

Substance Use Disorders for Students

Audio	Video
<p>[Mark] Okay. So this is the second attempt to record this lecture. And I actually, cut several of the slides that I thought had to do more with psychopharmacology that we would deal with, this summer. So this is a shorter version. So diagnosis of says substance use disorders.</p>	<p>PowerPoint presentation. Background is off white with black font. Title: Information About Substance Use Disorders for Students Mark Cogburn, D N P, P H D, A P R N Professor of Clinical Psychiatry and Behavioral Medicine Director, Student Counseling Center L S U H S C - Shreveport</p>

So the first thing is that I like to make you think about.

We tend to stereotype addicts as being a particular way. Looking a particular way, behaving in particular ways. And, this whole idea here in the first three points is Cartesian dualism. Is this idea that you're familiar with, you just probably don't know about that term where my mind controls my body. And that's really important in addiction, especially with adolescent addiction, in that, their brain is developing and...

We and when they are having, cravings and they have, severe substance use disorders. We try to teach them that just because your cells in your body are screaming, give me more alcohol, give me more, benzodiazepine. Giving more coke that your mind doesn't have to give in to that. And this idea of the distinction between my mind and what my body is asking me to do is an important part of that kind of treatment.

And it's it's important in terms of it gives the patient light some strength. It is directly in conflict with the first couple of steps in AA, which says, I am completely powerless to whatever the substance is. This is, more of a broad idea of my mind can tell my body no.

Okay. Modern recovery. So, you know, we use a strong AA model here in the United States, especially in the South. That's what you're going to be dealing with. We do have some spiritual programs around here, but out west, on the West Coast, they have more, they have a variety of different programs that are less disease oriented.

I think of like, chemical dependency and I think of the disease model, I think the disease model is really good at explaining it. It doesn't always work in applying the treatment to it, but it does help explain it. It's just like the, chemical imbalance in the brain. That's a great way to explain something to somebody. But but we know that it doesn't always hold up. A couple of different studies just to make you think.

Title: Can Addiction Also be a Choice?

Bullet point list:

- Supreme Court decision in 2005 to eliminate death penalty for children and adolescents
- "Brain is still developing"
- Cartesian Dualism (Mind/Body)
- Modern Recovery Movement: less disease oriented, focus on strengths and collaborate with professionals
- Money vs. Cocaine in C C U (Wesley et al., 2014)
 - Chronic Cocaine Users chose immediate cash over cocaine
 - "Addicts" CAN and do make healthy decisions everyday
- Operation Golden Flow (1971)
 - Studied by Lee Robbins for years: 3 years
 - "once a heroin addict always a heroin addict?"
 - Power of environment and boredom

A study that I can't believe an institutional review board approved, but they did. So they had chronic cocaine users come in for an intervention. And the interventions were, I will give you cash or I will give you cocaine. If you think about a university saying, yeah, give them cocaine if they want it. But they did. And. Invariably the chronic cocaine, addicts and then whatever we're calling this addiction, heavy severe substance users, they chose the money, they chose the cash. And I put that up there to remind you that, again, challenge the stereotype. We think of the sloven, homeless, craving, bothersome person who's just doing everything for a hit of the next drug sick, sitting over in the corner somewhere in some unoccupied building - that does exist.

But there are also addicts that get up every morning and go to work, or get up in the morning and get the kids off to school and go buy groceries, and then come home and drink all day, or get up and mow the yard and go fishing and get stoned while they're out there fishing. So they do things that look like normal life at the same time that they are having an addiction problem. Operation Golden Flow.

This was when President Nixon was even more paranoid than usual, and he was concerned that the guys were going to come back from Vietnam and create sort of anarchy in America, because there was this extremely high percentage of American soldiers that were using heroin, because there's so much poppy plant in Vietnam, and they were bored and didn't have anything to do.

And so boredom is a big trigger for a lot of use in. And there was, surprisingly high numbers of guys that were using heroin and that's like pure heroin. That's that's really uncut. And so Nixon thought that we're going to have all of these heroin addicts come back to the United States, not be able to get heroin. They're going to be in, you know, sort of an emotional mess. And by the way, we just train them and how to, you know, assassinate people, basically, and that we're going to have, an anarchy here. And so he made all the generals require that to go home. You had to have a clean drug screen. They called that operation Golden Flow in, just among themselves.

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<p>But all the student, I mean, all the soldiers got off the heroin, had a drug screen that was clean and, made it back to the States. The thing that was interesting is Lee Robbins studied them when they got home, sort of to prove whether or not Nixon's thinking was right. And only about 10% of the soldiers that came home continued to have addiction problems. 80 to 90% of them didn't have any problems at all. When we think of heroin, it's like probably the hardest addiction that there is to get over. So again, it's trying to challenge this idea that all addicts look a particular way, behave a particular way. Because they don't.</p>	
<p>Dopamine and craving. We kind of been over this. I just want to remind you that the dopamine surge is prior to the reward. In most drugs and in most addictions, gambling addictions and, video game addictions. So you think about - you crave the drug, and that craving increases the dopamine surge in your brain. It is the. And so it's the craving of it. It's the pursuit of it that makes you high and sometimes even higher than when you actually use it. That's not always true when it comes to cocaine. Cocaine is like an amazingly, high dopamine release upon use, but eventually you'll burn out all of your dopamine receptors if you just keep activating it over and over again. And that's what you see, like with, stimulants, meth. Crystal meth, any type of speed is that when they crash, they just sleep. So intermittent reinforcement, variable reinforcement. The idea that I get it.</p>	<p>Title: Dopamine and Craving Remember the Skinner Box and the light?</p> <ul style="list-style-type: none"> • This is a reward prediction error – predicts a reward is coming after unexpected reinforcement. This is a product of firing in the ventral tegmental area (V T A) of the midbrain (van Sessen et al., 2012). If everything happens as we predict, you never learn anything (you would already know everything). Brain is constantly trying to predict future (craving). • The Dopamine surge is prior to the behavior, not after and occurs when the reward is unexpected and child hears “maybe” (intermittent reinforcement) (Sapolsky, 2012; Robinson & Berridge, 2008) • Dopamine reward circuit is related to craving, not using!
<p>Video games again, your home of all places. The the one setting where you believe I can go home and relax. If you have a video game addiction and you play your video games at home the whole time you're on the bus approaching your house, you're beginning to crave and be triggered through a dopamine surge just by the sight and thought of your own home. We think about how complicated that is, how difficult that would be to undo, and treatment when your house is the thing that triggers you.</p>	<p>Title: Video Game Addiction Trigger . . . Graphic of a house with Family Home in text over it.</p>

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<p>Sunk cost fallacy. You all know, basically, I the example at the bottom is that if I bought \$100 worth of Girl Scout cookies and then I go in to see my doc and he says, your cholesterol is too high. And I say, oh, wow, I just bought \$100 worth of Girl Scout cookies. And he says, yeah, you don't need to eat those. But then when I get home, I go, you know what? I'm going to eat these, and then I'm not going to eat anymore. I'm not going to buy any more Girl Scout cookies. I'm not going to eat anything fattening. So I'll make a deal with myself that I'll go ahead and consume this with this promise that I won't do it again after this is over. And that's what happens with alcoholics. That's what happens with users. You know, I've got 2/5 of vodka left that might as well drink these, but I won't buy anymore when this is gone. That's the sunk cost fallacy.</p>	<p>Title: Sunk Cost Fallacy If you lose \$100 at the slot machine, I've loss one hundred so now the machine is about to pay off, so I can't leave. I have to get my one hundred back. Past decisions should not effect what you do now. If I pay \$100 for girl scout cookies, and my doctor says I need to cut sugar due to cholesterol, I shouldn't rationalize that I would be wasting one hundred dollars if I don't eat my candy. So I'll start diet after I get my one hundred worth of cookies eaten. This is the sunk cost fallacy.</p>
<p>So the substance classes alcohol, caffeine, cannabis, hallucinogens. And that includes PCP. Marijuana's in there. Even though I've got cannabis listed separately, it is an hallucinogen. So is M D M A, you know, ecstasy, inhalants, opioids, sedative hypnotics. Stimulants, tobacco.</p>	<p>Title: Substance Classes Two columns of bulleted items:</p> <ul style="list-style-type: none"> • Alcohol • Caffeine • Cannabis • Hallucinogens <ul style="list-style-type: none"> ○ P C P ○ Others • Inhalants • Opioids • Sedatives, hypnotics, and anxiolytics • Stimulants • Tobacco • Other <p>Gambling is in the lower center of screen by itself</p>
<p>Really there's two groups here in your DSM five. One is the substance use disorders. We used to think of them as substance abusers and substance dependent, which was like a great way of doing it because then you meet the term, told you what you were dealing with. But now we're into a spectrum. So the more symptoms you have defines whether it's, mild, moderate or severe. And then substance induced disorders.</p>	<p>Title: Substance-Related Disorders Two Groups</p> <ul style="list-style-type: none"> • Substance Use Disorders <ul style="list-style-type: none"> ○ Previously split into abuse or dependence ○ Involves: impaired control, social impairment, risky use, and pharmacological criteria • Substance-Induced Disorders

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<p>Substance use disorders, the person is using larger amounts for a longer time than they intended, persistent desire or unsuccessful attempts to cut down or control use. Remember your Cage questionnaire. A great deal of time obtaining, using, or recovering and and that in particular opioids drive this this number three here. And also certain stimulants do too like crystal meth.</p> <p>It's really powerful this way that after you use, you begin to immediately obsess about what you can do to use again. Craving. People have impairment in terms of like their work. They're not doing well at school, homework. Basically, their activities of daily living and persistent social and interpersonal problems caused by substance use.</p>	<p>Title: Substance Use Disorder</p> <p>Bulleted list:</p> <ul style="list-style-type: none"> • Using larger amounts or for longer time than intended • Persistent desire or unsuccessful attempts to cut down or control use • Great deal of time obtaining, using, or recovering • Craving • Fail to fulfill major roles (work, school, home) • Persistent social or interpersonal problems caused by substance use
<p>Important social occupational activities are given up or reduced. Then they will use in dangerous situations without any acknowledgment that this is making it even more dangerous. Even might say, you know, you think of the wild, wild West and the gunslingers, like, got to have a shot of liquid courage to go out there, go out there and, out draw somebody. Well, okay. You're actually doing something to impair your, your, your brain in terms of how fast it's processing information, but it's placebo. The gunfighter thinks that this shot of whiskey is going to make me shoot better. So there you go. And then the main things are tolerance and withdrawal. Tolerance and withdrawal. Those are the huge issues. That's what you're really paying attention to. You don't have withdrawal with PCP, inhalants and hallucinogens.</p>	<p>Title: Substance Use Disorder</p> <ul style="list-style-type: none"> • Important social, occupational, recreational activities given up or reduced • Use in physically hazardous situations • Use despite physical or psychological problems caused by use • Tolerance • Withdrawal (not documented after repeated use of P C P, inhalants or hallucinogens.)
<p>Severity. Again, this is the new DSM way of looking at things. 2 to 3 is mild 4 to 5 symptoms is moderate and severe six or more.</p>	<p>Title: Severity</p> <p>Severity</p> <ul style="list-style-type: none"> • Depends on number of symptom criteria • Mild: 2 to 3 symptoms • Moderate: 4 to 5 symptoms • Severe: 6 or more symptoms <p>Bar Graph with green bar slowly transitioning to red. The green side is marked mild and the red side is marked severe.</p>

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<p>Specifiers in early remission. And you can see what that is sustained remission. And notice that sustained remission craving is you can still be in sustained remission but have craving, or in a controlled environment like rehab, jail.</p>	<p>Title: Specifiers Specifiers</p> <ul style="list-style-type: none"> • In early remission: no criteria for greater than three months but less than 12 months (except craving) • In sustained remission: no criteria for greater than 12 months (except craving) • In a controlled environment: access to substance restricted (example jail)
<p>Substance induced disorders. That's the other group in your DSM intoxication withdrawal, psychotic disorders. So you you're using alcohol and you become psychotic. That's alcohol induced. You are, using a lot of benzos, and then you get cut off of it and you're having all this withdrawal stuff that's, you know, sedative, hypnotic induced withdrawal. Sleep. So just what what can the drug do to create a mental disorder? Or what can the drug do to create a problem? Sexual dysfunction. Depression.</p>	<p>Title: Substance-Induced Two columns of bulleted points</p> <ul style="list-style-type: none"> • Intoxication • Withdrawal • Psychotic Disorder • Bipolar Disorder • Depressive Disorder • Anxiety Disorder • Sleep Disorder • Delirium • Neurocognitive • Sexual Dysfunction
<p>Intoxication. And so really with these, the DSM is like trying to tell you what intoxication is, what tolerance is and what withdrawal is. And that's what you need to know for all of these, they're reversible. So with intoxication, everything that's happening is because of the drug or the substance. And this does not apply to tobacco. Tobacco's different.</p>	<p>Title: Intoxication</p> <ul style="list-style-type: none"> • Reversible substance-specific syndrome due to recent ingestion of a substance • Behavioral / Psychological changes due to effects of C N S developing after ingestions: <ul style="list-style-type: none"> ○ Example: Disturbances of perception, wakefulness, attention, thinks, judgement, psychomotor behavior and interpersonal behavior • Not due to another medical condition or mental disorder • Does not apply to tobacco

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<p>The clinical picture really depends on the substance and the dose and how they're doing it. And I think we're gonna talk about that a little bit more.</p>	<p>Title: Clinical picture of intoxication depends on:</p> <p>Two column of bulleted points</p> <ul style="list-style-type: none"> • Substance • Dose • Route of Administration • Duration / chronicity • Individual degree of tolerance • Time since last dose • Person's expectations of substance effect • Contextual variables
<p>Withdrawal. So I looked in the DSM before I did this. And it's really clear - don't let these chapters confuse you here on substance use disorders. It's substance specific. So, if you stop use then and sometimes you can think of it really generally to understand it. So like with opioids we use opioids for pain. We know that opioids make us constipated. So when you're in withdrawal from opioids everything hurts. You have pain that's like system wide and you have diarrhea. So you have the opposite of what the drug was intended for. That's kind of a cool way to look at it.</p>	<p>Title: Withdrawal</p> <ul style="list-style-type: none"> • Substance specific syndrome problematic behavioral change due to stopping or reducing prolonged use • Physiological and cognitive components • Significant distress in social, occupational or other important areas of functioning • Not due to another medical condition or mental disorder • No withdrawal: P C P; other hallucinogens, inhalants
<p>Substance induced mental disorders. Again, we just kind of reference those. It has to happen within one month of use of the substance. So in a lot of times we see this with, I know I have a patient that used marijuana one time and became psychotic, and he's been psychotic ever since. And you go and you see all this cannabis research saying that that's not true, that doesn't happen. When here in clinical practice we see that. So be careful about what you're reading. In terms of your professional literature, and who's sponsoring that. Yep. During or within past month, capable of causing it. And, it's not an independent mental disorder. It's actually related to the substance, and it persists longer than you would expect. So the marijuana has gotten out of this person's system and he's still psychotic.</p>	<p>Title: Substance Induced Mental Disorder</p> <ul style="list-style-type: none"> • Clinically significant presentation of a mental disorder • Evidence (History, patient exam, labs) <ul style="list-style-type: none"> ○ During or within 1 month of use ○ Capable of producing mental disorder seen • Not an independent mental disorder <ul style="list-style-type: none"> ○ Preceded onset of use ○ Persists for substantial time after use (which would not expect)

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<p>Neuro adaptation I just mentioned this. This is definitely more psychopharm, but the 50% rule, that's a big dopamine, piece of research where – say for gambling.</p> <p>What the what the psychologists in Las Vegas help program the slot machines want you to believe is that there's a 50 - 50 chance that you will win. We know that. That creates the most powerful craving and persistence to acquire the outcome, the winning in this case than any other. So 25%, getting what, you know, getting what you want or winning 25% of the time, that's not as effective. Getting what you want or winning 75% of the time, that's not effective. The most thing that's the most effective, way of manipulating somebody is to make them think that they're going to win 50% of the time. Interestingly, there are many slot machines at a casino where you win one every 1000 time, but you still believe it's 50 - 50 every time you put money in it.</p>	<p>Title: Neuroadaptation</p> <ul style="list-style-type: none"> • Refers to underlying C N S changes that occur following repeated use such that person develops tolerance and or withdrawal <ul style="list-style-type: none"> ○ Pharmacokinetic – adaptation of metabolizing system ○ Pharmacodynamic – ability to C N S to function despite high blood levels ○ Problem with genetic interpretations and addictions ○ Intermittent, variable reinforcement and craving <ul style="list-style-type: none"> ▪ 50 percent rule “maybe”
<p>Tolerance: need to use an increased amount of a substance in order to achieve the desired effect or markedly diminished effect with continued use of the same amount of the substance. So you see people going up and up and up. They're chasing the high, and, and they, they a lot of times they never really recapture the high. The one drug that doesn't really have tolerance that we're mentioning here today is cannabis. Marijuana will usually get you high every time. Just smoking a joint. You don't have to smoke ten joints. But yeah, need to increase the amount in order to get the effect or you can't get the effect. Even if you start trying to use more or the same amount.</p>	<p>Title: Tolerance</p> <ul style="list-style-type: none"> • Need to use an increased amount of a substance in order to achieve the desired effect <p>OR</p> <ul style="list-style-type: none"> • Markedly diminished effect with continued use of the same amount of the substance

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<p>And this is just kind of that a crazy curve is like found this somewhere, but it mean we have so many residents and many students that are just caffeine. They really are kind of addicted to it. We put this in here for them.</p>	<p>Title: Understanding the Addiction curve Drawing of a graph labeled the caffeine curve. The bottom axis is broken in hours from 7 am to 5 pm. The There is a line in the middle of the graph labeled normalcy. The top line is labeled Incredible elation. There is a perfect curve drawn from 7 am that peaks at 1 pm then comes down at 5pm. Arrow point to the 7am start with labels of Wake up, first cup. Second cup is at 8am. Third cup at 9am. Forth cup at 10am. The curve is now above normal and is marked excellent work habits. Fifth cup at 11 am. Curve rounds to top labeled God sighted. The curve slowly works down past the normal range around 4pm with a feeling of worthlessness and triple shotgun murder at the bottom at 5 pm.</p>
<p>Prevalence. I just want to draw your attention to the bottom - men. Prevalence. Right. Alcohol, men, American Indians, white people, unemployed people, people that live in cities, and parolees. If you were to just look or the correlations, the high correlations of people that use substances, this this collectively would be the group, the groupings, that's particular alcohols. You find that even more specifically with those groups.</p>	<p>Title: Epidemiology: Prevalence</p> <ul style="list-style-type: none"> • NIDA '04: 22.5 M – 12 year old substance related D/O 15 M – Alcohol dependence or abuse • Start at earlier age (less than 15 years), more likely to become addicted – Example alcohol, 18 percent versus 4 percent (if start at 18 years old or older) • Rates of abuse vary by age: 1 percent (12 year old) – 25 percent (21 year old) – 1 percent (65 year old) • Men; American Indian, whites, unemployed, large metro areas, parolees
<p>So the epidemiology, it's 40% of hospital admissions have alcohol or drugs associated. So you're in the E.R. and you run a drug screen on 100% of your patients, and 40% of them are going to have something in their system. Or they were using something that caused them to need to be in the emergency room or need to be in the hospital. Associated with hospital deaths. Intoxication is associated with MVA, so car wrecks, domestic violence cases. And like 50% of all murders.</p>	<p>Title: Epidemiology (continued)</p> <ul style="list-style-type: none"> • 40 percent of hospital admission have alcohol or drugs associated • 25 percent of all hospital deaths • 100,000 deaths per year • Intoxication is associated with 50 percent of all M V As, 50 percent of all Domestic violence cases and 50 percent of all murders

Audio	Video
<p>The etiology sort of continued. There's multiple factors that influence this type of behavior. Not everyone that becomes dependent experiences it in the same way. And that's kind of the criticism of the 12 steps, is that we have a sort of one size fits all when actually different types of people have different types of addiction.</p>	<p>Title: Etiology</p> <ul style="list-style-type: none"> • Multiple interacting factors influence using behavior and loss of decisional flexibility • Not all who become dependent experience it same way or motivated by same factors • Different factors may be more or less important at different stages (Drug availability, social acceptance, peer pressure vs personality and biology)
<p>Self-medicating. I would say this is the number one, in my experience, this is the number one reason that people use that I see. They have anxiety problems, so they drink. They have anxiety problems, and they smoke marijuana. They have anxiety problems, so they go steal somebody is benzodiazepines. They are depressed, and so they get their kid's Adderall They're depressed, so they get some cocaine. They're depressed, so they get some meth. They trying to make themselves get out of their depression - so to change the way you feel. The genetic thing - I just want to remind you, be careful about that. Well, your parents are both alcoholics, so of course you are going to be an alcoholic. That is not a true statement. We know the environment triggers almost everything that has a genetic predisposition. So take that person and put them in a different environment, t hey may never be an alcoholic. So pain trying to get rid of pain is another reason. Special status. Hey, I want to join the so-and-so club and the only way to be a member is we all have to sit down there and drink wonderful scotch and smoke cigars. Next thing you know, I'm having an alcohol problem. Impulsivity. I didn't really think about it before I thought about it. I'd already, you know, had four shots of tequila. And then I just thought, well, if I've had four, I'll have another one. Again, the, sunk cost fallacy. Paraphernalia. Paraphernalia. So you find this more with, marijuana users. They, they really take pride in their paraphernalia. A lot of them have, like, really exotic kind of cool things that they use. And they like to show that, that that will make them use a lot of times, continue using weed just so that they can break out the stuff when everybody comes over.</p>	<p>Title: Etiology</p> <ul style="list-style-type: none"> • Self-medication <ul style="list-style-type: none"> ○ E t O H – panic; opioids – anger; amphetamine – depression • Genetic (well-established with alcohol) • Conditioning: behavior maintained by its consequences <ul style="list-style-type: none"> ○ Terminate aversive state (pain, anxiety, withdrawal) ○ Special status ○ Euphoria ○ Impulsivity ○ Secondary reinforcers (example Paraphernalia)

Audio	Video
<p>The etiology. Let's see what I guess what I want you to focus on here is that Opioid transmitters, gaba. And so I in particular look at Gaba. So what usually happens is a person loves the way they feel from the their drug of choice. So in this case let's say it's alcohol. So over 40% of alcoholics also have a secondary sedative hypnotic use disorder. Because alcohol activates the Gaba system which is all about relaxing you and so do benzos. So if they can't get alcohol, they'll use benzos. If they if they can't get their benzos, they'll use alcohol. They like that particular high. Opioids you think of, you know, pain medicine, Vicodin, but, you know, heroin. And then club drugs. They're kind of different. We're going to talk about that more.</p>	<p>Title: Etiology</p> <ul style="list-style-type: none"> • Receptors • Too little endogenous opioid activity (ie low endorphins) or too much endogenous opioid antagonist activity equals increased risk of dependence. • Normal endogenous receptor but long-term use modulates, so need exogenous substance to maintain homeostasis. • Neurotransmitters <ul style="list-style-type: none"> ○ Opioid ○ Catecholamines (dopamine) ○ GABA (etoh, benzo's) ○ Serotonin (club drugs)
<p>So just downregulation is an important concept, probably more for Psycho Farm. But so let's not focus on that. But after drugs, after using drugs or when you stop, it leads to depleted state resulting in dysphoria and or cravings to use. So and that is true from a neurotransmitter standpoint. They'll just burn out all of their dopamine, stores. And then they're just flat, like, a stimulant use patient. They just sleep and sleep and sleep. It just can't get going at all. They have no energy because they don't have any dopamine. They don't enjoy any pleasure of any sort until they've had time to, refill those stores and, refill those receptors and all those neurons associated with dopamine.</p>	<p>Title: Learning and Physiological Basis for Dependence</p> <ul style="list-style-type: none"> • After using drugs or when stop – leads to a depleted state resulting in dysphoria and/or cravings to use, reinforcing the use of more drug. • Response of brain cells is to downregulate receptors and/or decrease production of neurotransmitters that are in excess of normal levels.
<p>Watch for comorbidity. Definitely. If you're impaired, you're more severe or likely to kill yourself. If you're depressed, you're more likely to want to try to change the way that you're feeling. Remember? Self-medication. Although you'll see, alcoholics are saying, I've been drinking because I've been feeling so depressed without any acknowledgment that alcohol is a central nervous system depressant. So I'm depressed and I'm just pouring more depression into my mouth or into my system. Antisocial personality disorder.</p>	<p>Title: Comorbidity</p> <ul style="list-style-type: none"> • Up to 50% of addicts have comorbid psychiatric disorder <ul style="list-style-type: none"> ○ Antisocial PD ○ Depression ○ Suicide

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<p>What you usually see is, this sort of acute, chronic withdrawal, again, a weird mood. We have a form that we use, this addiction recovery center that lists all of the possible, withdrawal effects. And basically, the more they circle, the bigger the problem. If they're just circling, tremor and sweats, and anxiety, that's one thing. If they're circling diarrhea, chronic insomnia, sweats, tremor. Dysphagia, if they're the basically I would just say cumulatively, the more of those things, the worse abstinence not easy to find. We generally see that there's different groups of, addiction patients that get sobriety. Most addiction patients get sobriety the first time they're in treatment. And then there's the group that sort of comes every now and then they relapse. And those groups just they're just really, really do have a bad addiction. And they really struggle to maintain any kind of sobriety.</p>	<p>Title: Typical Presentation and Course:</p> <ul style="list-style-type: none"> • Present in acute intoxication, acute chronic withdrawal or substance induced mood, cognitive disorder or medical complications • Abstinence depends on several factors: social, environmental, internal factors (Presence of other comorbid psychiatric illnesses) • Remission and relapses are the rule (just like any other chronic medical illness) • Frequency, intensity and duration of treatment predicts outcome • 70% eventually are able to abstain or decrease use to not meet criteria
<p>Stay away from pharmacy. Just pay attention. They will have another psychiatric disorder. And the other thing that I see a lot of, they show up, at the addiction program and they do have a lot of health problems. So you really have to be paying attention to that liver. You really have to be paying attention to the kidneys. You really have to, check systemic things like keep checking their neurologic stuff. You know, a lot more broken bones, just a lot more everything health related.</p>	<p>Title: Treatment</p> <ul style="list-style-type: none"> • Pharmacologic Intervention • Treat Co-occurring psychiatric disorders. <ul style="list-style-type: none"> ○ 50% will have another psychiatric disorder • Treat Associated medical conditions <ul style="list-style-type: none"> ○ Cardiovascular, cancer, endocrine, hepatic, hematologic, infectious, neurologic, nutritional, G I, pulmonary, renal, musculoskeletal

Audio	Video
<p>Alcohol. This is just a slide to let you know kind of what it is and what it does. It definitely can be fatal and it is. You know, people are going to come into your hospital or wherever you work with these alcohol levels over 300. I mean, you're going to have to really, really pay attention to them for seizures and that kind of stuff.</p>	<p>Title: Alcohol – C N S Depressant</p> <p>Two columns of bullet points with a photo of a person passed out on the floor in front a toilet in the bottom righthand side</p> <ul style="list-style-type: none"> • Intoxication <ul style="list-style-type: none"> ○ Blood alcohol level – point zero 8 g per D L ○ Progress from mood lability, impaired judgement, and poor coordination to increasing level of neurologic impairment (severe dysarthria, amnesia, ataxia, obtundation) ○ Can be fatal (loss of airway protective reflexes, pulmonary aspiration, profound C N S depression)
<p>The withdrawal, this is mentioned in your book. And, just remember that it can be life threatening. That's something you need to pay attention to that they, they can really, if you're not careful and don't handle the Librium tapers right. And everything they can, they could die on you.</p>	<p>Title: Alcohol withdrawal</p> <ul style="list-style-type: none"> • Early <ul style="list-style-type: none"> ○ Anxiety, irritability tremor, H A, insomnia, nausea, tachycardia, H T N, hyperthermia, hyperactive reflexes • Seizures <ul style="list-style-type: none"> ○ Generally seen 24 to 48 hours ○ Most often grand mal • Withdrawal delirium (D Ts) <ul style="list-style-type: none"> ○ Generally between 48 to 72 hours ○ Altered mental status, hallucinations, marked autonomic instability ○ Life-threatening
<p>Benzos. It's similar to alcohol, the intoxication, but, less cognitive impairment. Remember, your brain is just this big glob of fat. So anything lipophilic crosses the blood brain barrier likes that. Which is a benzo. And you're just trying to get to the longer term stuff away from the shorter term stuff.</p>	<p>Title: Benzodiazepine (B A D / Barbiturates</p> <ul style="list-style-type: none"> • Intoxication <ul style="list-style-type: none"> ○ Similar to alcohol but less cognitive motor impairment ○ Variable rate of absorption (lipophilia) and onset of action and duration in C N S ○ The more lipophilic and shorter the duration of action, the more “addicting” they can be ○ All can be addicting

Audio	Video
<p>Opioids. Again, we're going to focus a lot on this this summer, but not life threatening unless they do have some kind of big time medical issue.</p> <p>But it is very uncomfortable. And they do. They have a lot of diarrhea and they have a lot of pain. We have to figure out, how am I going to treat that. So you see here they recommend, you know, muscle relaxants and antacids, clonidine.</p>	<p>Title: Opioids</p> <p>Bind to the mu receptors in the C N S to modulate pain</p> <ul style="list-style-type: none"> • Intoxication – pinpoint pupils, sedation, constipation, bradycardia, hypotension and decreased respiratory rate • Withdrawal – not life threatening unless sever medical illness but extremely uncomfortable. S / S dilated pupils, lacrimation, goosebumps, n / v, diarrhea, myalgias, arthralgias, dysphoria or agitation • RX – symptomatically with antiemetic, antacid, antidiarrheal, muscle relaxant (methocarbamol) NSAIDS, clonidine and maybe BZD • Neuroadaptation: increased DA and decreased NE
<p>I just found this slide, thought that you might want to take a look at it. These the in red or the States. They have the highest percentages of substance use disorders by state. And we are one of those.</p>	<p>Title: Percentage of prescription SUD patients by State</p> <p>Graphic of united stages with states colored according to the percentages. Louisiana, Oklahoma and Arkansas are red denoted highest percentage of 5 point 6 6 to 6 point 7 2. Texas is tan denoting 4 point 4 zero to 4 point 8 2 percent.</p>
<p>Stimulants again, people that are depressed, they think they use a stimulant, they use speed. It's going to make them not be depressed.</p> <p>When the speed wears off. They're even more depressed. They're totally wiped out. They're crashing. Euphoria. Vigor makes them feel happy. Sort of. But lots of anxiety. And so that's what you have to be careful with. Kids like you think of Adderall or Ritalin. Those are stimulants. And if you if misdiagnosed this person as having ADHD, but they really have an anxiety problem, you give them a stimulant. And I mean the anxiety is going to go through the ceiling. They're going to be moody. They're going to start crying a lot. And remember, stimulants, physical issues.</p>	<p>Title: Stimulants</p> <ul style="list-style-type: none"> ○ Intoxication (acute) <ul style="list-style-type: none"> ○ Psychological and physical signs ○ Euphoria, enhanced vigor, gregariousness, hyperactivity, restlessness, interpersonal sensitivity, anxiety, tension, anger, impaired judgment, paranoia ○ Tachycardia, papillary dilation, HTN, N/V, diaphoresis, chills, weight loss, chest pain, cardiac arrhythmias, confusion, seizures, coma

Audio	Video
<p>Withdrawal is not severe. But again they just crash.</p>	<p>Title: Stimulants continued</p> <ul style="list-style-type: none"> ○ Chronic intoxication <ul style="list-style-type: none"> ○ Affective blunting, fatigue, sadness, social withdrawal, hypotension, bradycardia, muscle weakness. ○ Withdrawal ○ Not severe but have exhaustion with sleep (crash) ○ Treat with rest and support
<p>Amphetamines. More stimulants. I think the thing to pay attention here is, treatment of similar as for cocaine, but no known substances to reduce cravings. But we still we're just finding more and more things to throw at, for craving. That's more of a cycle farm issue. And the other thing would be that you can have a permanent amphetamine psychosis with continued use of amphetamines, like in high volumes, like, person with a addiction problem is going to use, they can have a permanent psychosis.</p>	<p>Title: Amphetamines</p> <ul style="list-style-type: none"> ● Similar intoxication syndrome to cocaine but usually longer ● Route – oral, I V, nasally, smoked ● No vasoconstrictive effect ● Chronic use results in neurotoxicity possibly from glutamate and axonal degeneration ● Can see permanent amphetamine psychosis with continued use ● Treatment similar as for cocaine but no known substances to reduce cravings ● Neuroadaptation <ul style="list-style-type: none"> ○ Inhibit reuptake of D A, N E, S E – greatest effect on D A
<p>Tobacco's different. Definitely. Look at that in your D S M five. So it affects a lot of the meds that we use for schizophrenics. So you can get a patient really stable in the hospital that smokes and they're not smoking. They get out of the hospital and start smoking, and immediately their levels of particular meds are off. And this is there's a high percentage of psychiatric patients that smoke. So, it's a tough addiction to break. Very few, patients asked to to break this. They'll they'll get off here, give me off the heroin, give me off the crystal meth. But don't get me off that tobacco.</p>	<p>Title: Tobacco</p> <ul style="list-style-type: none"> ● Most important preventable cause of death and disease in U S A ● 25 percent current smokers, 25 percent ex smokers ● 20 percent of all U S Deaths ● 45 percent of smokers die of tobacco induced disorder ● Second hand smoke causes death / morbidity ● Psychiatric patients at risk for Nicotine dependence – 75 to 90 percent of schizophrenia patients smoke.

Audio	Video
<p>Just a slide to remind you. If you don't know, quit attempts made abruptly rather than gradually are more likely to be successful. So cold turkey works best.</p>	<p>Title: Predictors of Success</p> <ul style="list-style-type: none"> Quit attempts are made abruptly rather than gradually are more likely to be successful <p>Graph from West et al (2012) at www.smokingengland.info depicting strength of urges, time spent with urges, tried to quit recently all at roughly the same odds ratio of quitting versus abrupt cessation which has much higher odds</p>
<p>Hallucinogens peyote, LSD, DMT is kind of a short form. MDMA is ecstasy, usually has Mitsubishi insignia on ecstasy, but it can have others.</p>	<p>Title: Hallucinogens</p> <p>Small photo of handful of mushrooms in top left corner</p> <ul style="list-style-type: none"> Naturally occurring – Peyote cactus Synthetic agents – L S D (lysergic acid diethylamide) = oral D M T (dimethyltryptamine) smoked, snuffed, I V S T P (2 5 dimethoxy four methylamphetamine) Serenity, tranquility, and peace: Like L S D with increased sex drive and vibration of objects; oral M D M A (3 4 methyl enedioxymethamphetamine) ecstasy – oral

Audio	Video
<p>Cannabis. Again usually will get you high whenever you use it. Highly Lipid. Lasts a long time. It's definitely widely used in America. Just it is a hallucinogen and it can cause people to be psychotic.</p>	<p>Title: Cannabis</p> <ul style="list-style-type: none"> • Most commonly used illicit drug in America • T H C levels reach peak 10 to 30 minutes, lipid soluble, long half life of 50 hours • Intoxication <ul style="list-style-type: none"> ○ appetite and thirst increase ○ colors sounds tastes are clearer ○ increased confidence and euphoria ○ relaxation ○ increased libido ○ transient depression, anxiety, paranoia ○ tachycardia, dry mouth, conjunctive injection ○ slowed reaction time, motor speed ○ impaired cognition ○ psychosis <p>There is a small photo of cans of liquid cannabis in the bottom right corner</p>
<p>Withdrawal is insomnia, irritability, anxiety. I guess that's the thing to pay attention to.</p>	<p>Title: Cannabis continued</p> <ul style="list-style-type: none"> • Neuroadaptation <ul style="list-style-type: none"> ○ C B 1, C B 2 cannabinoid receptors in brain / body ○ Coupled with G proteins and adenylate cyclase to C A Channel inhibiting calcium influx ○ Neuromodulator effect; decrease uptake of GABA and D A • Withdrawal – insomnia, irritability, anxiety, poor appetite, depression, physical discomfort

Audio	Video
<p>PCP. These people are amazingly strong when they come in. A flakka patient will come in, and the first thing you're going to notice about them is that they are probably naked because their body temperature is around about 105, 106. Angel dust patients come in strong as an ox. It takes everybody you've got to restrain them. And they have big time nystagmus. They come in with usually in some sort of overdose, and they can just go straight to catatonic, all of this, muscle like, spasming seizures, like very, very difficult. People that abuse PCP, they get really paranoid. That's why it's one of the- Like I say, they are so afraid of you. They just have amazing strength. They will be violent.</p>	<p>Title: Phencyclidine (P C P) "Angel Dust"</p> <ul style="list-style-type: none"> • Dissociate anesthetic • Similar to ketamine used in anesthesia • Intoxication: sever dissociative reactions – paranoid delusions, hallucinations, can become very agitated / violent with decreased awareness of pain. • Cerebellar symptoms – ataxia, dysarthria, nystagmus (vertical and horizontal) • With severe O D, mute, catatonic, muscle rigidity, H T N, hyperthermia, rhabdomyolosis, seizures, coma and death
<p>Usually going to use antipsychotics. We're not. That's not where we are. But there is no tolerance or withdrawal.</p>	<p>Title: P C P continued</p> <ul style="list-style-type: none"> • Treatment <ul style="list-style-type: none"> ○ Antipsychotic drugs or B Z D if required ○ Low stimulation environment ○ Acidify urine if sever toxicity / coma • Neuroadaptation <ul style="list-style-type: none"> ○ Opiate receptor effects ○ Allosteric moduation of glutamate N M D A receptor • No tolerance or withdrawal