep hygiene techniques (e.g. bed/wake at same time), behavioral modification techniques such as stimulus control, and medications such as benzodiazepines (for a short period of time).
* Treatment of choice for insomnia is stimulus control; if you’re lying in bed and can’t fall asleep, get out of bed. Don’t read in bed. Go to living room to read. If you get drowsy in the living room, go to bedroom. It will take some time for this to work, but once your brain knows the bed is for sleeping, you will fall asleep when you lie in bed.

**Parasomnias**
* Nightmare is a “bad dream,” occurring during REM. We can have memory of our dreams. They increase during times of stress and about 50% of population tends to have nightmares.
* Treatment could involve suppressing REM, such as the TCAs. Alcohol does too, but not a treatment.
* Night terror is seen commonly in young boys. They wake up in the middle of the night, scream, and go back to bed with no memory of the event in the morning. These occur in stages 3 and 4.
* Treatment for night terrors is rarely required. Benzodiazepines could be used.
* Sleep talking is seen in children, involves saying a few words, and treatment is rarely required.
* Sleep walking (somnambulism) occurs in stages 3 and 4 (NREM). Patient goes to bed in own bed then gets up during stages 3 or 4 (unknowingly) and may do some activity, such as rearrange living room or cook food, then wakes up in another location such as living room or someone else’s bed.
* If you wake up a sleep walker, they will be disoriented and confused. Myth is not to wake up sleep walker because they become violent. This is untrue. However, some people can commit violent acts while sleep walking.
* Treatment is to suppress REM, such as benzodiazepines.
* An overweight male of average height presents to his doctor’s office complaining of feeling tired during the day. He has missed several days of work due to this problem. Which of the following is the most likely diagnosis. Answer is sleep apnea.
* Which of the following is the most likely explanation for a young man suddenly falling down but not losing consciousness? Answer is cataplexy, likely due to narcolepsy.
* What is the treatment of choice for insomnia? Answer is behavioral techniques, such as stimulus control.

**Human Sexuality**
* Sexual identity is based on the person’s sexual characteristics, such as external and internal genitalia, hormonal characteristics, and secondary sexual characteristics.
* Gender identity is based on the person’s sense of maleness or femaleness, established by the age of 3, and is currently believed to have been determined by parents. “Gender has nothing to do with the package we came with.”
* Gender role is based on the external behavioral patterns that reflect the person’s inner sense of gender identity.
* Sexual orientation is based on the person’s choice of a love object. It may be heterosexual (opposite sex), homosexual (same sex), bisexual (both sexes), or asexual (no sex).
* Masturbation is a normal precursor or object-related sexual behavior. All men and women masturbate.
* Genital self-stimulation begins at the age of 15 to 19 months; no sexual fantasies are present then.
* As puberty arrives, sexual interest peaks and masturbation increases.
* Males learn to masturbate earlier than females and tend to do it more often. Adolescents will have sexual fantasies while masturbating. Commonly seen among adolescents, married couples, and the elderly.
* Masturbation is considered excessive only if it interferes with daily functioning.
* Homosexuality was removed from the DSM in 1980 as a mental illness.
* It is considered a variant of human sexuality, not a pathologic disorder. Most homosexuals report feelings toward same sex individuals since adolescence. Freud believed it was an arrest of psychosexual development.
* Kinsey Scale is a 0-6 scale with homosexuality on one (0) and heterosexuality on the other end (6).
* 11.6% of white males aged 20-35 were given a rating of 3 for this period of their lives.
* 7% of single females aged 20-35 and 4% of previously married females aged 20-35 were given a rating of 3 for this period of their lives. 2-6% of females, aged 20-35, were given a rating of 5 and 1-3% of unmarried females aged 20-35 were rated as 6.
* Recent studies indicate homosexuality may be due to genetic and biologic causes.
* Greater incidence among monozygotic versus dizygotic twins. No difference in the sexual practices from those exhibited by heterosexuals. Male-male relationships may be less stable than female-female relationships.
* Equal incidence of mental illness and pedophilia when compared with heterosexuals.
* Exceptions (normal during adolescence) are visual comparisons of genitalia, mutual masturbation, group exhibitionism, handholding, and kissing. If someone had a thought or a homosexual experience, it doesn’t mean they are homosexual. Also, prisoners will have sex with same-sex partners but are not homosexual (“down low”).
* Only way to tell if child will be homosexual is to get information about the child’s fantasy life, meaning the child only thinks about kissing or sexual activities with members of the same sex.
**Sexual Dysfunction**

* Sexual dysfunction is a group of disorders related to a particular phase of the sexual response cycle. These disorders can be psychological, biological, or both, and include desire, arousal, orgasm, and pain.
* Disorders of the desire stage are the hypoactive sexual desire disorder and the sexual aversion disorder.
  * Hypoactive sexual desire disorder is someone who has sex once in a while but it is not something they want to do. Example is a woman who is married for 10 years, has had sex 10 times, has three kids. Will not initiate sex but may be willing when pressured by her spouse.
  * Sexual aversion disorder is someone who is completely repulsed by sex. Example is a man married for 10 years and has never had sex. Some men believe the vagina has teeth (vagina dentata), a reason for sexual aversion.
    * These disorders are triggered by religion, upbringing, guilty feelings about sex, etc.
* Treatment is sexual therapy. Sexual therapy should almost always be couples therapy.
* Sexual arousal disorders include female sexual arousal disorder and impotence.
* Female sexual arousal disorder is women who have problems getting adequate lubrication. Impotence is inability in attaining or maintaining an adequate erection until completion of the sexual act.
* Impotence is now called erectile dysfunction (ED).
  * Want to know if this impotence is organic or psychologic, thus you test for erections at night during REM. If organic, there will be no erections at night.
  * Testing is nocturnal penile tumescence test, which tests for nocturnal erections via a gauge connected to the penis that measures stretch, or the postage stamp test.
  * Postage stamp test is get a roll of stamps and adhere to penis; if roll has been broken then one can assume there was an erection during the night.
* Orgasmic disorders include the female orgasmic disorder and premature ejaculation. Female orgasmic disorder is a woman who cannot achieve orgasm. Treatment is teaching patient how to achieve orgasm, including anatomy, fantasizing, and use of toys such as a vibrator.
  * Premature ejaculation is male ejaculation before he wishes to do so, either as he enters the vagina or just before he enters the vagina. The most common cause is anxiety about the sexual experience.
  * Associated with men who are less experienced sexually and with men who have had the bulk of their sexual experiences with a prostitute or in non-romantic/hurried settings such as the back of a car.
  * Treatment is retraining the patient via the stop-and-go technique and/or the squeeze technique.
  * The stop-and-go technique is when the man is thrusting and when he is about to ejaculate, he stops. Then you start again, then stop, then start, then stop. What happens is that it will be longer and longer until ejaculation.
  * The squeeze technique is where the partner stimulates the man and when the man is about to ejaculate he squeezes the glands of the penis. Then the partner stimulates and the man squeezes, and so on.
* If pharmacotherapy is used, pick one with delayed ejaculation. These are the SSRIs or clomipramine.
  * Pain disorders include dyspareunia and vaginismus. Dyspareunia is pain during intercourse.
  * If pain during intercourse is due to medical reasons or lack of lubrication, it is not called dyspareunia; because then it would be due to organic causes, not psychiatric.
  * Causes of dyspareunia include upbringing, guilty feelings about sex, anxiety about sex, religion, etc.
  * Vaginismus is involuntary constriction of the outer third of the vagina, which eventually interferes with the act of sex. Causes include guilty feelings about sex, high SES women, previous rape, previous abuse, etc.
  * Treatment of choice for vaginismus is use of dilators and couples therapy.

**Paraphilias**

* Paraphilias are a group of disorders that are recurrent and sexually arousing. They usually focus on humiliation and/or suffering, the use of nonliving objects, and involve non-consenting partners. Typically occur for more than 6 months and are usually distressing and cause impairment in the patient’s level of functioning (e.g. quitting work).
  * A 20yo man was caught outside his neighbor’s window looking in as she disrobed. Before his arrest, he would wander the subway station and rub himself up against women as well as expose himself to women who were nearby. All of these activities produce great pleasure to the patient. This is common among paraphilias.
  * A good majority of the patient who get treatment for the paraphilias are forced into treatment (e.g. as part of a prison sentence), not because they sought treatment willingly.
  * It is important to note that engaging in these activities along with normal sexual practices is not considered a major psychiatric problem. However, when one foregoes all other sexual acts and the only thing that works for arousal is one of these paraphilias (humiliation, non-living objects, non-consenting partners) then there is a problem.
* Paraphilias more commonly affect men, peak between ages 15 and 25, there tends to be other paraphilias, and the frequency tends to decrease with age. Most have a paraphilia before age 18.
* As mentioned, there may be multiple paraphilias so if the patient reveals one then inquire about others.
* Sexual activity is usually ritualistic, the fantasy is typically fixed and shows little variation, and there are intense urges to carry out the fantasy.
* Treatment involves individual psychotherapy to help the patient understand the reason why the paraphilia developed. The patient also becomes aware of daily activities and how they are related to paraphilic behavior.
* Exhibitionism is a recurrent urge to expose oneself to strangers (e.g. man opening trench coat, “flasher”).
* Exhibitionists tend to be men; cynics will say that women have “a way out” such as working at a strip club.
* Fetishism involves the use of non-living objects usually associated with the human body (e.g. panties, shoes).
* It is a fetish only if the object must be present for the person to become aroused or achieve orgasm.
* Frotteurism is a recurrent urge or behavior involving touching or rubbing against a non-consenting partner.
* Example is guy on way to work and takes the subway, puts penis in a plastic bag, then rubs on unknowing women on the subway and achieves orgasm within seconds, repeats, then goes to work.
* Pedophilia is recurrent urges or arousal toward prepubescent children; the most common paraphilia.
* Pedophile is typically a male and there is typically an age limit. Example is a 16yo boy with a girl that is younger than 13yo; the pedophile must be at least 16yo and 5 years older than the prepubescent child. When an adult has sex with a girl under the age of 13, it is called statutory rape (i.e. prison sentence). The law enforcement definition differs, using pedophilia as someone accused of sexual abuse of a minor, which includes both prepubescent children and adolescent minors younger than the local age of consent.
* Voyeurism is recurrent urges or behaviors involving the act of observing an unsuspecting person who is engaging in a sexual activity, disrobing, using the toilet, etc. This is the earliest paraphilia to develop. “Peeping Tom.”
* Masochism is recurrent urges or behaviors involving the act of humiliation. Example is the person who likes to be bound, likes to be gagged, likes to be told to bark like a dog during sex.
* Sadism is recurrent urges or behaviors involving acts in which physical or psychological suffering of a victim is exciting to the patient. Example is the person who likes to tie up their sexual partner.
* Transvestic fetishism is recurrent urges or behaviors involving cross-dressing, usually found in heterosexual men. This is typically a man with gender identity as a man, usually chooses a female sexual partner, but likes dressing as a woman. Cynics say women have an out because society does not see it abnormal for them to wear a tie, suit, tuxedo.
* Typical transvestite is not the performer seen in movies or at clubs. Typically it is a normal looking guy who wears women’s panties under their clothes or goes home and puts on teddy lingerie.
* Paraphilias are treated with behavioral modification techniques and medications.
* Medications used are anti-androgens, given in shots. These reduce the urge/desire to have sex.
* Treatment also involves extensive behavioral therapy, such as aversive conditioning for pedophilia.
* Aversive conditioning would involve the pedophile seeing slides of naked children then receiving an electric shock. The electric shock is not used these days, but the idea is the paraphilia becomes painful, not pleasurable.
* Another treatment is masturbatory satiation, where the patient is made to masturbate so much that they lose the desire to masturbate afterwards.

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**Gender Identity Disorders**

* Disorders characterized by a persistent discomfort and sense of inappropriateness regarding the patient’s assigned sex. These patients are convinced they are trapped in the opposite sex’s body.
* Billy, a 5yo boy, was found in his mother’s bedroom wearing her clothes. He’s been observed going to the bathroom to urinate while sitting on the toilet while playing with dolls instead of his trucks and guns. He prefers wearing dresses and hates being a boy. This is gender identity disorder.
* Seen more frequently in men than women, cause is unknown, and many believe there are biological reasons such as hormones. Children prefer to have friend of the opposite sex.
* They are preoccupied with wearing the opposite gender’s closes, refuse to urinate sitting down (if girl) or standing up (if boy), and believe they were born with the wrong body.
* Routinely request medications or surgery to change their physical appearance. Women may bind their breasts, have mastectomies, take testosterone to deepen the voice. Men may have electrolysis to remove body hair and take estrogens to change the voice, and may have surgeries to remove the penis and create a vagina.
* Part of the treatment involves going to work as the opposite sex before sexual reassignment is performed.
* What is the treatment of choice for premature ejaculation? Answer is squeeze technique, or stop-and-go.
* Which of the following is the most common cause of erectile dysfunction due to a medical condition? Answer is diabetes, not alcohol, not cirrhosis, not myocardial infarction.
* Periodic impotence in a middle-aged man is most commonly caused by alcohol.
* Most common psychological cause of impotence is fear of failure.

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**Psychopharmacology: Antipsychotic Medication**

* Antipsychotic medication is used to treat manifestations of psychosis and other psychiatric disorders.
* The precise mechanism is unknown, however antipsychotic medication (APM) blocks several populations of dopamine (D2, D4) receptors in the brain.
* Some newer antipsychotic medications also block some serotonin receptors (5HT3), a property that may be associated with increased efficacy.
* Antipsychotics also variably blocks central and peripheral cholinergic, histaminic, and alpha-adrenergic receptors.
* Since these block muscarinic receptors, you get anticholinergic symptoms such as urinary retention, dry mouth, and blurred vision. Thus, pick the medication with the least side effects for the elderly population.
* Blocking of the histamine receptors leads to sedation and weight gain.
* Blocking of the alpha-receptors leads to hypotension, another reason to be careful in the elderly.
* Pure D2 antagonists are the typical antipsychotics. Include low-potency (chlorpromazine) and high-potency (haloperidol) older medication.
* D2-5HT2 antagonists include risperidone.
* Multi-receptor antagonists are clozapine (D4, D2, 5HT2) and olanzapine or quetiapine (D2, D4, 5HT2).
* Risperidone has D2 blockade so it can cause movement side effects (extrapyramidal symptoms).
* The multi-receptor drugs, which work on D4, have less movement side effects.
* Psychomotor agitation is an indication for high potency antipsychotics (haloperidol).
* Typically, haloperidol is used for the other antipsychotics in an emergency situation because it comes in an injectable form. So, it’s the only one that you can give as an IM shot in the butt and calm them down.
* APM are the treatment of choice for schizophrenia presenting with acute psychotic episodes and for prophylaxis against further episodes.
* APM used for other psychotic disorders; effective in treating psychoses and cognitive disorders due to general medical conditions and substance, delusional disorder, brief psychotic disorder, schizophreniform disorder, and other more rare psychotic disorders.
* APM used for mood disorders, useful for the treatment of agitation and psychosis during mood episodes.
* Lorazepam (benzodiazepines) is a common drug used in the Emergency Department for psychosis, but should be avoided in the elderly as it can add to the patient’s confusion.
* Adverse effects include sedation (histamine blockade), hypotension (alpha blockade with low potency APMs), and anticholinergic symptoms (dry mouth, blurred vision, urinary hesitancy, constipation, bradycardia, confusion).
* Other effects include endocrine (gynecomastia, galactorrhea, amenorrhea), dermal and ocular syndromes (photosensitivity, pigmentation, cataracts), cardiac conduction abnormalities (especially thioridazine), and agranulocytosis specifically with clozapine (1% of patients).
* Dopamine tracts are tuberoinfundibular tract, mesolimbic tract, and nigrostriatal tract.
* Blocking tuberoinfundibular tract increases prolactin, causing gynecomastia, galactorrhea, amenorrhea.
* Antipsychotic most likely to cause retinitis pigmentosa is thioridazine.
* Blocking mesolimbic tract reduces psychoses.
* Blocking nigrostriatal tract increases movement disorders, causing extrapyramidal symptoms (tremors, Parkinsonian side effects, akathisia).
* Clozapine blocks the mesolimbic tract selectively, thus no gynecomastia, galactorrhea, or amenorrhea. It will also not cause tremors or Parkinsonian side effects seen with nigrostriatal tract.
* Acute dystonia is the first thing that can occur, seen within hours to days of treatment.
* Acute dystonia presents with spasms of various muscle groups; can be dramatic and frightening to the patient. Can be a major contributing factor to noncompliance. Young men may be at higher risk.
* When dopamine is high, acetylcholine is low. When dopamine is low, acetylcholine is high.
* In Parkinson’s, patient has low dopamine thus high acetylcholine. This causes rigidity and stiffness; acetylcholine is found at neuromuscular junction.
* Thus, with an antipsychotic dopamine is dropped. Acetylcholine shoots up and the patient may be torticollis. They may get oculogyric crisis, where the patient’s eyes roll up and cannot be brought down (10% of patients).
* Treatment for these dystonic reactions is anticholinergic medications (benztropine, diphenhydramine, trihexyphenidyl, or amantadine).
* Most commonly used treatments are benztropine (Cogentin) and diphenhydramine (Benadryl) because they are available in injectable concentration (e.g. IM). This is important for patients who may have laryngeal spasm.
* Parkinsonism tends to be seen as slow volitional movement, increased muscle tone, and resting tremor. Key signs include decreased facial expression (mask-like facies), festinating gait, cogwheel rigidity, and pill-rolling tremor.

* Parkinsonism more commonly seen in elderly. DDx includes catatonic rigidity or apathy and withdrawal.

* Akathisia is generalized restlessness; patient cannot sit still. “Ants in pants.” “Thorazine shuffle.”

* Akathisia mistaken for anxiety or agitation. Treatment of choice is to lower dose or stop medication if needed.

* Extrapyramidal symptoms (EPS) can be treated with anticholinergic medications. Amantadine may exacerbate.

* Akathisia can be treated with propranolol, benzodiazepines, or antihistamines.

* Tardive dyskinesia (TD) is characterized by choreoathetosis and other involuntary movements. Movements often occur first in the tongue or fingers and later involve the trunk. Etiology may be a form of “chemical denervation hypersensitivity,” which is caused by chronic dopamine blockade in the basal ganglia.

* This is seen on typical APM such as haloperidol, fluphenazine, thioridazine, chlorpromazine.

* Seen when patient is on medications for a long time, meaning 3 to 6 months.

* Tardive dyskinesia is a chronic disorder and tends to be irreversible. Risk after 6 months. You see tongue protrusion, lip smacking, abnormal arm movements. The patient can stop the movements for a short time. Movements tend to disappear with sleep. Elderly and female patients are at higher risk.

* Treatment of TD is to stop antipsychotic and switch to newer one, e.g. atypical antipsychotics. Some new research is hinting that clozapine can reverse TD.

* Neuroleptic malignant syndrome (NMS) is fairly rare, potentially life threatening, and characterized by muscle rigidity, hyperthermia, autonomic instability, and delirium.

* NMS is usually associated with high doses of high-potency antipsychotic medications. CPK is usually diagnostic.

* CPK elevated into 1,000s.

* Treatment of choice is transfer patient to medicine (e.g. ICU), stop antipsychotic and give either dantrolene or bromocriptine.

* NMS is not a contraindication for restarting the drug at a lower dose, but most will switch to another drug.

* Older low-potency D2 medications (chlorpromazine) are highly sedating, cause more hypotension, cause more anticholinergic effects, have a low frequency of acute movement syndromes, and have few remaining indications.

* High-potency typical drug is haloperidol; typical low-potency is chlorpromazine.

* For 85yo agitated patient, give haloperidol because it has less anticholinergic effects.

* Potency of APM is directly related to extrapyramidal symptoms and inversely related to anticholinergic effects.

* So for example, haloperidol will have more EPS but less anticholinergic.

* For chlorpromazine, you get little EPS but more anticholinergic.

* Older high-potency D2 medications (haloperidol) are less sedating, less hypotension, less anticholinergic effects, higher frequency of acute movement syndromes, and remain useful for acute agitation (especially via IM route).

* Older high-potency D2 medications have depot (deaconate) route for haloperidol and fluphenazine.

* Fluphenazine lasts 2 weeks, haloperidol lasts 4 weeks; Treatment for schizoaffective patients.

* Make sure you give a test dose to these patients prior to giving the depot injection.

* Clozapine is the most effective antipsychotic for schizophrenia, but significant adverse effects make it a second-line medication. Serious adverse effects include seizures (5% or patients) and agranulocytosis (1% of patients).

* There is no incidence of movement disorders with clozapine.

* Drooling (can be significant), sedation, anticholinergic effect, and weight gain also are common.

* Patient needs weekly WBCs for first 6 months, then every two weeks. This is standard for the U.S.; in some countries they check monthly and other countries they never check. Patients here have to be in a national registry and are given medication week by week, getting the new pills when their WBC results comes back.

* Risperidone is a first choice medication for the treatment of schizophrenia, especially when sedation is not tolerable. It has minimal sedation and a small incidence of movement disorders in doses below 6mg.

* Risperidone works on D2 receptor, thus can cause tremors and akathesia. But less if dose below 6mg.

* Olanzapine, quetiapine, and ziprasidone are first choice medications for schizophrenia. There is no incidence of movement disorders but significant sedation and weight gain.

* Ziprasidone can cause prolongation of the QTc interval. Thus, avoid in patients with cardiac problems.

* Olanzapine and clozapine have been known to cause diabetes. The mechanism is unknown but may be do to significant weight gain. Blood sugars will drop down after drugs are stopped.

* Quetiapine was originally shown to be associated with cataracts; however the research was flawed because the doses were very high and given to beagle dogs, which are the most prone to getting cataracts. So, no cataract link.

* If a patient presents with schizophrenia, the guidelines say start atypical medications (e.g. olanzapine). Don’t worry about cost, HMOs, or other confounding factors. Just pay attention to the guidelines.
**Psychopharmacology: Antidepressant Medication**

* Antidepressant medications (ADs) are used to treat mood, adjustment, and psychotic disorders.
* Also used to treat various anxiety disorders, bulimia nervosa, disorders of impulse control, enuresis, chronic pain.
* 90% of patients with depression also have anxiety; AD meds work on same neurotransmitters.
* Amitriptyline (TCA) is especially useful for chronic pain; it increases endogenous opiates (pain threshold).
* TCAs are extremely dangerous when an overdose is ingested (QTc prolongation). Clinicians should generally prescribe in small quantities and only after determining the absence of suicidal intent.
* Treatment for TCA overdose is bicarbonate given in amps until QTc is no longer significantly prolonged.
* Thus, if patient coming in on TCA overdose must be connected to a cardiac monitor (or serial ECGs).
* The mechanism is currently believed to be an effect of the monoamine neurotransmission in the CNS through reuptake inhibition and modulation of receptor function.
* TCAs block the reuptake of norepinephrine, serotonin, and dopamine.
* TCAs also down-regulate beta-adrenergic receptors.
* MAOIs work by inhibiting enzymes (monoamine oxidase) that metabolize neurotransmitters.
* SSRIs block the reuptake of serotonin neurotransmitter.
* SSRIs, MAOIs, and TCAs all treat depression with the same efficacy.
* SSRIs are first line due to side effect profile, not because they work better.
* Blockade of alpha-adrenergic, histamine, and acetylcholine (muscarnic) especially seen in TCAs.
* So with TCAs, expect sedation, weight gain, dry mouth, blurry vision, urinary retention, hypotension.
* Worst TCA because of most side effects is amitriptyline. Don’t give to 80yo patient with mild dementia, glaucoma, and benign prostatic hypertrophy.
* Safest TCAs (used most frequently) are nortriptyline and desipramine.
* ADs used to treat depression, depressive episodes in other mood disorders (e.g. bipolar disorder), and anxiety disorders such as panic disorder, OCD, social phobia, generalized anxiety disorder.
* Overall efficacy for treatment of major depressive disorder is around 70%.
* Newer ADs should be considered first because of better safety profile.
* Difficult to predict which patient will respond to which antidepressant, so trials of several antidepressants may be necessary before an effective one is found.
* If patient is started on fluoxetine and has unwanted side effects. Answer is to switch to another AD.
* Individual antidepressants differ greatly in their side-effect profiles, and must be matched to patient preference and ability to tolerate. Older antidepressants are extremely dangerous when an overdose is ingested.
* When used to treat individuals with depressive symptoms, clinicians should generally prescribe in small quantities and only after determining the absence of suicidal intent.
* If no response to treatment after 4 to 6 weeks, or if patient cannot tolerate current AD, switch to another.
* Treatment response may be augmented with lithium or thyroxine.
* Treatment should continue for 6 months to 1 year after favorable response.
* If patient comes in on week 2 and says they don’t feel any better, answer is tell patient to wait.
* The most common cause of drug failure is the physician not giving the medication an adequate trial.
* Only switch medications if you’ve maximized the dose and maximized the time (or side effects).
* AD medications can cause sedation, hypotension, and anticholinergic effects.
* Sedation most severe with doxepin (Sinequan), amitriptyline (Elavil), and trazodone (Desyrel).
* Sedation least severe with desipramine (Norpramine), protriptyline (Vivactil), and SSRIs.
* Hypotension more severe with TCAs (amitriptyline worse, nortriptyline best), less severe with others.
* Anticholinergic effects most severe with amitriptyline and doxepin, none with most SSRIs (except paroxetine/Paxil) and trazodone. SSRIs shouldn’t because they only work on serotonin.
* Dextroepin and trazodone used often at night to help with sleep, given at night (qhs).
* TCAs tend to prolong the QTc interval. So, an ECG must be done prior to starting TCAs.
* Seizures more common with TCAs, maprotiline (Ludiomil) and bupropion (Wellbutrin), uncommon with SSRIs.
* All AD medications can lower the seizure threshold.
* Research was flawed with bupropion as it was tested in high doses on women with eating disorders, who are more likely to have seizures. So in reality, risk of seizure is not that much higher compared with the other ADs.
* Sexual dysfunction including anorgasmia and decreased libido with SSRIs, priapism with trazodone (Desyrel).
* Likely most common reason for stopping SSRI is anorgasmia, decreased libido, delayed ejaculation.
* SSRI with slightly less sexual dysfunction is citalopram (Celexa). Bupropion also has low incidence.
* SSRIs include fluoxetine (Prozac), paroxetine (Paxil), sertraline (Zoloft), fluvoxamine (Luvox), and citalopram.
SSRIs have reduced number of serious side effects and simple dosing schedules (once a day).
* Specific efficacy in OCD, panic disorder, and bulimia nervosa.
* Few cardiac side effects, anticholinergic effects, or hypotensive effect.
* “Just because a drug doesn’t have FDA approval for a specific indication (e.g. anxiety) doesn’t mean it won’t treat that. It works on the same neurotransmitters.”
* Significant incidence of agitation, appetite loss, nausea, vomiting, headache, diarrhea, and sexual dysfunction.
* If patient gets agitation, have them take it during the day. If patient gets sedation, have them take it at night.
* Trazodone (Desyrel) has marked sedation, minimal anticholinergic effects, often used to treat depressed patients who have severe insomnia.
* Trazodone is a heterocyclic antidepressant, basically an offshoot of the TCAs.
* Nefazodone (Serzone) has sedation similar to trazodone but less sexual dysfunction than SSRIs or trazodone.
* Bupropion (Wellbutrin) is activating, has minimal hypotension, cardiac effects, or sexual dysfunction, but more likely to cause seizures. Used commonly in the elderly.
* Venlafaxine (Effexor) has a profile similar to SSRIs.
* Mirtazapine (Remeron) has a profile roughly similar to tertiary TCAs but a lot of sedation. Possibly more rapid onset of antidepressant effects than with SSRIs.
* Bupropion is also known as Zyban for smoking cessation. Dopamine linked to smoking cessation because dopamine is linked to reward center in brain. So when you smoke you don’t get the pleasure from the smoking.
* Similar to naltrexone, which blocks pleasure centers in brain for alcohol, used in alcoholics.
* TCAs earliest antidepressants to be widely used.
* Tertiary TCAs are imipramine, amitriptyline, doxepin, clomipramine, and trimipramine.
* Secondary amine TCAs are desipramine, nortriptyline, and protriptyline.
* When imipramine breaks down, it converts to desipramine.
* Amitriptyline breaks down to nortriptyline.
* Active metabolites (desipramine and nortriptyline) are “cleaner” meaning fewer side effects.
* Levels need to be checked for most of the TCAs, which patients do not like. The serum drug level has to fall within the therapeutic window in order for it to be effective and not toxic.
* Tertiary amine TCAs used for mood disorders, imipramine often used for panic disorder, clomipramine used for OCD (works most on serotonin) and amitriptyline used to treat chronic pain.
* TCAs (especially tertiary) tend to cause significant sedation, orthostatic hypotension, and anticholinergic effects; they are the most dangerous antidepressants in overdose.
* MAOIs work by inhibiting MAO-A and/or MAO-B in the CNS and have antidepressant efficacy.
* MAOIs differ by the type of inhibition (reversible or irreversible), the severity of adverse effects, and the specificity of inhibition (MAO-A or MAO-B).
* Hydrazines are more sedating.
* Problem with MAOIs is patient cannot eat foods with tyramine (cheese, wine) because it will produce a hypertensive reaction. Processed cheese is fine, like cottage cheese or Velveeta. Crumbly, smelly, or aged cheeses are rich in tyramine. Red wine is rich in tyramine, but white wines are not. Other tyramine-rich foods include chocolate, sausage, nuts, and pickled products.
* Case example is patient at wine and cheese party, gets headache, nosebleed, then goes to hospital. Arrives with BP of 220 systolic. Answer is hypertensive crisis with MAO-I.
* Hypertensive crisis may also occur with combination of other medications, such as nasal decongestants, antiasthmatic medications, and amphetamines.
* Adverse effects include sedation, weight gain, orthostatic hypotension, liver toxicity (with hydrazine MAOIs), and sexual dysfunction.

**Electroconvulsive Therapy (ECT)**
* Considered the best treatment for depression. It is used for patients who have not responded to antidepressant medications or mood stabilizers.
* Used particularly in major depressive episodes with high risk for immediate suicide.
* Also used in major depressive episodes in patients with contraindications to using antidepressant medications.
* ECT raises intracranial pressure, so high ICP is a contraindication.
* ECT can cause transient memory disturbances, which increases in severity over the course of ECT, and then gradually resolves over several weeks. However, the more ECT the more memory loss.
* Complications of associated anesthesia and induced paralysis can occur.
* Transiently increased intracranial pressure, so caution with space-occupying lesions.
* ECT involves electrodes connected to head and an induced seizure. The patient does not have a physical seizure; it is not needed for ECT to be effective. In the past, a physical seizure was thought to be necessary. Newer research has found that a seizure is not absolutely necessary.
* Typical ECT course is between 10 and 15 treatments.
* Pre-assessment for ECT involves being admitted, full series of neurological tests/questions, head CT to rule out tumor/trauma/space-occupying lesions, regular blood-work, ECG/EKG, sometimes complete bone scan to rule out unhealed fractures. Treatment starts approximately 3x/week (e.g. Monday, Wednesday, Friday) then tapered down to twice a week, then once a week, and then maintenance ECT, which is a number agreed upon by anesthesiologist and psychiatrist.

**Psychopharmacology: Mood-Stabilizing Medication**

* Mood stabilizing medications include lithium, divalproex, carbamazepine, lamotrigine, gabapentin, topiramate.
* Commonly used as anticonvulsants, bipolar disorder, impulse control disorders, violence, agitation, aggression.
* Most commonly used mood-stabilizers are lithium, divalproex (valproic acid), and carbamazepine.
* Lithium used for bipolar disorder, schizoaffective disorder, and mood disorders.
* Lithium has a narrow margin of safety. There are a lot of side effects.
* Most common lithium side effects are tremors (e.g. hand shaking) and GI problems (e.g. diarrhea).
* Lithium can cause headaches, worsen acne, and weight gain; interferes with patient compliance.
* ECG conduction changes are usually benign. An ECG must be done before lithium treatment is started.
* Lithium causes hypothyroidism, so a TSH must be done prior to starting lithium.
* Lithium can cause leukocytosis, polyuria, polydipsia, nephrogenic diabetes insipidus; assess kidney function.
* Lithium is teratogenic, leading to fetal cardiac malformations (Ebstein anomaly affecting tricuspid valve).
* Therefore, must do a pregnancy test on any young female before starting lithium and also advise patient to avoid pregnancy. If patient becomes pregnant, they should stop lithium per medical doctor.
* Hypothyroidism if > 1.5mEq/L plasma levels. Therapeutic is 0.6 to 1.3 approximately.
* Some studies say to keep levels close to 1mEq/L and not go higher, else you create more side effects.
* Dehydration and hyponatremia predispose to lithium toxicity by increasing serum lithium levels.
* Tremors may occur at therapeutic levels and may respond to decreased dosage.
* Divided doses or slow release preparations minimize dose-related effects by decreasing peak plasma levels.
* If lithium level gets very high, > 2.5mEq/L plasma level, treatment of choice is dialysis.
* Other lithium overdose effects include ataxia, seizures, and coma.
* Divalproex is the treatment of choice for rapid-cycling bipolar disorders (cycle within days), or when lithium is ineffective, impractical, or contraindicated (e.g. poor kidney function, thyroid disease).
* Divalproex is becoming increasingly popular in emergency settings.
* Divalproex time course of treatment response is similar to lithium.
* Efficacy for prophylaxis is unclear.
* Side effects include sedation, cognitive impairment, tremor, GI distress, hepatotoxicity (e.g. order LFT before starting patient), and possible teratogenicity (spina bifida). Thus, check pregnancy test before starting.
* Mood stabilizers take anywhere from 10-14 days to reach effective level.
* Carbamazepine is second-line choice for treatment of bipolar disorder when lithium and divalproex are ineffective or contraindicated.
* Rare but serious hematologic and hepatic side effects and significant sedation make carbamazepine less useful.
* Divalproex is considered second line for the exam. Lithium is considered first line for the exam.
* In reality, lithium has a rough side effect profile so divalproex may be used more than lithium for first line.
* Carbamazepine can cause agranulocytosis, so be careful if mixing with clozapine.
* Other mood stabilizers include lamotrigine (Lamictal), gabapentin (Neurontin), and topiramate (Topamax).
* Topiramate helps the patient reduce weight, unlike all the other mood stabilizers.
* Lamotrigine, gabapentin, and topiramate are second-line or can be used in addition to first-line for bipolar.

**Psychopharmacology: Anxiolytic Medication**

* Benzodiazepines are first choice for acute anxiety. They bind to specific CNS receptors that modulate GABA transmission. They open sodium-chloride channels and allow GABA transmission, raising GABA levels.
* Buspiron (Buspar) is used for generalized anxiety disorders (GAD) and social phobia.
* Antidepressants are used for panic disorders (SSRIs, imipramine), OCD (SSRIs, clomipramine), social phobia (SSRIs), and generalized anxiety disorder (venlafaxine, SSRIs).
* Patient presents with mania. Answer is mood stabilizer, specifically lithium. If not a choice, pick valproic acid.
* Patient presents with acute mania (emergency). Answer is benzodiazepine or antipsychotic.
* Adjustment disorder with anxious mood, benzodiazepines are used with brief psychotherapy.
* Panic disorder, SSRIs, alprazolam, and clonazepam decrease frequency and intensity of panic attacks.
* Generalized anxiety disorder, venlafaxine, other SSRIs, and buspirone decrease overall anxiety.
* OCD, SSRIs and clomipramine decrease obsessional thinking.
* Social phobia, SSRIs and buspirone decrease fear associated with social situations.
* Benzodiazepines should not be abruptly changed in dosage. Use lower dosages for elderly.
* Do not mix benzos with alcohol or other sedative-hypnotic medications; can cause death.
* Consider dependency potential with benzodiazepines.
* There has never been a proven benzodiazepine death from overdose alone, but can cause death from respiratory compromise when mixed with alcohol.
* Benzos cause sedation, impaired cognition, disinhibition, have tolerance and withdrawal issues, may be abused, and are possibly teratogenic.
* Buspirone is thought to work on serotonin. It is effective in the treatment of GAD and social phobia.
* Lag time of about 1 week before clinical response.
* No additive effect with sedative hypnotics. Not addicting, so good anxiety medication for substance abuser.
* No withdrawal syndrome. No sedation or cognitive impairment. Headache may occur.
* Patient has depression. What is the treatment? Fluoxetine (SSRI) not nortriptyline (TCA).
* Treatment for depression should be nortriptyline instead of amitriptyline due to safety profile.
* Patient with bipolar disorder with kidney disorder. Answer is divalproex, not lithium.
* Patient with bipolar disorder (normal or liver disorder). Answer is lithium.
* What three tests should be ordered before starting lithium? Pregnancy, thyroid function, kidney function.
* Patient has panic disorder. Answer is any benzodiazepine, but specifically alprazolam (Xanax).
* Benzo used most frequently for the prevention of alcohol withdrawal? Answer is chlordiazepoxide (Librium).
* Chlordiazepoxide given over 3-5 days, tapered every day, which gives a safe detoxification.
* Some places use oxazepam (Serax) for alcohol withdrawal because it does not go through CP450 system.
* Mnemonic is OTL: oxazepam, temazepam, lorazepam do not go through CP450 system.
* Patient presents to the ED with history of alcohol abuse and is agitated. Answer is lorazepam (Ativan) because it does not go through CP450 system and it is available in an IM injection.

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**Psychiatric Interventions: Suicide**

* Suicide is very common in adults (7th or 8th cause of death) and adolescents (2nd or 3rd cause of death).
* Suicide assessment includes ideation (have you thought about suicide?), intent (are you serious about suicide?), and plan (do you have any plan?). Everyone thinks about suicide at some point; it means nothing.
* Asking a patient about suicide will not put that idea in their head and increase suicide risk.
* Patient may say, “Yes, I think about suicide, I wish I were dead, but I would never do that to my family.” This patient does not need admission into a hospital for psychiatric examination.
* However, if the test says the patient thinks about suicide and nothing else is given, you have to admit them.
* A suicide plan would include giving away possessions, buying a gun, writing a note, or going to isolated place.
* Another case: Patient says, “I’m going to have dinner with my husband, then leave dinner to go to the bathroom, get a bottle of Tylenol, then come back to dinner, open the bottle, and take it all in front of my husband.” This is most likely a patient that is not really suicidal. She is hoping that her husband will stop her. If her husband does not stop her, she more than likely will call the ambulance herself. Likely should be admitted anyway.
* Usually, the more isolate the plan the more serious the intent.
* Example: Patient attempted suicide while she was alone, left a note, and left a will. She says, “I wasn’t really serious, I didn’t want to die.” Do not believe this patient. Their plan was well thought out. The attempt occurred at a time when no one was there to rescue her. She left things in place in case she actually did die. Admit this patient.
* If patient wakes up from suicide attempt and says, “I can’t believe I’m alive.” They should not be immediately released from the hospital.
* If patient has suicidal ideation and plan, they should be admitted.
* Suicide presentation includes recent suicide attempt, complains of suicidal thoughts, admission of suicidal thoughts upon questioning, and demonstration of possible suicidal behavior.
* Most of patients who try to kill themselves will try again within 3 months of the first attempt.
* Myth: patients who talk about suicide won’t actually hurt themselves.
* Most patients who commit suicide have gone to the doctor within the past 6 months prior.
* The patient presents to the doctor because they know something is wrong. They go seeking help. However, the doctor does not recognize the depression. The doctor sends them home, they don’t get better, their depression sinks in, and then they kill themselves.
* Risk factors include previous suicide attempts, perceived hopelessness (demoralization), presence of psychiatric illness or drug abuse, male gender, elderly, social isolation, low job satisfaction, and chronic physical illness.
* Chronic illnesses include HIV, cancer, and dialysis.
* Number one cause of death for adolescents is motor vehicle accidents. One theory is that the car is a means of committing suicide. The teen drinks, gets behind the wheel, and ends up killing themselves.
* Men are more likely to use lethal means, which increases suicide success.
* Women attempt suicide more often than men.
* Men most commonly use guns. Women most commonly use pills, overdose, or poison for attempts. However, most lethal is firearms for women.
* When men use guns, they don’t mess around. They put it against their temple, throat facing up, or in mouth. When women use guns, they avoid blowing up their face. Common location is gun against middle of chest.
* Men are more likely to be successful in their suicide attempts because of where they are shooting themselves.
* Elderly is the number one risk factor for suicide. Elderly white males. They tend to commit less suicide, but are much more successful. Suicide rates for elderly have dropped over last century, but still greater than all others.
* High socioeconomic status is another risk factor (more to lose). White people kill themselves more than African Americans. Unemployed kill themselves more (they’ve lost it all). Poor economic times cause increased suicide rates, such as during the Great Depression.
* These days, there has been a change in suicides with stock markets; as the stock markets plummet the investor will grab a gun and go hunt down their stockbroker. This has happened numerous times in numerous cities.
* Emergency assessment involves detaining the patient until the evaluation is complete.
* Take all suicide threats seriously. Question about suicide (e.g. family history, friends committing suicide).
* Example is 15yo in Tampa who took flying lesions and slammed a Cessna into a Bank of America. A note was found in his pocket that said how he adored Osama Bin Laden and his 9/11 terrorist attack. (copycat suicide)
* Ask about suicide pacts. Boy and girl in Massachusetts, girl committed suicide, boy decided not to.
* Adolescents will kill themselves over very silly things, such as a boyfriend, a bad grade, being picked on.
* Get information from third parties. Don’t identify with the patient (“I’d kill myself too if that were me”).
* Emergency treatment decisions about suicidal behavior are based on clinical presentation and presence of risk factors. The more risk factors the patient has, the more likely they are to be admitted.
* An elderly white male may be brought in by his family for depression. He recently wrote a will and bought a gun. Even if the patient says he wrote the will to protect his family and bought the gun for hunting because he loves to hunt, he is going to need to be admitted.

**Psychiatric Interventions: Combative Behavior**
* If the patient is combative, determine the reason for combative nature: general anger, anger at a specific person, an attempt to frighten or manipulate.
* Determine stressors (lessen stress if possible). Determine psychopathology.
* Delay physical examination of combative patients.
* Set clear limits, warn others, use appropriate equipment and trained personnel, search for concealed weapons, and use antipsychotic medications and/or benzodiazepines to control agitation.
* Example is Charter Hospitals that used inappropriate methods for handling agitated patients, leading to the death of several patients.
* Some hospitals use 4-point restraint. The wrists and ankles are restrained to sides. 5-point restraints add on a strap across the chest to prevent the patient from sitting up.
*Some hospitals use a belt restraint, which handcuffs their wrists to their waist. This allows for some arm movement but prevents the patient from punching others.
* A “calming blanket” is a tough canvas-like material used to wrap-up agitated patients; not commonly used.
* Straightjacket is rarely used and likely to be abandoned in all states.
* Patients are very creative and will hide interesting weapons in even more interesting places.
* Calming an agitated patient should always be started with verbal de-escalation. If you suddenly get into a patient’s face and talk to them, or yell at them, they will become more agitated.
* Make sure you are between the door and the patient.
* Offer food or water or juice or soda to the patients; this may help them calm down and trust you.
Then, the patient runs out of your office. What do you do? Answer for the first step is to notify the police.

* If the patient comes into your office and says they hate their neighbor
  * Most psych Emergency Departments have locked doors, meaning you have to be buzzed in and buzzed out.
  * If this happens in a hospital, the answer for the first step is to detain the patient because they are right there.

* The patient comes in with a serious intent to kill someone, three things must happen. You detain the individual, a duty to warn and a duty to protect. Meaning, you have to warn any victims. You also have to protect the victim.
  * In medical cases, informed consent must almost always be obtained, even for lifesaving treatment.
  * Emergency medical treatment may be administered if the patient is unconscious or severely cognitively impaired.
  * If the patient is going to hurt someone or themselves, you can give medication/seclusion/restraint because it is imminent danger to the patient or others.
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**Informed Consent**
* Informed consent has three components: information (risks, benefits, alternatives), voluntariness (non-coerced), and competency (understanding and judgment).
  * Exceptions include emergencies (minutes to hours), a waiver by the patient (if patient is competent to do so), and therapeutic privilege (information would be harmful to patient).
  * Waiver by patient could be, “Look doc, you do what you think is best.”
  * Therapeutic privilege could be an unconscious patient who needs non-emergency surgery. We could deprive the patient of their rights and perform the surgery.

* Therapeutic privilege also includes telling patient information that would be catastrophic to the patient.
  * For the purpose of the exam, tell the patient everything even if it means the patient would go kill them self.

**Involuntary Treatment**
* Psychiatric hospitalization for suicidal, homicidal, or gravely disabled. Meaning, these are the things that you must do for someone to take away your basic rights and lock you up on a psych ward.
  * Grave disability is an inability to provide for food, clothing, or shelter. This does not apply to all states.
  * Medication, seclusion, or physical restraint should be used for psychiatric emergencies or by judicial order.
  * Patients who are extremely schizophrenic but not suicidal/homicidal have the right to be free.

* If you take away a patient’s right of freedom, you have to provide treatment. If the patient refuses treatment, you have to go to court (have a hearing) and have treatment ordered else the patient must be discharged.

* If the patient is going to hurt someone or themselves, you can give medication/seclusion/restraint because it is imminent danger to the patient or others.

**Confidentiality**
* Confidentiality is implicit in clinician-patient relationship. Based on the American Psychiatric Association (APA).
  * Special protection exists for HIV status and substance abuse history.
  * Can ethically be breached in certain circumstance. Usually suicide, homicide, child abuse, sexual abuse.

* In medical cases, informed consent must almost always be obtained, even for lifesaving treatment.

* Non-emergency medical treatment requires a judicial order.

**Confidentiality**
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  * Special protection exists for HIV status and substance abuse history.
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* Patient must be informed when confidentiality is breached.
  * HIV status can be broken in the state of New York. Everyone can be notified including partner. More than 30 states in the country are looking to do this. For the test, the answer is do not notify others.

* You cannot tell anyone about substance about (e.g. parents, partners). If you call a substance abuse clinic and ask for a specific person, you will be told they don’t know that person or they aren’t there even if they are there.

* You should tell the patient, “Everything you tell me will be confidential, except if you are going to kill yourself, kill someone else, or are being abused. It is my duty to report those and do something about it.”

* Appropriate breaches include essential information during an emergency, patient requests, discussion among designated treatment personnel, judicial subpoena, and state medical reporting such as abuse and duty to warn and protect (Tarasoff).

* Tarasoff was a case in California where two students were in a relationship and stopped seeing each other. The male student saw a therapist at the university and said he was going to kill the girl (Tarasoff). The therapist becomes concerned, writes a memo, calls campus police to have the male student detained. The campus police gets the memo, detains the patient, then lets him go eventually. The therapist boss comes in, gets mad, tells the therapist to go to the campus police and get the memo to be destroyed because it is confidential. Two months later, the girl is dead. The family sues the California Board of Regents. As a result of that, there were two rulings. They felt there is a duty to warn and a duty to protect. Meaning, you have to warn any victims. You also have to protect the victim.

* If the patient comes in with a serious intent to kill someone, three things must happen. You detain the individual, you notify the police (protect), and you notify the victim (warn).

* If this happens in a hospital, the answer for the first step is to detain the patient because they are right there.

* Most psych Emergency Departments have locked doors, meaning you have to be buzzed in and buzzed out.

* If the patient comes into your office and says they hate their neighbor and can’t stand them. They say they went to Walmart and bought a shotgun and tomorrow at 5pm I’m going to stand behind the bushes and blow his head off. Then, the patient runs out of your office. What do you do? Answer for the first step is to notify the police.
**Childhood Development**

- Milestones include gross motor, fine motor, perceptual-cognitive, communicative, emotional, and social.
- Erikson’s stages are based on social development. Piaget’s stages are based on cognitive development. Freud’s stages are based on sexual development.
- Erik Erikson believed that human personality was determined by childhood and adult experiences. His theory of human development covers infancy to old age. His stages are determined by crises, which are the turning points of the stages.
- If you do not complete a stage, you are said to have a fixation; an arrested stage of development.
- Stage 1, basic trust versus mistrust (birth to 1 year). Infants develop feelings of trust that their wants will be satisfied; if parent is not attentive, the infant will learn to mistrust.
- Babies learn that if they cry for any reason (hunger, wet diaper) parents will come and take care of everything. This is learned trust. If parents don’t show up when the baby cries, they learn mistrust.
- Stage 2, autonomy versus shame and doubt (1 to 3 years). Children have a sense of mastery over themselves and their drives. They can be cooperative or stubborn. They gain a sense of their separateness from others.
- The word they learn to master is “no.” It is there sense of control.
- Stage 3, initiative versus guilt (3 to 5 years). Initiates both motor and intellectual activity. Sexual curiosity is present; sibling rivalry. Not a lot happens here.
- Stage 4, industry versus inferiority (6 to 11 years). Child enters program of learning. Able to work and acquire adult skills. Children learn they are able to master and complete a task.
- Age 6 children go to school, in general, in the U.S.
- Stage 5, identity versus role diffusion/confusion (11 years through adolescence). Group identity; preoccupation with appearances. Deal with morality and ethics. Identity crisis occurs at the end of this stage, which Piaget called normative. This is where peer pressure comes into play. Sexual experimentation occurs here.
- Stage 6, intimacy versus isolation (21 to 40 years). Intimacy of sexual relations, friendships, and all deep associations are present. Ability to care and share with others without fear or losing self. What do I do with my life?
- Stage 7, generativity versus stagnation (40 to 65 years, “middle adulthood”). Having and raising children as well as other interests outside the home. If childless, development of altruism and creativity. Midlife crises can occur here (e.g. toupee, convertible, liposuction). Questioning self, “Where am I? Am I where I wanted to be?”
- Stage 8, integrity versus despair (over 65 years). A sense of satisfaction with one’s life. Allows for an acceptance of one’s place in the life cycle. Despair if you are unhappy with how your life turned out.

- Piaget believed that children develop through cognitive stages. Intelligence was an extension of biological adaptation and had a logical structure. His theory consisted on how children and adolescents think and acquire knowledge.
- Stage 1, sensorimotor stage (birth to 2 years). Infants begin to learn through sensory observation and gain control of their motor functions through activity, exploration, and manipulation of the environment. Object permanence is achieved. Children are learning to master their senses (sight, sound, smell). This is the stage where the mom can leave the room and the child will not cry because the child has internalized the structure of the mother (permanence).
- 1.5yo in room and mother leaves room, the child does not cry. There is no separation anxiety. This is a clue for autism. Children with autism never bonded with parents.
- Stage 2, preoperational stage (2 to 7 years). Child uses symbols and language more extensively. Children are egocentric, use animalistic thinking, and have a sense of immanent justice. Death is reversible. Lack the law of conservation. This is an important stage. Children feel the sun goes up because they made it. If someone is getting a divorce, the child blames them self. Punishment at this age should be a time-out because that is what a child understands; you cannot reason deductively with a 2yo. Could expect a child to say, “Yes, grandpa is dead and in heaven like you told me. But when is he taking me to the park like he promised?” Children here do not understand things can change shape and be the same. Example is from the movie Rainman when the character expected to have 8 fish sticks, but only had 4, then another character cut them in half making 8 and that was a solution.
- Stage 3, concrete operations stage (7 to 11 years). Egocentricity is replaced by operational thought; therefore, they can see things in other’s perspective. Have the law of conservation; death is irreversible at age 10 (or even 9). These children will understand that two 8oz containers hold the same amount of fluid even though one is thin and tall while the other is wide and short.
- Stage 4, formal operations stage (11 years to end of adolescence). Ability to think abstractly, reason deductively, and define concepts. Characterized by hypothetical thinking and deductive reasoning. This is the stage where children can understand abstract thoughts. What is peace? What is justice? What is liberty?
* If you ask a 6yo how are an apple and an orange alike, they will likely say they are both round. A 13yo would likely say they are both fruit. A 6yo would say a chair and podium are both made out of wood. An adult would say they are both pieces of furniture.
* Sigmund Freud believed that children were influenced by sexual drives. He noted that infants were capable of sexual activity from birth, the first of which were non-sexual.
* Stage 1, oral stage (birth to 18 months). The mouth is the main site of gratification and is manifested by chewing, biting, and sucking. Being stuck in this stage would include nail biters, smokers, drinkers, pen gnawing.
* Stage 2, anal stage (1 to 3 years). The anus and surrounding areas is the main site of gratification. Primarily involved in bowel functions and bladder control. If harsh toilet training, may become “anally fixated” (obsessive-compulsive personality disorder).
* Stage 3, phallic stage (3 to 5 years). The genital area is the main site of gratification. Penis envy and fear of castration are evident during this stage. Increase in genital masturbation with fantasies involving the opposite-sex parent, “Oedipal complex.” “Electra complex” where girl is in love with father. Men make up for this later by marrying someone just like their mother; women marry someone like their father. According to Freud, this is the stage where girls want a penis. She expects to get it from her father. If that doesn’t work she expects to get a baby from the father. This theory has been disproved.
* Stage 4, latency stage (5 to 11-13 years). Formation of the superego, resolution of the Oedipal complex. Sexual interests during this period are believed to be quiescent. Sublimation of sexual energy into energetic learning and play activities.
* Stage 5, genital stage (11-13 to adulthood). Capacity for true intimacy.
* Side note: Critics will go on to point out that Freud did cocaine and may have had a relationship with his daughter.

Adjustment Disorders
* Maladaptive reactions to an identifiable psychosocial stressor. There has to be a stressor.
* Cause can be environmental stressors having an effect on functioning (e.g. fight, fired, traffic accident).
* Risk that a stressor will cause an adjustment disorder depends on an individual’s emotional strength and coping skills. Prevalence is extremely common, seen in all age groups.
* Onset occurs within 3 months of the initial presence of the stressor.
* Course lasts 6 months or less once the stressor is resolved. Can become chronic if stressor continues and new ways of coping with the stressor are not developed.
* So, stressor occurs (e.g. got fired). Symptoms must develop within 3 months. Once symptoms develop, they cannot last more than 6 months.
* Presenting symptoms include complaints of overwhelming anxiety, depression, or emotional turmoil associated with specific stressors.
* Associated problems include social and occupational performance deterioration, erratic or withdrawal behavior.
* Treatment is to remove or ameliorate the stressor. Brief psychotherapy is used to improve coping skills.
* Anxiolytics or antidepressant medications are used to ameliorate symptoms.
* The psychotherapy used for adjustment disorders is supportive psychotherapy.
* A 22yo female was fired two months ago from her job. Since then, she has complained of decreased sleep and weight gain. Is this adjustment disorder? Yes, adjustment disorder.
* A 65yo male retired 3 months ago and for the last 5 weeks has complained of depressed mood, helplessness, hopelessness, anhedonia, decreased sleep, feelings of guilt, and 25-pound weight loss. No, major depression.
* A 40yo female has complained of increased anxiety for the last 2 months. No, anxiety disorder NOS.
* NOS means not otherwise specified, basically a catch-all phrase. D/O is used to denote disorder.
* A 28yo woman without previous behavioral problems becomes angry and bitter after her husband of 5 years leaves her to live with his female business partner. One week later, the woman quits her job without giving notice and begins drinking heavily. For the next several weeks, the woman telephones friends and tearfully expresses suicidal rumination. She also makes several threatening calls to her husband’s new girlfriend. This is adjustment disorder, not bipolar I (no mania, major depression), not bipolar II (no hypomania, major depression), not borderline (don’t all of a sudden get a personality disorder).

Childhood Disorders: Mental Retardation
* This goes on axis II in psychiatry. Mental retardation may be written as MR.
* There must be significant sub average intellectual function (IQ less than 70), as measured by a variety of IQ tests.
* This must be accompanied by concurrent impairment in adapting to demands in school, work, social, and other environments.
* The onset is before 18 years of age.
* Most with MR have a mild version, so they start to notice problems in social adaptive functioning.
* Associated genetic and chromosomal abnormalities include inborn errors of metabolism (e.g. lipidoses, aminoacidurias, glycogen storage diseases) and chromosomal abnormalities (e.g. cri du chat syndrome, Down syndrome, fragile X syndrome).
* Associated with intrauterine infections (e.g. rubella, cytomegalovirus, other viruses), postnatal causes (e.g. toxin exposure, infections, poor prenatal care, postnatal exposure to heavy metals, physical trauma, social deprivation).
* Prevalence is 1% of population and occurs at a 1.5:1 male-to-female ratio.
* Mild retardation (IQ 50-70), attain academic skills to approximately the sixth-grade level, often live independently in the community or with minimal supervision, may have problems with impulse control and self-esteem, and may have associated conduct disorders, substance-related disorders, and attention deficit hyperactivity disorder (ADHD).
* Proposed higher risk of depression.
* Do patients with mild MR have the ability to understand treatment you will be giving in the hospital setting and be able to consent? Answer is yet.
* Moderate retardation (IQ 35-50), attain academic skills to a second grade level, may be able to manage activities of daily living, work in sheltered workshops, live in residential community settings, and have significant problems conforming to social norms. Down syndrome patients are at high risk for early development of Alzheimer disease.
* Severe (IQ 20-35) and profound retardation (IQ less than 20), little or no speech, very limited abilities to manage self-care, requires highly supervised are settings. Severe MR can do basic things but cannot live alone.
* Physical examination shows evidence of underlying disorder or injury.
* Amniocentesis may reveal chromosomal abnormalities associated with mental retardation in high-risk pregnancies (mother > 35 years of age).
* Treatment includes primary prevention, genetic counseling, good prenatal care, and safe environments.
* Treatment of associated general medical conditions may improve overall level of cognitive and adaptive function.
* DDx includes learning and communication disorders, sensory impairment, and autism.

**Childhood Disorders: Learning Disorders**
* Characterized by learning achievement in specific areas that is substantially below expectations, giving the patient’s age, intelligence, sensory abilities, and educational experience. Types are reading disorder (most common), mathematics disorder, and disorder of written expression.
* Some cases are due to the effects of coexisting general medical conditions such as cerebral palsy on CNS function.
* Some general medicine conditions and substance-induced conditions associated with learning disorders, including lead poisoning and fetal alcohol syndrome.
* Many cases have no obvious etiology.
* Lead poisoning case may be described as a child living in an old run-down building (e.g. Section 8 housing).
* Prevalence is about 5% of school-age children. Onset is usually during elementary school.
* Perceptual-motor problems may be present.
* Conduct disorder, oppositional defiant disorder, and ADHD may be present.
* Poor self-esteem and social immaturity may be present.
* School failure and behavioral disturbances may occur.
* Deficits sometimes persist into adulthood and interfere with occupational function.
* IQ testing and academic achievement tests are the major diagnostic tools.
* Special education to ensure general learning and maximize skills in the deficient areas is the mainstay of treatment. Counseling of patients and families to improve self-esteem, social behavior, and family functioning helps.
* DDx is to rule out environmental deprivation, hearing or vision impairment, and mental retardation.

**Childhood Disorders: Autistic Disorder**
* Qualitative impairments in social interaction, communication, imaginative activities, and interest.
* Communication is the most important factor affected by autism.
* The cause is CNS damage due to known or unknown factors. Sites of CNS damage specifically associated with autistic disorder are unknown.
* General medical conditions associated with autistic disorder include encephalitis, maternal rubella (common cause), phenylketonuria (PKU), tuberous sclerosis, fragile X syndrome, and perinatal anoxia.
* There is no obvious etiology in many cases.
* Prevalence is 0.04% in general population, 5:1 male-to-female ratio. Onset is before 3 years of age.
* Social symptoms include lack of peer relationships and a failure to use non-verbal social cues.
* Communication symptoms include absent or bizarre use of speech.
* Behavioral symptoms include odd preoccupation with repetitive activities and bizarre mannerisms.
* When child with autism gets upset or hurt they will employ “self soothing mechanisms” such as rocking back and forth or banging their head against the wall.
* More than 75% of autistic children have mental retardation (IQ < 70) and 50% have IQ < 50.
* Physical findings include higher incidence of abnormal EEGs, seizures, and abnormal brain morphology.
* Approximately 30% of individuals with autistic disorder become semi-independent in adulthood but almost all have severe residual disabilities.
* Predictors of a poor outcome are associated with mental retardation and failure to develop useful speech.
* Seizures develop by adulthood in 25% of autistic individuals.
* Self-injuries caused by head banging or biting are sometimes present on exam; cases of taking own eyes out.
* Treatment includes family counseling, special education, and newer antipsychotic medications to control episodes of severe agitation or self-destructive behavior.
* DDx includes ruling out mental retardation, hearing impairment, environmental deprivation, and selective mutism.
* Speech is one way to differentiate mental retardation (normal speech) from autism (abnormal speech).
* Eye contact is one way to differentiate deftness (makes eye contact) from autism (little or no eye contact).
* Autistic children never bond with their parents, do not care about their parents, and are not interested in their parents. So there is usually no separation anxiety with autism.

**Childhood Disorders: Attention Deficit Hyperactivity Disorder (ADHD)**

* Many experts believe ADHD is very over-diagnosed today.
* Some cases involve a parent who is looking for an answer why their child is a menace. They will see multiple physicians, being told the child is normal, until one physician gives the ADHD diagnosis. Then they will not seek other opinions, stick with this physician, and follow the medication and treatment plan prescribed.
* Case of families who sued the APA and pharmaceutical company making the ADHD drug saying the diagnosis was made up and a conspiracy to sell medication. The courts found the allegation to be completely bogus.
* ADHD is characterized by inattention, hyperactivity, and impulsivity that interferes with social or academic function. The symptoms last for at least 6 months and onset occurs before 7 years of age.
* Symptoms are present in multiple settings (e.g. home, school, work, physician’s office).
* Subtypes are based on the predominance of symptoms or inattention or of hyperactivity and impulsivity.
* Example: child is normal at home, watching cartoons for 5 hours, but hyperactive and has attention problems at school plus poor grades. Is this ADHD? No, it does not occur in multiple settings.
* No specific etiologies have been identified. Other CNS pathology and disadvantaged family and school situations are sometimes present.
* Prevalence is 5% of school-age children. Occurs at a 9:1 male-to-female ratio.
* Family history of ADHD, mood and anxiety disorders, substance related disorders, and antisocial personality.
* Onset usually first recognized when a child enters school, and symptoms usually persist throughout childhood. ADHD persists into adulthood in approximately 30% of affected individuals.
* Children with ADHD many times do not get better. So they become adolescents who are not better, cutting class, setting fires, etc. This is conduct disorder. Say that adolescent becomes 18yo and is not better. This is antisocial personality disorder. Now this adult starts drinking, uses drugs, and has children. Children could have ADHD, conduct disorder, and the whole cycle repeats itself. The point is this could happen, so you may do a family history and learn about drugs, ADHD, and antisocial personality disorder.
* Symptoms include short attention span, constant fidgeting, inability to sit through cartoons or meals, inability to wait in lines, failure to stay quiet or sit still in class, disobedience, shunning by peers, fighting, poor academic performance, carelessness, and poor relationships with siblings.
* Children with ADHD do not have learning problems; the problem is they cannot focus.
* Common associated problems include low self-esteem, mood lability, conduct disorder, learning disorders, motor skills disorder, communication disorders, drug abuse, school failure, and physical trauma as a result of impulsivity.
* Physical exam may find perceptual-motor problems and incoordination, sometimes.
* IQ tests and various structured symptoms-rating scales for use by teachers and parents are often used.
* Conners Rating Scale (Revised) is used by teachers to help determine if a child has ADHD.
* DDx is rule-out age appropriate behavior, response to environmental problems, mental retardation, autistic disorder, and mood disorders.
* Treatment focuses on psychopharmacology. Psychological, social, and educational interventions.
* Specialized educational techniques. Family education is important.
* Latest theory is that ADHD is due to low levels of dopamine. Medications are aimed at increasing dopamine.
* Pharmacotherapy of choice is stimulant medications, especially methylphenidate (Ritalin) and other amphetamines like dextroamphetamine (Dexedrine) and pemoline (Cylert).
* Methylphenidate is given to children above the age of 6.
* Dextroamphetamine is given to children about the age of 3.
* They are usually effective in decreasing hyperactivity, inattention, and impulsivity.
* They should generally be given only on school days, usually morning or during day (not after 2pm), and not automatically restarted following the patient’s summer vacation.
* Other medications include various antidepressants and clonidine.
* Drug holiday is when the child only takes the medication during the school year and stops during the summer.

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**Childhood Disorders: Conduct Disorder**

* Persistent violations in four areas: aggression, property destruction, deceitfulness or theft, and rules.
* Genetic influences play a role by affecting temperament. Stressful family and school environments have also been implicated. One way kids can fit in is by joining a gang, and joining a gang may require doing something illegal.
* Prevalence is 10% of school-age children. Occurs at a 9:1 male-to-female ratio.
* Family history can include antisocial personality disorder, conduct disorder, ADHD, mood disorders, and substance-related disorders.
* Onset is most often during late childhood or early adolescence.
* In most individuals, the symptoms gradually remit.
* Key symptoms include bullying, fighting, cruelty to people or animals, rape, vandalism, fire setting, theft, robbery, running away, and/or school truancy. Example is stealing other kid’s lunch money. Another example is Jeffrey Dahmer, who killed animals then eventually people. Truant officers ensure these kids go to school.
* Complications include substance-related disorders and school failures.
* Often outcomes include antisocial personality disorder, somatoform disorders, depressive disorders, and substance-related disorders.
* DDx has major rule-outs of environmental problems, ADHD, and oppositional defiant disorder.
* Treatment is healthy group identity and role models, provided by structures sports programs and other programs (e.g. Big Brothers). Structures living settings that place value on group identification and cooperation are useful. Punishment and incarceration are not often effective. Basically we cross our fingers and hope something works.
* One popular therapy today is taking kids who are almost ready to go to jail and put them in boot camp. The hope is that they learn to not break the law, because if they fail boot camp they go to jail.

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**Childhood Disorders: Oppositional Defiant Disorder**

* Persistent pattern of negativistic, hostile, and defiant behavior toward adults, including arguments, temper outbursts, vindictiveness, and deliberate annoyance.
* High reactivity and increased motor behavior are innate features of temperament that may predispose to this disorder. Inconsistent or poor parenting may also contribute.
* Prevalence is 10% of school-age children. Occurs at a 1:1 male-to-female ratio.
* Onset is usually in latency or early adolescence and may start gradually. Onset is later in females.
* Associated problems include family conflict and school failure, low self-esteem and mood lability, early onset of substance abuse, ADHD, and learning disorders.
* Family conflict often escalates after the onset of symptoms. Outcome often results in conduct disorder.
* Treatment involves advising parents to spend time interacting with the child, to reward desired behaviors and not to simply punish undesired behaviors, and to be consistent in statements and deeds. Alternative caregivers may be indicated in some cases. There may be special parenting classes available.
* DDx includes conduct disorder.
* Oppositional defiant disorder children do not break the basic rules of society. Conduct disorder involves breaking the law. Example is the TV show The Simpsons, Nelson has conduct disorder, Bart has oppositional defiant.

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**Childhood Disorders: Childhood Enuresis**

* The disorder is characterized by repeated voiding of urine into the patient’s clothes or bed in a child at least 5 years of age. It is diagnosed only if the behavior is not due to a medical condition.
* Age 5 is where you should have complete control of your sphincter. Make sure to rule out medical conditions.
* Etiology includes current psychological stress, family history of enuresis, and urinary tract infections.
* Prevalence is 3% of children aged 10 and slightly more common in boys.
* May occur only at night, only during daytime, or both. Often causes emotional turmoil in the child or parents.
* Common case is a boy who wets the bed at home and gets invited to a sleep over. The boy doesn’t we the bed at the sleep over because he doesn’t sleep the entire night. Then, the parents think the boy is being bad and intentionally wetting the bed only at home to make the parents miserable or punish them.
* Physical exam should focus on medical problems, such as urinary tract infection or diabetes.
* Treatment is appropriate toilet training and avoiding large amounts of fluids before bed, decreasing emotional stressors and rewarding the child with praise for a dry bed or clothes. A bell-pad apparatus is sometimes used.
* Bell-pad apparatus is a pad that lays on top of the bed, senses wetness, and then rings a loud bell.
* Pharmacotherapy includes desmopressin (DDAVP) and imipramine for short-term treatment.

**Childhood Disorders: Childhood Anxiety**

* Stranger anxiety (normal) is the fear of strangers in unfamiliar context that is present from 8 months to approximately 2 years of age. Example is grandma spends first three months with child and the child doesn’t cry, then she comes back at 7 months and tries to kiss baby, but baby starts crying. Another example is baby going in to get DPT shot at 2 months, no crying, gets DPT shot at 4 months, no crying, gets DPT shot at 6 months, then cries.
* Separation anxiety (normal) is fear of separation from the caregiver that is present from approximately 1 to 3 years of age. This goes away as child grows through object permanence stage.
* Phobias (normal) are irrational fears that often present from approximately 3 to 6 years of age. School phobia is common; children will have symptoms only M-F mornings, tummy aches, sore throat, head hurts, but they feel just fine on Saturday morning.
* Childhood anxiety disorders involve anxiety that is inappropriate in terms of focus or intensity.
* Social phobia in children is characterized by excess timidity and fear of stranger.
* Generalized anxiety disorder in children is characterized by excessive or unrealistic anxiety about future events, past behaviors, and competence.
* Risk factors include excessively close-knit families (overbearing parents), excessive expectations of children, and innate temperamental anxiety.
* Prevalence is 5% of school-age children. Key symptoms include prominent physical complaints such as stomach-aches and malaise, unrealistic fears (e.g., monsters) and nightmares, various phobias such as school phobia and fear of animals or the dark, difficulty sleeping, and self-mutilation such as scratching, nail-biting, and hair-pulging.
* Physical examination can include evidence of nail biting and scratching.
* Complications include social avoidance, low self-esteem, and inhibited social development may occur.

**Childhood Disorders: Tourette Disorder**

* Childhood onset of multiple motor and/or vocal tics.
* Autosomal dominant transmission may occur in some cases. There are associations between ADHD (50%) and OCD (40%). Abnormalities in the dopaminergic and adrenergic systems have been implicated.
* Prevalence is 5 per 10,000. It is twice as frequent in males. Average age of onset is 7 years.
* Vocal and motor tics wax and wane over time.
* Motor tics may present as twitching of face, trunk, or extremities, or may involve complex behaviors such as pacing, spinning, or touching.
* Vocal tics are usually grunts, may be screaming, singing, clicking; coprolalia occurs in about 10% of cases.
* Associated problems include ADHD and obsessive-compulsive disorder, present in about one-third of cases.
* Course is life long with remissions and exacerbations.
* Treatment is high potency antipsychotic drugs, including pimozide, haloperidol, and risperidone because they lower the level of dopamine. Clonidine and clonazepam are sometimes useful (noradrenergic system).
* Clonidine is a presynaptic inhibitor of noradrenergic.
* Kids with Tourette syndrome can suppress their symptoms for a short period of time. They also do masking techniques to hide the tics from others. Example is fake coughing along with a vocal tic. Another example is pretending to adjust your hair with your hand to cover up a neck-rolling motor tic.
* A 13yo boy is referred by his junior high school principal for evaluation of his short attention span and inability to sit quietly in class or on the school bus. He has a quick temper at school and at home, and his peers tease him about his temper. What will most likely be associated? Answer is conduct disturbances.

**Anxiety Disorders**

* Anxiety is a syndrome with psychologic and physiologic components.
* Psychologic components include worry that is difficult to control, hyper-vigilance, restlessness, difficulty concentrating, and sleep disturbances.
* Physiologic components include autonomic hyperactivity (e.g. hands shake, palpitations, dry mouth, upset stomach, quivering voice) and motor tension.
* Psychodynamic theory says anxiety occurs when instinctual drives are thwarted.
* Behavioral theory says anxiety is a conditioned response to environmental stimuli, originally paired with a feared situation. This occurs in phobias and in post traumatic stress disorder (PTSD).
* Stimulus generalization says that any stimulus that resembles the original will produce the same effect. Example is being bitten by a rabbit at age 4, then being afraid of all animals at age 16.
* Example for PTSD is you are sitting on a plane and the flight attendant says “everybody assume the crash position, the pilot and copilot have died, we lost an engine and are out of fuel, and we are about to crash into a mountain.” A normal response will be panic and screaming. The plane then crashes but you survive. Now every time you drive by an airport you get scared and panicked. A more common example is being in a car crash then being afraid of certain intersections or car situations.
* Treatment of choice for phobias is behavior modification.
* Biological theory says various neurotransmitters and various CNS structures are involved, such as NE, 5HT, and GABA (most implicated). Brain areas involved include the locus ceruleus (NE) and raphe nucleus (5HT).
* Presenting symptoms include excessive nervousness, fears, sense of impending doom, irrational avoidance of objects or situations, and anxiety attacks.
* Mental status exam may show hyper-arousal, exaggerated startle responses, timidity, and excessive worries.
* Physical exam may show autonomic arousal, motor restlessness, and other general medical conditions.
* Some studies show blood pressure rises the moment patients arrive at a physician’s office (white coat syndrome).
* Diagnostic tests include general medical conditions (thyroid) and drug use (caffeine, cocaine, amphetamines).
* Treatment includes antidepressants, benzodiazepines, and behavioral therapy.
* DDx includes adjustment disorders, anxiety disorders, general medical conditions, substance-induced anxiety.
* Panic disorder has recurrent unexpected panic attacks. These typically occur out of the blue and cause intense distress to the patient. These patients may present to the Emergency Department thinking they have a heart attack.
* Panic attacks include intense anxiety often marked with physical symptoms, such as tachycardia, hyperventilation, dizziness, and sweating.
* Risk factors include separations during childhood, “panicogens” (lactate, flumazenil, epinephrine, CO2), and genetic components. Most commonly seen in young women with genetic loading.
* Prevalence is 2% of the population. Occurs at a 1:2 male-to-female ratio.
* Onset is during third decade of life (20 to 30 years).
* Severity of symptoms may wax and wane, and be associated with intercurrent sessions.
* Key symptoms include attacks that last a few minutes and patients may complain of impending doom or fear of death. Associated problems include agoraphobia, depression, generalized anxiety, and substance abuse.
* Pharmacologic interventions include SSRIs, alprazolam, clonazepam, imipramine, and MAOIs.
* Alprazolam (Xanax) is typically the drug of choice for urgently stopping a panic attack.
* Imipramine is common only because many studies on TCAs and anxiety involved that drug specifically.
* Psychotherapeutic interventions include relaxation training and systemic desensitization for agoraphobia.
* Relaxation training is focused on breathing exercises and guided imagery (picturing self in relaxing setting).
* Phobic disorders are irrational fears and avoidances of objects and situations. When confronted with the feared object, patients typically experience anxiety.
* Important differentiating point for phobias: most people are afraid of height or afraid of sharks. If you are swimming in the ocean and feel afraid of sharks, that’s not necessarily a phobia. But if you are sitting at work or in a classroom and get anxious about sharks, that is likely a phobia. It has to be irrational.
* Agoraphobia is fear or avoidance of places from which escape would be difficult in the event of panic symptoms.
* Specific phobia is fear or avoidance of objects or situations other than agoraphobia or social phobia.
* Social phobia is fear of humiliation or embarrassment in either general or specific social situations. Examples include people being afraid of speaking in public, afraid of eating in restaurants or using public restrooms.
* High incidence of social phobia in the avoidant personality disorder.
* Treatment in mainly cognitive-behavioral therapies, such as systemic desensitization and assertiveness training.
* Pharmacotherapy includes SSRIs, buspirone, and beta-blockers (especially for stage fright).
* Systemic desensitization pairs anxiety with relaxation because it is not physiologically possible to have both anxiety and relaxation at the same time. The patient makes a list of what makes them the most anxious to the least anxious, example worst is real spider, then fake rubber spider, then pictures of spiders. Then the therapist starts at
the least anxious item on the list and works on relaxation techniques with that item being present. Once that step is mastered, they move on to the next item in the list.

* Flooding is a technique that involves massive exposure (e.g. the TV show Fear Factor). Example would be the patient is brought into a room with the therapist and with 1000 spiders. The patient sees that the therapist is calm and they learn from that and hopefully calm down as well. Systemic desensitization is used more commonly than this.

* Beta-blockers mask the autonomic symptoms of anxiety (such as hand/voice quivering in performance anxiety).

* Obsessive-compulsive disorder (OCD) involves obsessions, which are anxiety provoking intrusive thought that tend to be repetitive, senseless, and commonly concerning contamination, doubt, guilt, aggression, and sex.

* OCD involves compulsions, which are peculiar behaviors that tend to be repetitive, time consuming, and reduce anxiety. These may be hand washing, organizing, checking (e.g. the stove), counting, and praying.

* Etiology is thought to be abnormalities of serotonin metabolism.

* Prevalence is 2% of population. Occurs at a 1:1 male-to-female ratio.

* Onset is insidious, and occurs during childhood, adolescence, or early adulthood.

* OCD is usually chronic and symptoms worse with stress.

* Symptoms usually wax and wane, depression and substance abuse are associated.

* Treatment includes behavioral therapy such as relaxation training, guided imagery, exposure and response prevention (similar to flooding).

* Pharmacology includes SSRIs and TCAs (clomipramine). Clomipramine is the most serotoninergic of the TCAs.

* Exposure and response prevention would be taking a person who has a fear of contamination and getting them really dirty and then not letting them wash. After a while, the anxiety decreases.

* Acute stress disorder (ASD) and post-traumatic stress disorder (PTSD) are characterized by severe anxiety symptoms and follow a threatening event that caused feelings of fear, helplessness, or horror.

* In ASD, anxiety lasts less than 1 month (but greater than 2 days).

* In PTSD, anxiety lasts longer than 1 month.

* Risk factors are traumatic events. Premorbid factors include substance abuse, personality disorders, childhood trauma, external locus of control (fate or luck controls your destiny), etc.

* Internal locus of control means you feel you control your own destiny.

* Example for external locus of control would be a patient that says, “Why should I quit smoking? If I’m destined to get lung cancer, I will. My parents have smoked for 50 years and don’t have cancer. My next door neighbor is 27, doesn’t smoke, and just got lung cancer.” These individuals are more prone to illness (physical and psychological).

* Onset may occur at any age, more likely among young or elderly. About 50% of cases resolve within 3 months.

* Symptoms usually begin immediately after trauma, but can occur after months or years.

* Treating PTSD right away improves the chances of recovering, versus waiting for several months.

* Symptoms include re-experiencing of the traumatic event (nightmares, flashbacks, intrusive recollections), avoidance of stimuli associated with the trauma (phobic avoidance), and increased arousal (anxiety, sleep disturbances, hyper-vigilance).

* Treatment is counseling (especially immediately after the event reduces incidence), group psychotherapy with other survivors, and pharmacotherapy (SSRIs, antidepressants, benzodiazepines).

* Generalized anxiety disorder (GAD) is excessive, poorly controlled anxiety about life circumstances that continues for more than 6 months. Psychological and physiologic symptoms are present.

* There is a genetic predisposition for anxiety trait.

* Prevalence is 5% of the population. Occurs at a 2:3 male-to-female ratio. Onset is mainly during childhood.

* GAD is usually chronic and symptoms worsen with stress.

* Associated problems are depression, somatic symptoms, and substance abuse.

* Treatment includes behavioral psychotherapy and pharmacotherapy.

* Behavioral therapy focuses on relaxation training and biofeedback.

* Pharmacotherapy includes venlafaxine (Effexor), other antidepressants, buspirone, and benzodiazepines.

* Buspirone (Buspar) can be used because it is not addicting. These patients may worry their entire lives.

* Buspirone does not potentiate the effects of alcohol.

* A 31yo local politician has a sudden onset of extreme anxiety, tremulousness, and diaphoresis immediately before his first scheduled appearance on national television. He is unable to go on the air. For the next week, he is paralyzed by fear each time he faces an audience, and he cancels all of his scheduled public appearances. Which of the following is the most likely diagnosis? Answer is social phobia.
* Cognitive disorders are characterized by the syndromes of delirium, dementia, and amnesia, which are caused by general medical conditions, substances, or both.
* Risk factors are very young or advanced age, debilitation, presence of specific general medical conditions, and sustained or excessive exposure to a variety of substances.
* Symptoms include memory impairment (especially recent memory), aphasia (failure of language function), apraxia (failure of ability to execute complex motor behaviors), agnosia (failure to recognize or identify people or objects), and disturbances in executive function (abstract thinking, shopping, making plans, or keeping a home).
* Dressing apraxia would be a patient who takes a pair of pants and puts them on their head.
* Visual agnosia would be a patient that cannot recognize a quarter, but can tell you what it is if they feel it.
* Tactile agnosia would be a patient who cannot recognize a quarter by touch, but can by visualization.
* Example of executive function problems would be a patient who can no longer balance their checkbook, or who is driving home from the store and gets lost.
* Physical exam may show impairment in CNS function (tremors, poor coordination, sensory impairment, focal deficits, etc.), underlying general medical conditions, and substance specific syndromes.
* EEG, although not diagnostic, will see slowing or focal activity. Slowing really means nothing though.
* Neuro-imaging testing can be done, especially if due to medical reasons.
* Neuro-psychiatric testing can be done, especially if due to medical reasons.
* Treatment is amelioration of underlying pathology (e.g. CNS pathology, stopping a medication). Management includes frequent orientation, reassurance, and emotional support.
* Delirium is characterized by prominent disturbances in alertness, confusion, and a short and fluctuating course, caused by acute metabolic problems or substance intoxication.
* Most common cause of delirium is drugs. Delirium typically lasts from days to weeks.
* Risk factors include medical conditions, such as systemic infections, metabolic disorders, hepatic diseases, seizures, and head trauma.
* Associated with high, sustained, or rapidly decreasing level of many drugs, especially in the elderly or debilitated.
* Elderly patients have lower glomerular filtration rate (GFR), so a “normal” dose will remain longer.
* Delirium occurs in 25% of elderly, hospitalized patients. Prevalence is almost 50% post-hip surgery.
* Presents with agitation or stupor, fear, emotional lability, hallucinations (patient may scream in the middle of the night or talk to family members who are not there), delusions, and/or disturbed psychomotor activity.
* Physical exam may show incoordination, tremor, asterixis (hand flapping), nystagmus, incontinence, general medical conditions, and substance specific syndromes.
* EEG typically finds slowing of waves or local abnormalities. Not much information here.
* Neuro-imaging testing and neuro-psychiatric testing may be ordered as well.
* Treatment is focused on ameliorating the underlying condition (e.g. stop drug, treat infection).
* Treatment includes frequent orientation (e.g. calendar on wall), reassurance, protective use of physical restraints, and high potency antipsychotic medications (less anticholinergic side effects).
* DDx includes dementia, substance intoxication or withdrawal, psychotic disorders.
* Example, 85yo patient starts having visual hallucinations for the first time. Think delirium and not schizophrenia.
* Dementia is characterized by prominent memory disturbances coupled with other cognitive disturbances that are present even in the absence of delirium. Caused by CNS damage and tends to have a chronic course.
* 90% of dementias are irreversible.
* Risk factors include neurodegenerative disease (Alzheimer, Pick, Huntington), cerebrovascular disease (vascular dementia), intracranial processes (HIV), traumatic brain injuries, radiation, and tumors.
* Studies show most people who have had a traumatic brain injury eventually develop some type of dementia.
* Risk factors include seizure disorders, metabolic disorders (Wilson), endocrinopathies (hypothyroidism), nutritional deficiencies (thiamine), pernicious anemia (vitamin B12), and toxins (alcohol, medications).
* Prevalence is 5% of the population over 65 years of age, and more than 20% of those over 85yo.
* Some types of neurodegenerative dementias are inheritable.
* Key symptoms are increasing disorientation, anxiety, depression, emotional lability, personal disturbances, hallucinations, and delusions.
* Disorientation occurs in the order of time, place, and person.
* Visual hallucinations are more likely in delirium than dementia.
* Associated findings of dementia include abnormalities in neuro-imaging testing and neuropsychiatric testing.
* The stability or deterioration of course depends on etiology.
* Physical exam could show CNS pathology, general medical conditions, and substance specific symptoms.
* Alcohol dementia is the third most common cause. Physical exam would find features of alcoholism.
* Atrophy of the caudate nucleus, with resultant ventricular enlargement, is common.
* Caused by a defect in an autosomal dominant gene located on short arm of chromosome 4.
* Huntington disease is a rare, progressive, neurodegenerative disease that involves loss of GABAergic neurons of the basal ganglia, manifested by choreoathetosis, psychosis, and dementia.
* Altered personality and loss of fear of predators; a high rage threshold, so takes a lot to get them upset.
* Pick disease is another type of dementia. Neuroanatomical findings include atrophy in the frontal and temporal lobes. Histopathology findings include Pick bodies and Pick cells in affected areas of the brain.
* Alzheimer disease is associated with chromosome 21 (Down syndrome association). Findings include decreased acetylcholine (Ach) and norepinephrine (NE). Ach is linked to memory.
* Alzheimer dementia patients occupy more than 50% of nursing home beds.
* It is found in 50-60% of patients with dementia.
* Risk factors are female gender, family history, head trauma, and Down syndrome.
* Neuroanatomical findings include cortical atrophy, flattened sulci, and enlarged ventricles.
* Histopathology findings include senile plaques (amyloid), neurofibrillary tangles, neuronal loss, synaptic loss, and granulovascular degeneration of neurons. Congo red stain is used for amyloid.
* Alzheimer disease is associated with chromosome 21 (Down syndrome association).
* Findings include decreased acetylcholine (Ach) and norepinephrine (NE). Ach is linked to memory.
* Deterioration is generally gradual, with average duration from onset to death being about 8 years.
* Focal neurologic symptoms or deficits are rarely seen.
* Treatment includes long-acting cholinesterase inhibitors, such as tacrine (Cognex) or donepezil (Aricept).
* Risperidone and other high potency antipsychotic medications be helpful in low doses to decrease agitation.
* Risperidone, olanzapine, and quetiapine (atypical antipsychotics) can be used; clozapine is second line.
* If vascular dementia, may have lateralizing signs, carotid bruits, dyssynergia, weakness, and/or focal deficits.
* Vascular dementia found in 15-30% of patients with dementia. Second most common type of dementia.
* Risk factors include male gender, hypertension, or other cardiovascular disorders.
* Affects small and medium sized vessels. Use to be called multi-infarct dementia.
* Examination may reveal carotid bruits, fundoscopic abnormalities, and enlarged cardiac chambers.
* MRI may reveal hyper-intensities and focal atrophy suggestive of old infarctions.
* Deterioration may be stepwise or patchy, depending on underlying pathology.
* In contrast, Alzheimer dementia is usually linear or continuous decline.
* In vascular dementia, focal neurologic symptoms are common.
* Abnormal reflexes and gait disturbances are often present.
* Treatment is directed toward the underlying condition and lessening cell damage.
* Control of certain risk factors is useful, such as smoking cessation, control of cholesterol, etc.
* Cerebrovascular pathology, endarterectomy (e.g. carotid artery), correction of sources of emboli, and anticoagulation therapy may be indicated.
* Thrombolytic agents (TPAs) are given in hopes of decreasing cellular ischemia during the first hours of an acute ischemic stroke. Tissue plasminogen activator is known as tPA.
* Pick disease is another type of dementia. Neuroanatomical findings include atrophy in the frontal and temporal lobes. Histopathology findings include Pick bodies and Pick cells in affected areas of the brain.
* Etiology is unknown. Most common in men with family history of Pick disease.
* Difficult to distinguish from Alzheimer disease; look for atrophy of the frontal and temporal lobes.
* May see features of Kluver-Bucy syndrome, such as hyperphagia, hyperorality, hyper-sexuality, and passivity.
* Passivity means lack of fear of predators; a high rage threshold, so takes a lot to get them upset.
* Creutzfeldt-Jakob disease is a rare spongiform encephalopathy caused by a slow virus (prion).
* A prion is a protein with no RNA or DNA material.
* Presents with dementia, myoclonus, and EEG abnormalities. Very rapid progression; the “worst” dementia.
* Symptoms progress over months from vague malaise and personality changes to dementia and death.
* Findings include visual and gait disturbances, choreoathetosis and other abnormal movements, and myoclonus.
* Huntington disease is a rare, progressive, neurodegenerative disease that involves loss of GABA-ergic neurons of the basal ganglia, manifested by choreoathetosis, psychosis, and dementia.
* Caused by a defect in an autosomal dominant gene located on short arm of chromosome 4.
* Atrophy of the caudate nucleus, with resultant ventricular enlargement, is common.
* Clinical onset usually occurs at approximately 40 years of age.
* Triad for Huntington: dementia, choreoathetosis, and psychosis (e.g. visual hallucinations).
* Chorea athetosis could be described as being clumsy, or dropping objects.
* Early symptoms include personality changes and subtle movement disturbances with progression to choreoathetosis and dementia.
* Behavioral disorganization, severe mood instability, suicidal behavior, and psychotic features are fairly common.
* Parkinson disease is a common, progressive, neurodegenerative disease involving loss of dopaminergic neurons in the substantia nigra.
* Clinical onset is usually between age 50 and 65.
* Motor symptoms include resting tremor (e.g. pill-rolling), rigidity, bradykinesia, and gait disturbances.
* Dementia occurs in 40% of cases, and depressive symptoms are common.
* Differentiate normal aging tremor (intention tremor) from Parkinson dementia tremor (resting tremor).
* Intention tremor is a tremor that occurs only when something is picked up and/or moved, not at rest.
* So, a sloppy signature would be indicative of normal aging. A normal signature would be seen in Parkinson.
* Destruction of dopaminergic neurons in the substantia nigra is a key pathogenic component, and may be caused by multiple factors, including environmental toxins, infection, genetic predisposition, and aging.
* Treatment of Parkinson disease involves use of dopamine precursors, dopamine agonists, anticholinergic medications, amantadine, and selegiline. L-DOPA is used because dopamine does not cross the blood brain barrier.
* HIV related dementia is caused by HIV directly and progressively destroying brain parenchyma.
* It becomes clinically apparent in at least 30% of individuals with AIDS, beginning with subtle personality changes. May include 70-90% of patients by the time they die.
* Diffuse and rapid multifocal destruction of brain structures occurs, and delirium is often present.
* May be misdiagnosed as depression in early stages due to complaints of apathy, social withdrawal, and dysphoria.
* Motor findings include gait disturbances, hypertonia, and hyperreflexia, pathologic reflexes, and oculomotor deficits. Mood disturbances in individuals with HIV infection may mimic cognitive impairment.

Amnestic Disorders
* Amnestic disorders are characterized by prominent memory impairment in the absence of disturbances in level of alertness or the other cognitive problems that are present with delirium or dementia.
* Risk factors include bilateral damage to diencephalic and mediotemporal structures, thiamine deficiency, head trauma, cerebrovascular disease, hypoxia, local infection, ablative surgical procedures, seizures, and alcohol.
* Alcohol is the most likely cause or amnestic disorders.
* Presenting symptoms include memory loss that may be sudden or gradual, depending on etiology.
* Recent memory is disproportionately affected. Patient won’t remember what they did yesterday or ate for breakfast.
* Confabulation (false memory formation) often occurs, as in Korsakoff encephalitis.
* When doing physical exam, will typically see evidence of alcohol abuse.
* Example of confabulation would be meeting a patient for the first time, introducing yourself, then the patient starts telling you a story about all of the wonderful things you’ve done for him in the past, how you took care of his children, how you took care of his wife, what a wonderful doctor you are, etc.
* Testing includes EEG (typically slowing of waves), neuro-imaging and psychiatric testing (may be abnormal).
* Dx include delirium, dementia, and dissociative amnesia.
* Dissociative amnesia is where a patient exhibits a stressor and has a memory loss.
* A 65yo woman is found by the police in a filthy apartment after they were called by neighbors complaining of an unpleasant odor. Police find spoiled food in the kitchen, clogged sinks and toilets, and severe infestation of cockroaches. The woman angrily refuses to leave with the police, stating that her neighbors have threatened her with attack and she fears that they will rob her apartment in her absence. Emergency room assessment reveals a very frail and unkempt woman who is completely alert and attentive. She believes it is 10 years earlier than it actually is, and she seems confused about her current finances and social contacts. She is unable to give the current addresses or phone numbers of her children and cannot find her phone book or purse. Answer is dementia, likely Alzheimer.

Dissociative Disorders
* Dissociation is the fragmentation or separation of aspects of consciousness, including memory, identity, and perception. Some degree of dissociation is always present, however, if an individual’s consciousness becomes too fragmented, it may pathologically interfere with the sense of self and ability to adapt.
* So, it is splitting off of the brain from conscious awareness.
* Example of normal dissociation is getting in car to drive to work and not remembering seeing any traffic, stop lights, or landscape on the way there. All you know if you got in the car and now you’re at work.
* Another example is you are hungry for something in particular, open the fridge, and then just stare.
* Another example is being in bed, getting thirsty, then getting up for water but ending up in the living room wondering why you are there, forgetting that you wanted to go to the kitchen.
* Sybil was a book that told the story of Mason, who had dissociative personality disorder (formerly multiple personality disorder) as a result of severe sexual abuse by her mother. Her brain created another personality to dissociate (protect) herself from realizing the horrible acts she was going through.
* Presenting complaints and findings of dissociative disorders include amnesia, personality changes, erratic behavior, and odd inner experiences (e.g. like in a dream, like floating and seeing self below).
* Dissociative amnesia is significant episodes in which the individual is unable to recall important and often emotionally charged memories. This typically occurs as a result of psychological stress.
* Seen more commonly in women and younger adults.
* Onset is usually detected retrospectively by the discovery of memory gaps of extremely variable duration.
* Symptoms include amnesia that may be general or selective for certain events. E.g. “I don’t remember my name.” Amnesia may suddenly or gradually remit, particularly when the traumatic circumstance resolves.
* Associated problems include mood disorder, conversion disorder, and personality disorders.
* Treatment includes diagnostic evaluation for general medical conditions or substances that may cause amnesia. Treatment of associated general medical conditions may improve overall level of cognitive and adaptive function.
* Hypnosis (to retrieve memories), suggestion, and relaxation techniques are helpful.
* The patient should be removed from stressful situations when possible.
* Psychotherapy should be directed at resolving underlying emotional stress.
* DDx include amnestic disorders due to a general medical condition, substance induced amnestic disorder, and dissociative disorders.
* Dissociative fugue is a sudden, unexpected travel, accompanied by the inability to remember one’s past and by confusion about personal identity, or by the assumption of a new identity.
* Example is a patient who got in a car accident, then moves across the country, starts a new life with a new name, and has no memory of their previous identity or life. Another example is Jason Borne in the movie Borne Identity.
* Risk factors are psychological stressors, more severe than dissociative amnesia (e.g. during war).
* Incidence is 0.2%. Onset is usually sudden, often following a stressful life event.
* Most episodes are isolated and last from hours to months.
* Resolution is usually rapid, but amnesia may persist.
* Associated problems are mood disorders, PTSD, and substance-induced disorders.
* Treatment is diagnostic evaluation for general medical conditions or substances that may cause amnesia.
* Hypnosis, suggestion, and relaxation techniques are helpful. Amobarbital (Amytal) interview may be used.
* DDx includes complex partial seizures, other dissociative disorders, factitious disorder, and malingering.
* Example for malingering is living in New York City and owing lots of people money. It would be pretty easy to move to New Jersey, start a new identity, then claim you don’t know anyone when they find you.
* Patients with dissociative amnesia are aware of the memory loss (e.g. “I don’t remember my name”).
* Patients with dissociative fugue, typically, are not aware of the memory loss. They are convinced that their new identity is their actual real identity and have no recollection of any previous identity.
* Dissociative identity disorder (formally multiple personality disorder) is the presence of multiple, distinct personalities (two or more) that recurrently control the individual’s behavior, accompanied by failure to recall important personal information.
* Example is personality A goes to a movie. During the movie, personality B comes out, and is confused about why they are at a movie because they don’t remember buying a ticket.
* Childhood sexual abuse has been postulated as a risk factor.
* Seen more commonly in women. Usually occult (may take many years), clinical presentation is several years later when disturbances in interpersonal functioning are present.
* The presence of distinct personalities is often subtle. In some cases, it is discovered only during treatment for associated symptoms.
* Associated problems include chaotic interpersonal relationships, impulsivity and self-destructive behavior, suicide attempts, and substance abuse.
* Co-morbid conditions are borderline personality disorder, PTSD, major depressive disorder and other mood disorders, substance-related disorders, sexual disorders, and eating disorders.
* Symptoms may fluctuate or be continuous. Look for gaps in memory. “I miss days in the week.”
* Might say, “Someone is trying to make me go crazy. They are coming into my house, changing my furniture, changing my clothes, and they’re doing this just to bother me.”
* DDx include borderline personality disorder and other personality disorders, bipolar disorder with rapid cycling, factitious disorder, and malingering.
* Treatment is psychotherapy to uncover psychologically traumatic memories and to resolve the associated emotional conflict. Hypnosis or Amytal interview could be used as well.
* Depersonalization disorders are characterized by persistent or recurrent feelings of being detached from one’s mental processes or body, accompanied by intact sense of reality.
* Psychological stress it the major risk factor.
* Episode of depersonalization are common.
* Usually in adolescence or early adulthood. Stressful events may precede the onset of the disorder.
* Depersonalization described as “out-of-body experience.” (Patient believes they are not real)
* Derealization means a perception of the environment is often distorted or strange during episodes of depersonalization, accompanied by a feeling of being detached from physical surroundings. Jamais vu (a sense of familiar things being strange), déjà vu (a sense of unfamiliar things being familiar), and other forms of perceptual distortion may occur. (Patient believes the world is not real)
* DDx includes substance-induced mental disorders with dissociative symptoms.
* Treatment is psychotherapy.
* Volunteers bring a 19yo man to the emergency department from a homeless shelter. The man claims he cannot remember who he is. He says that he found himself in Los Angeles, but that he cannot remember where he comes from, the circumstances of his trip, or any other information about his life. He has neither identification nor money, but he has a bus ticket from New York. Answer is dissociative fugue.

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**Eating Disorders**

* If a patient binges and purges, do not automatically think bulimia nervosa. If a patient exercises and fasts, do not automatically think anorexia nervosa. They will be doing the same thing, but for different reasons.
* In anorexia, there is a significant weight loss. In bulimia, the weight will be around normal.
* Anorexia nervosa is characterized by failure to maintain a normal body weight.
* There is a fear and preoccupation with gaining weight and unrealistic self-evaluation as being overweight.
* Tend to have amenorrhea for 3 cycles or more.
* Subtypes are restricting (no binge-eating or purging) and binge-eating/purging (regularly engaged in binge-eating/purging).
* There is a body image disturbance present; they feel overweight no matter what. In contrast, body dysmorphic disorder is when the patient feels one part of their body is abnormal.
* Biologic factors are suggested by higher concordance for illness in monozygotic twins.
* Amenorrhea may precede abnormal eating behavior.
* Psychological risk factors include emotional conflicts concerning family control and sexuality.
* There may be a cultural risk factor due to emphasis on thinness.
* Prevalence is 0.5% and occurs at a 1:10 male-to-female ratio.
* Average age of onset is 17 years. Late onset anorexia nervosa has a poorer prognosis.
* Onset is often associated with emotional stressors, particularly conflicts with parents about independence, and sexual conflicts.
* Patients restrict food intake and maintain diets of low-calorie foods. Weight loss may also be achieved through purging (i.e. vomiting or taking laxatives, diuretics, or enemas) and exercise.
* Great concern with appearance. Significant amount of time spent examining and denigrating self for perceived signs of excess weight.
* Denial of emaciated conditions.
* With binge eating/purging, self-induce vomiting, laxative abuse, and diuretic abuse may be seen.
* About 70% of girls with anorexia nervosa also binge and purge.
* Associated symptoms include excessive interest in food-relative activities (other than eating), obsessive-compulsive symptoms, and depressive symptoms.
* Some individuals recover after a single episode and others develop a waxing and waning course.
* Physical exam may show signs of malnutrition including emaciation, hypotension, bradycardia, lanugo hair, and peripheral edema.
* Signs of purging include eroded dental enamel caused by emesis and scarred, scratched, or callused hands/fingers from self-gagging to induce emesis.
* General medical conditions caused by abnormal diets, starvation, and purging.
* These patients may lose about 15-20% of what is considered ideal body weight.
* Signs of malnutrition are normochromic normocytic anemia, elevated liver enzymes, abnormal electrolytes (e.g. hypomagnesemia), low estrogen and testosterone levels, sinus bradycardia, reduced brain mass, and abnormal EEG.
* Typical cause of death in these patients is abnormal electrolytes, particularly hypokalemia.
* Signs of purging are metabolic alkalosis (loss of gastric acid), hypochloremic hypokalemia caused by emesis, and metabolic acidosis caused by laxative abuse.
* Initial treatment should be correction of significant physiologic consequences of starvation with hospitalization if necessary. Behavioral therapy should be initiated, with rewards or punishment based on absolute weight, not based on eating behaviors.
* Could sign a contract with the patient, saying you must gain a pound per week else you are fed via NG tube.
* Family therapy designed to reduce conflicts about control by parents is often helpful.
* Antidepressants may play a limited role in treatment when comorbid depression is present (cause weight gain).
* DDx includes bulimia nervosa, general medical conditions that cause weight loss, major depressive disorder, schizophrenia, OCD, and body dysmorphic disorder.
* Anorexic may hide food around the house then throw it away when no one is around. They do this to make others think they are eating. They may serve themselves a larger portion when others are around to hide the problem.
* Bulimia nervosa is characterized by frequent binge eating and purging and a self-image that is unduly influenced by weight.
* Purging is self-induced vomiting or the use of laxatives, diuretics, or enemas.
* Non-purging includes fasting or exercise, but no purging during bulimic episodes.
* Psychological conflict regarding guilt, helplessness, self-control, and body image may predispose.
* Biologic factors are suggested by frequent association with mood disorders.
* Prevalence is 2% in young adult females. Occurs at a 1:9 male-to-female ratio.
* Onset is usually during late adolescence or early adulthood and often follows a period of dieting.
* Course may be chronic or intermittent.
* 70% of cases have remitted after 10 years. Co-occurring substance abuse is associated with a poorer prognosis.
* Symptoms include recurrent episodes of binge eating and recurrent, inappropriate compensatory behavior.
* Self-evaluation is unduly influenced by body shape and weight.
* Associated problems include depressive symptoms, substance abuse, and impulsivity.
* Typical foods during a binge are carbohydrate-rich (e.g. cookies, potato chips, pies, cakes, pastries).
* Comorbid disorders include borderline personality disorder, seen in about 50% of cases.
* Physical exam may show evidence of purging (e.g. Mallory-Weiss tears).
* Diagnostic tests may show evidence of laxative or diuretic abuse.
* Treatment is cognitive and behavioral therapy.
* Psychodynamic psychotherapies are useful for accompanying borderline personality traits.
* Antidepressant medications, particularly SSRIs, are usually employed. Bulimia linked to low levels of serotonin.
* DDx includes anorexia nervosa, binge eating/purging, major depressive disorder with atypical features, and borderline personality disorder.
* Anorexic and bulimic patients would rather eat alone so they can serve themselves the amount of food they want.
* Bulimic patients also hide food around the house, but they do it to go eat it secretly.
* Bulimia associated with kleptomania, stealing things that they do not need.
* A 19yo woman is hospitalized for dehydration caused by severe, laxative induced diarrhea. She is depressed about the recent breakup of a romantic relationship. She admits that she uses laxatives because she has been binge-eating frequently and is worried about gaining weight. Although the woman is very thin, she believes that she is overweight. She has never had a menses. Answer is anorexia nervosa.
* Rough estimate for ideal body weight: women who are 5’ tall should weigh 100lbs. For every inch over 5’, add 5lbs. So if you’re 5’ 7”, ideal body weight is 135lbs.
* For men, 5’ should weight 106lbs. For every inch over 5’, add 6lbs. If a man is 6’ tall, they should weight 178lbs.
* May describe patient as a gymnast, a ballerina, a supermodel, or another “thin” body-type profession.

Substance Dependence
* Substance dependence is characterized by substance abuse that leads to loss of control or substance use and monopolization of time by substance use. The individual spends the majority of his time obtaining and using drugs, recovering from drug use, and discussing drugs. “Drugs become your life.”
* Substance abuse is an individual who uses drugs in a maladaptive way (e.g. gets self in trouble). Example is a patient who only drinks on weekends saying, “I work 9-5 during the week and don’t drink a drop.” However, they only drink to get drunk and every time they get drunk they get in trouble, than that is abuse (e.g. alcoholic).
* Substance dependence involves adverse medical, social, or emotional consequences from substance use, including tolerance (more drug needed to produce the same effect) and withdrawal.
* Sons of alcoholics are more likely to develop alcoholism than is the general population.
* Individuals who are innately more tolerant to alcohol may be more likely to develop alcohol abuse.
* Poor parenting, childhood physical or sexual abuse, and permissive attitudes toward drug use.
* Twin studies show children of alcoholic parents are 4 times more likely to develop alcoholism.
* Asians are less likely to develop alcohol abuse because they have reduced amounts of aldehyde dehydrogenase, the enzymes that breaks down acetaldehyde into acetic acid. So if acetic acid is not produced then you have a build-up of acetaldehyde, which is toxic (e.g. facial flushing, getting sick).
* Environmental risk factors include peer pressure, economic disadvantage, and social isolation.
* Psychiatric disturbances can also lead to increased drug use, such as conduct disorder, ADHD, depression, bipolar disorder, and low self-esteem.
* The self-medication hypothesis states individuals with certain psychological problems may abuse substances in an effort to alleviate symptoms.
* Alcohol abuse affects 14 million people in the United States (5% of population).
* Drug abuse affects 3 million people in the United States.
* The highest prevalence of substance abuse is between 18 and 22 years of age (i.e. college). However, a high incidence of alcohol use during college does not necessarily imply future alcoholism.
* Experimentation with gateway drugs (e.g. tobacco, alcohol, then marijuana) may start as early as preadolescence.
* When assessing substance abuse, a clinician should maintain an index of suspicious, expect denial from abusers, and try to obtain additional history from significant family members or friends.
* Clinical interview should include questions about family function, school and occupational performance, and interactions with friends and acquaintances.
* No one likes to admit they have a problem with drugs, so you cannot trust the patient.
* Substance abuse history should include what drugs do you use, how much do you use, when do you use it, what happens to you, have you had withdrawal, have you been in treatment centers, have you been in rehab programs, etc.
* CAGE questionnaire for alcohol abuse. Affirmative answer to any 2 of the questions (or to the last question alone) is suggestive of alcohol abuse. C = Cut down, A = Annoyed, G = Guilty, E = Eye-opener.
* Have you ever felt that you should cut down on your drinking? Have you ever felt annoyed by others who have criticized your drinking? Have you ever felt guilty about your drinking? Have you ever had a morning drink (eye-opener) to steady your nerves or alleviate a hangover?
* In addition to a general physical examination, the clinician should look for signs of poor hygiene, poor nutrition, cough, and physical signs of drug use including burns, needle marks, and/or skin infections.
* Look for evidence of self-inflicted injuries or accidents, substance intoxication, and substance withdrawal.
* Laboratory toxicology includes breath (alcohol), blood, and urine drug screens (with permission).
* Alcohol intoxication in most states is 100mg/dL of alcohol or 0.1% BAC. Some states down to 0.08, 80mg/dL.
* Urine can test for TCAs, barbiturates, benzos, opiates/opioids, and more.
* Cocaine is likely the shortest, staying in the urine 2-3 days at most.
* Marijuana is likely the longest, staying up to 30 days, especially for chronic users.
* Hair testing is not routinely ordered, but provides a longer window of detection. Even if the person being tested has a shaved head (perhaps in preparation for the test), hair can also be taken from almost any other area of the body (e.g. facial hair, the underarms, arms, and legs). This test is most useful for programs with a zero-tolerance policy.
* Laboratory detection of alcohol abuse includes SGGT, SGOT, SGPT, and LDH.
* Intravenous drug abuse workups include HIV, hepatitis B, hepatitis C, and tuberculosis.
* Ask about “licking the needle” as this may predispose patients to polymicrobial endocarditis and other infections as a result of mouth flora being injected into the bloodstream.
* Symptoms include overwhelming anxiety, depression, or emotional turmoil associated with specific stressors.
* Associated problems include social and occupational performance deterioration, and erratic or withdrawn behavior. Patient’s life basically spirals out of control.
* Treatment for alcohol dependence includes using medications that reduce cravings (naltrexone), referral to group psychotherapy (alcoholics anonymous/AA) and family members to Al-Anon, and consider behavioral approaches, such as aversive conditioning with disulfiram (inhibits aldehyde dehydrogenase).
* Many experts believe naltrexone really doesn’t work.
* AA for patients and Al-Anon for family members to learn how to stop enabling the user. Al-Teen also.
* Disulfiram has to be purely volitional. If you hide it in your spouse’s coffee, they won’t learn. Anything with alcohol will cause a reaction (e.g. crème brûlée due to vanilla extract, mouthwash, perfume, cologne). The patient would then learn to avoid the restaurant or perfume, instead of ethanol alcohol.
* Since smoking is so difficult to quit, it is essential to ask all patients first if they are ready to quit smoking. Almost no one really wants to smoke, but being willing to quit is a different story.
* Treatment for nicotine dependence includes using medications that reduce cravings (bupropion), referral to group psychotherapy (smoking cessation groups), and consider the use of behavioral approaches, such as fading where you slowly reduce the reinforcer with the subject being aware. Examples include the patch, nicotine gum, and inhaler.
* If the patient lives in a house with other smokers, try to get everyone to do treatment at the same time.
* Example is the patch, starting with 21mg, then going to 14mg after several weeks, and finally to 7mg.
* The patch is the most commonly used, but always refer the patient to group psychotherapy as well.
* Treatment for opioid dependence includes using medications to reduce cravings (naloxone), referral to group psychotherapy (narcotics anonymous/NA), and use of methadone to slowly taper the patient off narcotics.
* Naltrexone and naloxone blocks opioid receptors. Naltrexone is given by mouth and has a long half-life.
* A significant number of patients remain on methadone treatment for their entire lives.
* Detoxification is substance-specific but generally involves calming support, reassurance, occasional adjunctive pharmacology, and diagnosis and treatment of medical complications have been the most effective treatment available for many adult substance abusers, both for rehabilitation and relapse prevention.
* Prevention programs teach adolescents how to resist social pressures to use drugs and to enhance other social and personal skills. “Just say no” campaign commercials.
* Drug rehabilitation involves cessation of drug use and development of new coping skills that make relapse less likely. This could involve finding new friends, finding a new job, etc.
* Self-help groups have been the most effective treatment available for many adult substance abusers, both for rehabilitation and relapse prevention.
* Disulfiram is an aldehyde dehydrogenase inhibitor that causes an unpleasant reaction when alcohol is ingested.
* Naltrexone is an opioid antagonist that blocks the pleasurable effects of opioids and alcohol.
* Methadone and long-acting L-alpha-acetylmethadol (LAAM) are opioid agonists that decrease the chance of recurrence of severe heroine dependence. LAAM has a much longer half-life than methadone.
* Complications include social deviancy, depression, drug-induced CNS damage, and trauma from accident.
* 25% of the U.S. population uses nicotine regularly. Recommend cessation to patients (e.g. 1-800-QUIT-NOW).
* Alcohol is the most commonly abused substance in the U.S. Beer and wine are the alcoholic beverages of choice for most abusers.
* Marijuana (cannabis) is the most frequently used illicit drug. Compulsive use of marijuana is associated with poor adaptation skills.
* Use of crack cocaine has declined recently. Psychosis, panic, and violence are common findings in heavy users. Significant withdrawal symptoms occur, and this may strongly contribute to compulsive use.
* Cocaine works on the dopaminergic system, so use increases dopamine levels. This increases paranoia.
* Suicidal ideation is an important withdrawal symptom to watch for in cocaine abusers.
* Acute coronary syndrome (ACS) may occur in cocaine users due to coronary vasospasm created by the drug. ACS covers unstable angina, ST elevation myocardial infarction (STEMI), and Non-STEMI (NSTEMI).
* Amphetamines are rapidly increasing in popularity. Methamphetamine (“crystal,” “ice”) is usually theamphetamine of choice and is often taken intranasal. Some occupational groups, especially those that require prolonged alertness (e.g. truck drivers) are at risk for amphetamine abuse. Binge abuse is the usual pattern because tolerance develops quickly.
* Opiates are natural alkaloids of the opium poppy, such as morphine and codeine.
* Opioids are endogenous (e.g. endorphins, enkephalins), semi-synthetic (e.g. heroin, hydromorphone, hydrocodone, oxycodone), or fully synthetic (e.g. fentanyl, methadone, tramadol) chemicals that bind to opioid receptors.
* Heroin is by far the most commonly abused opioid. Opioid abusers often isolate themselves from nonusers. Avoidance of opioid withdrawal often leads quickly to daily use and a need to obtain money for the habit.
* Opioids/opiates cause pinpoint pupils (miosis), respiratory depression, slurred speech, constipation, and coma.
* If patient presents with pinpoint pupils and lower level of consciousness, assume opioids. Drug of choice is naloxone (Narcan), which blocks opioid receptors, preventing respiratory depression.
* Inhalants commonly abused include gasoline, glues, paint thinners, and solvents. Inhalants are often used by younger and poorer populations (e.g. Central America) because they are cheap and accessible. Gasoline and toluene are associated with significant and possibly irreversible cognitive impairment in users.
* Phencyclidine (PCP) use has declined. Violence (e.g. homicide, “super human strength”) and psychosis are common with PCP intoxication. There is also an association with nystagmus of the eyes.
* Treatment involves removing sensory stimulation, such as putting the patient in a dark, quiet room.
* Hallucinogens include lysergic acid diethylamide (LSD, “acid”), mescaline (peyote), and psilocybin (mushrooms). Use of hallucinogens is usually intermittent. These work on serotonin (possible association with schizophrenia).
* Hallucinogens cause “trips” with depersonalization and derealization. Example would be a person getting up on a balcony, jumping off, and flapping their arms to fly.
* Hypnagogic regression (“flashback”) is when the individual experiences some subjective effects long after the drug has worn off, usually days after a typical dose. These effects usually are shorter than the original “trip.”
* Hallucinogen persisting perception disorder (HPPD) is characterized by continual visual disturbances that are reminiscent of those generated when previously ingesting hallucinogens.
* Designer drugs are transiently popular among small groups. Many of these drugs are methoxylated amphetamines, including 3,4-methylenedioxymethamphetamine (MDMA), which is known as “XTC” or “ecstasy,” N,N-dimethyltryptamine (DMT), and MDEA (“eve”).
* Benzodiazepines and other sedative-hypnotics are prescribed frequently. Older persons may be at special risk because of problems with insomnia. Tolerance and withdrawal are common. Patients should be tapered off benzodiazepines slowly to reduce seizure risk.
* Anabolic steroids are used by approximately 5% of adolescents, predominantly males. Some anabolic steroids may have psychoactive effects. They are commonly associated with other substance abuse. Example is a young weight lifter is brought into the hospital with psychotic symptoms.
* “Date-rape” drugs include flunitrazepam (Rohypnol), which produce rapid onset of benzodiazepine-like intoxication including amnesia. Gamma-hydroxybutyrate (GHB) produces a giddy intoxication lasting 4 hours.
* Substance intoxication is a reversible, substance-specific syndrome caused by the recent ingestion of or exposure to a substance.
* Substance withdrawal is a substance specific, maladaptive behavioral change, with physiologic and cognitive concomitants, caused by the cessation of or reduction in heavy and prolonged substance use.
* Family intoxication and withdrawal are disturbances that are a direct physiologic result of a substance. Many recreational drugs, both legal and illicit, can cause intoxication and withdrawal.
* When getting a substance abuse history, ask what substance(s) used, dosage(s), effects, duration and social context of use, plus prior experiences with substance detoxification, rehabilitation and relapse prevention.
* Medical history includes complications of substance abuse (e.g. elevated liver enzymes in alcoholism).
* Past psychiatric history includes other primary psychiatric diagnoses and past treatments.
* Mental status exam includes signs of substance-induced disorders (e.g. paranoia in cocaine intoxication).
* Physical exam includes signs of substance abuse (e.g. tremors or seizures in alcohol withdrawal).
* Toxicology examination for types of substances and concentrations is helpful.
* Treatment is correction of physiologic complications resulting from substance abuse, emotional reassurance and a structured/secured environment, and pharmacologic intervention to ameliorate psychologic or physical symptoms.
* If patient has history of alcohol abuse, standard procedure is to prevent delirium tremens (DTs). It typically only occurs with heavy drinking for 3-5 years. This includes thiamine (prevents Wernicke encephalopathy), multivitamins and folic acid, and benzodiazepines for 3-5 days tapered slowly. Peak for DTs is 3-4 days. Most frequently used benzodiazepine is chlordiazepoxide (Librium) or oxazepam (Serax).
* A 29yo man is brought in by judicial order for evaluation of his continued involvement with heroin use. The man denies that he is addicted but is willing to enter treatment in order to avoid more severe criminal penalties. Which of the following is essential to determine the presence of heroin dependence in this individual? Answer is he spends all his time trying to obtain heroin and can’t stop himself from using it.