CEU MATRIX
THE INSTITUTE FOR ADDICTION & CRIMINAL JUSTICE STUDIES

DRUG AND ALCOHOL DEPENDENCE: THE PROBLEM, THE SOLUTION, AND CO-OCCURRING DISORDERS

3 Continuing Education Credits

Asynchronous Distance Learning Course

Content Level: Beginning

Course Author: William Loving, M.D.

Last Updated: 2026

Approved by such credentialing bodies as:

• National Association of Alcoholism and Drug Abuse Counselors (NAADAC) #94564

• National Board of Certified Counselors (NBCC) #6310

All approval bodies are listed at ceumatrix.com/accreditations

For questions or to request accessibility accommodations please email us at: support@ceumatrix.com

© 2026 CEU Matrix. All rights reserved.

Welcome to CEU Matrix. We have been committed to supporting the continuing education of behavioral health professionals since 2007. Please reach out with any questions, ideas, or feedback.

Do the best you can until you know better.
Then when you know better, do better.

— Maya Angelou

COPYRIGHT

© Copyright 2008, 2026 CEU Matrix. All rights reserved.

This course was originally authored by William Loving, M.D. and is the exclusive property of CEU Matrix.

No portion of this course may be reproduced in any manner without the written permission of the publisher, in accordance with the U.S. Copyright Act of 1976, Title 17 U.S.C.

ABOUT THE INSTRUCTOR

William M. Loving, MD is a board certified psychiatrist (January 1981) and an addictionist who is certified by the American Society of Addiction Medicine (April 1989). He graduated from the University Of Texas Medical Branch at Galveston in 1974. He was given the Physician Excellence Award at Seton Shoal Creek Hospital in 1991, and received the Exemplary Psychiatrist Award by NAMI (National Alliance for the Mentally Ill) in 1995. He has 25 years experience treating psychiatric and chemically dependent patients. He is the medical director of CORE Health in Dripping Springs, Texas, which is a residential treatment center for disabled psychiatric patients and a post-acute rehabilitation center for traumatic brain injuries. He is also the medical director of Texas Star Recovery Program in Austin, Texas, which is a detoxification hospital and inpatient drug and alcohol rehabilitation center. He has written numerous articles on chemical dependency for the Travis County Medical Society Journal, Recovery Today, and the Texas Medical Society Journal.

© 2026 CEU Matrix

The Brain Disease Model: A Continuing Scientific Debate

This course presents chemical dependency as a brain disease — a central nervous system disorder driven by changes in the brain's reward circuitry. This framework, which has dominated addiction science for three decades, has been instrumental in reducing stigma and advancing pharmacological treatment research. It remains clinically useful. But the scientific community's understanding of this model has become more nuanced since 2008.

A 2025 review in The Lancet Psychiatry examined the brain disease model of addiction and argued that "the absence of an agreed, clear, and consistent definition of a brain disease" has hindered productive scientific discourse. The authors distinguished between two philosophical positions: a narrow view requiring documented structural or functional brain damage, and a broad view that automatically classifies all mental disorders as brain diseases because they involve brain activity. Neither position, they argued, has been definitively established for addiction (Blithikioti et al., 2025).

A 2022 analysis in Psychopharmacology took a similar position, noting that "brain dysfunction cannot be analyzed merely as brain changes" — observable brain differences in people with addiction do not automatically prove that those differences caused the addiction. The author argued that establishing causation through intervention has not "fully demonstrated" the causal role of specific brain changes like gray matter loss or dopamine system alterations. Rather than anchoring anti-stigma efforts on the brain disease label, she recommended combating "moralism about drugs and moralistic drug policies directly" (Pickard, 2022).

For practitioners, these debates do not invalidate the neurobiological content of this course. The reward center, dopamine pathways, and neuroadaptation processes described here remain well-documented phenomena. What the current literature suggests is that brain changes are one important component of addiction — but not the entire picture. Genetic vulnerability, environmental factors, social determinants, trauma, and individual choice all interact with neurobiology in ways that a purely brain-centric model does not fully capture.

Emerging Pharmacological Frontiers: GLP-1 Receptor Agonists

The medications discussed in this course — primarily naltrexone, disulfiram, and methadone — represent the established pharmacological toolkit for addiction treatment. A new class of medications has emerged as a potential addition.

A 2024 comprehensive review from researchers at the National Institute on Drug Abuse and the National Institute on Alcohol Abuse and Alcoholism examined glucagon-like peptide-1 (GLP-1) receptor agonists — the same class of medications used for diabetes and weight management (semaglutide, liraglutide) — as potential treatments for substance use disorders. Preclinical evidence indicates that "GLP-1R agonists reduce alcohol/substance use and other related outcomes" through mechanisms involving reward processing, stress response, and cognitive function. Clinical studies have been "limited and their findings less conclusive; however, most support the safety and potential efficacy" of these medications. Research has focused primarily on alcohol, with additional investigations into psychostimulants, opioids, and nicotine (Bruns Vi et al., 2024).

© 2026 CEU Matrix

This is an active area of investigation, not an established treatment. But it illustrates how the neuroscience of addiction described in this course — particularly the role of the reward center — continues to generate new pharmacological targets.

Co-Occurring Disorders: Updated Evidence on Treatment Outcomes

The co-occurring disorders section of this course describes the challenges of treating patients with both substance use disorders and mental health conditions. Recent research has quantified just how significant the treatment disadvantage is for this population.

A 2025 meta-analysis in the Journal of Dual Diagnosis examined 13 primary studies drawn from 35 systematic reviews spanning 2000 to 2024. The findings confirmed that "those with concurrent disorders are largely disadvantaged in treatment compared to those with a single disorder," with a pooled risk ratio of 1.71. Individuals with co-occurring conditions were approximately twice as likely to experience adverse outcomes including relapse, emergency department visits, rehospitalization, and mortality (Scott & Gorey, 2025).

A 2024 expert review examined the specific intersection of schizophrenia and substance use disorders, noting that comorbid patients face "poor physical health, low medication adherence, high relapse and hospitalization rates, and increased risk of mortality." The authors found that partial dopamine agonists — a newer class of antipsychotics — "demonstrated good control of psychotic symptoms and SUDs with a favorable safety profile," and emphasized that effective treatment requires pharmacological interventions "accompanied by psychosocial support within an integrated and multidisciplinary approach" (Neyra et al., 2024).

Sustaining Integrated Treatment

For treatment programs serving clients with co-occurring disorders, a critical question is whether integrated care models can be maintained over time. A 2022 cluster-randomized controlled trial tracked 49 addiction treatment programs for up to two years after implementing integrated mental health and substance use services. Both the intervention and control groups "sustained their capability to provide integrated treatment services" at comparable levels, suggesting that once programs build integrated care capacity, it tends to persist without continuous external support (Chokron Garneau et al., 2022).

For practitioners, this finding is encouraging: the investment in building integrated treatment capacity — staff training, clinical protocols, screening procedures — pays dividends that extend well beyond the implementation period.

© 2026 CEU Matrix

I. THE DISEASE OF CHEMICAL DEPENDENCY

The disease of chemical dependency includes alcoholism and drug dependence and is not the same as alcohol abuse or drug abuse. In our society many people go through a stage of alcohol and/or drug abuse in their teens, twenties or even later in which they experiment with alcohol and taking other drugs that give you a high or euphoria. Most of these people stop abusing the drugs or alcohol when bad things start happening to them and they become embarrassed or sick from the alcohol and drug abuse. The abuse implies some degree of control such that when they suffer a hangover or have problems due to impairment by the alcohol or drugs, they eventually quit the abuse of the chemical or substance. This is the case in about 85% of our population—that is when bad things start happening from the drug and alcohol abuse, the person quits that misbehavior and either stops using the alcohol or drug altogether or at least decreases the amount so that their behavior is not out of control. The other 15% (give or take 5%) of our population goes through this period of chemical abuse but is unable to stop or significantly modify their intake of drugs or alcohol. These people become out of control with the substance and even though they may want to stop using the alcohol or drugs or at least decrease the amount they are using, they are unable to do so. They are out of control. These are the people with the disease of chemical dependency which is commonly called alcoholism or drug addiction.

This course is about the disease, and through research and experience we know a great deal about this problem. Experts refer to this as a bio-psycho-social disease because it has elements involving biology; psychology is affected; and numerous social problems are related to this disease. It is likely that around 80% or more of the people who have the disease of chemical dependency have it because it is passed down through the family and is likely a genetic disorder. It is a chronic disease like diabetes and asthma are chronic diseases. A chronic disease is one that does not have a cure, and once you are diagnosed with such a disease, the treatment entails learning to manage the disease so it does not harm you. The disease is present in the person for the rest of their lives, but it may not be active or causing problems with the person if the disease is well managed. This disease is also a self-induced central nervous system disorder from a biological point of view. The major part of the central nervous system involved is the brain. The substance must be ingested by the person to make the disease flourish, so it is self-induced by the affected person drinking alcohol or taking drugs. It is a progressive disease that gets worse over time unless it is managed properly; it is a severe disease; and it is potentially fatal just as cancer or other severe diseases can be fatal.

Once a person is diagnosed with alcoholism or drug addiction, the person is prone to get out of control with these substances throughout his or her life. This is the chronic nature of this disease. The word “disease” is used because this problem is a physical, biological, or physiological problem basically. This means that it is not a problem of willpower, morality or intelligence. The alcoholic or drug addict is not a weak person, a dumb person, or a bad person. When the person is out of control

© 2026 CEU Matrix

and in the throes of the disease, the person's behavior will likely be bad or immoral. Decisions will be dumb and the person's willpower will not work. With physical or physiological problems, willpower is not effective. For example, next time you have diarrhea try to will yourself to stop. Many good people get this disease, and yet when they are impaired and out of control with the substances, they do immoral things and behave in ways that go against their own ethical standards. Just as pneumonia strikes smart people and not so smart people, this disease strikes people of all levels of intelligence. In fact, one author notes that the highest incidence of alcohol and drug dependence in any one group is found in Nobel Prize winners in literature. Three quarters of these very bright authors were affected by the disease of chemical dependency and include people like Ernest Hemingway and William Faulkner.

So if it is a disease or a physical or biological problem, what is the abnormality? Remember it was said that this is a self-induced central nervous system disorder and the major part of the central nervous system involved is the brain. The abnormality or defect in this disease is basically in a particular part of the brain, primarily, and secondarily affects the whole brain. To discuss this problem we have to venture into a discussion of how the brain works and discuss some of the basic anatomy of the brain. Refer to Diagram 1 (below) of the brain and its areas of function.

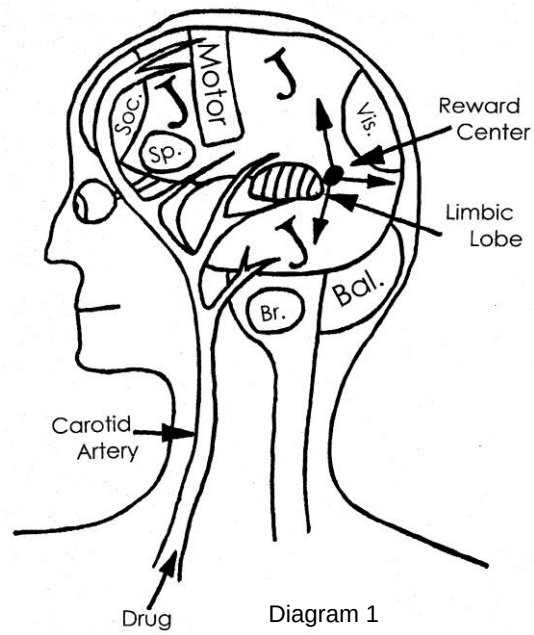


Diagram 1

The brain is organized such that different parts of it do different things. For example, the frontal lobe or the area just behind the forehead is the part of the brain that controls our social function or our ethics. This is noted by the letters "Soc" on the diagram. The "motor" area is the part of the brain that controls voluntary movement. The left motor strip, as it is referred to, controls the right side of the body's movement, and the right motor strip controls the left. The brain is like a big wiring system and yet it is chains of nerve cells instead of wires. In the case of the motor strip, the neurons or nerve cells cross over such that the right side controls the left voluntary movement and vice versa. "Sp" stands for speech. This is the speech center that is usually on the left side of the brain around the temple area and controls the modulation and regulation of speech. "Vis" stands for vision and is the visual center. It is located in the back of the head or in the occipital area. The eyes pick up light which is projected on the retina of the eyeball and then is converted into a message that is sent by way of the chains of nerve cells all the way to the back of the head to the visual cortex. This is the part of the brain that organizes the light that the eyes pick

 © 2026 CEU Matrix

up into a picture that we can understand. It is interesting engineering because if one of us designed it we would probably locate the visual cortex in the front of the head near the eyes, but the visual cortex is way at the back of the head. A person can be injured badly to the back of the head and have the visual cortex damaged and be blinded even though their eyes may be perfectly healthy. This is called cortical blindness. "Bal" stands for balance and is at the lower part of the back of the head and in the cerebellum of the head. "J" stands for judgment and is scattered over the cerebrum or the neocortex - the large wrinkled part of the brain which we all identify as the brain. "Br" stands for breathing center and it is located in the brain stem which is at the very base of the brain. The brain stem continues on down the back in the backbone as the spinal cord. The breathing center is a part of the brain that keeps us regularly breathing. The biscuit shaped part of the brain in the middle of the diagram is the limbic lobe, and this is the area of the brain that contains most of our feelings or emotions. The black dot with the arrows going out from it adjacent to the limbic lobe is the reward center or some experts refer to as the pleasure center. This is the area of the brain that when stimulated gives us pleasure or euphoria or a "high."

The substances that cause problems in this disease include alcohol, marijuana, heroin and other opiates, amphetamines and other drugs in Table 1. All have their primary site of action at the reward center and limbic area. Something about the chemical formula of these substances gives them strong activity at these areas of the brain. These substances stimulate the reward center thus making the person feel high or euphoric, and also stimulate the limbic area causing some change in the way the person feels. Researchers and experts have discovered that the basic problem causing this disease is a disordered or supersensitive reward center to the effects of these substances. The reward center in those with the disease of chemical dependency is ultra sensitive to the effects of these drugs such that the person gets a very strong high or sense of euphoria. The reason the reward center has arrows going out from it in the diagram is that the reward center basically does two things: The reward center when stimulated makes the person feel pleasure or euphoria and the next thing the reward center does is send messages to the rest of the brain telling the person to repeat that experience like a reflex action saying "Do that again." When the reward center is super sensitive then not only does the person get a higher high than most people, but also the person gets extremely strong reflex messages saying, "DO IT AGAIN." These messages in the person with the disease are turbo charged and ten times as strong as in the average person. These reflex messages are so strong that the person cannot overcome them with their logic, willpower, or good sense.

© 2026 CEU Matrix

TABLE 1

The Reward Center

Antipsychotics/ Major Tranquilizers	Antidepressants	*Stimulants
Haldol	Pamelor	Tenuate
Mellaril	Desyrel	Amphetamines
Navane	Effexor	Benzadrine
Prolixin	Elavil	Cocaine, Crack
Stelazine	Nardil	Cylert
Thorazine	Paxil	Desoxyn
Trilafon	Prozac	Dexadrine
Clozaril	Senequan	Ecstasy
Risperdal	Tofranil	Ice
Seroquel	Vivactil	Ritalin
Zyprexa	Wellbutrin	
Cymbalta	Zoloft	

*Minor Tranquilizers	*Sedative/Hypnotics
Ativan	Dalmane
Centrax	Halcion
Dalmane	Miltown
Halcion	Nembutal
Klonopin (Clonazepam)	Noctec
Librium	Placidyl
Meprobamate	Quaalude
Paxipam	Restoril
Restoril	Seconol
Serax	Tuinal
Soma	Alcohol
Tranzene	
Umbitrol	
Valium	
Xanax	
Alcohol	

Stimulate the Reward Center

© 2026 CEU Matrix

*Narcotics/Opiates	*Cannabinoids	*Hallucinogens
Codeine	Marijuana	Ecstasy
Darvon	Hashish	Ketamine
Demerol	THC	LSD
Dilaudid		Mescaline
Heroin		Mushrooms
Hydrocodone	*Inhalants	PCP
Methadone	Liquid Paper	
Morphine	Gasoline	
Narco	Glue	
Oxycontin	Paint	
Percodan		
Talwin		
Vicodin	***Stimulate the Reward Center**	

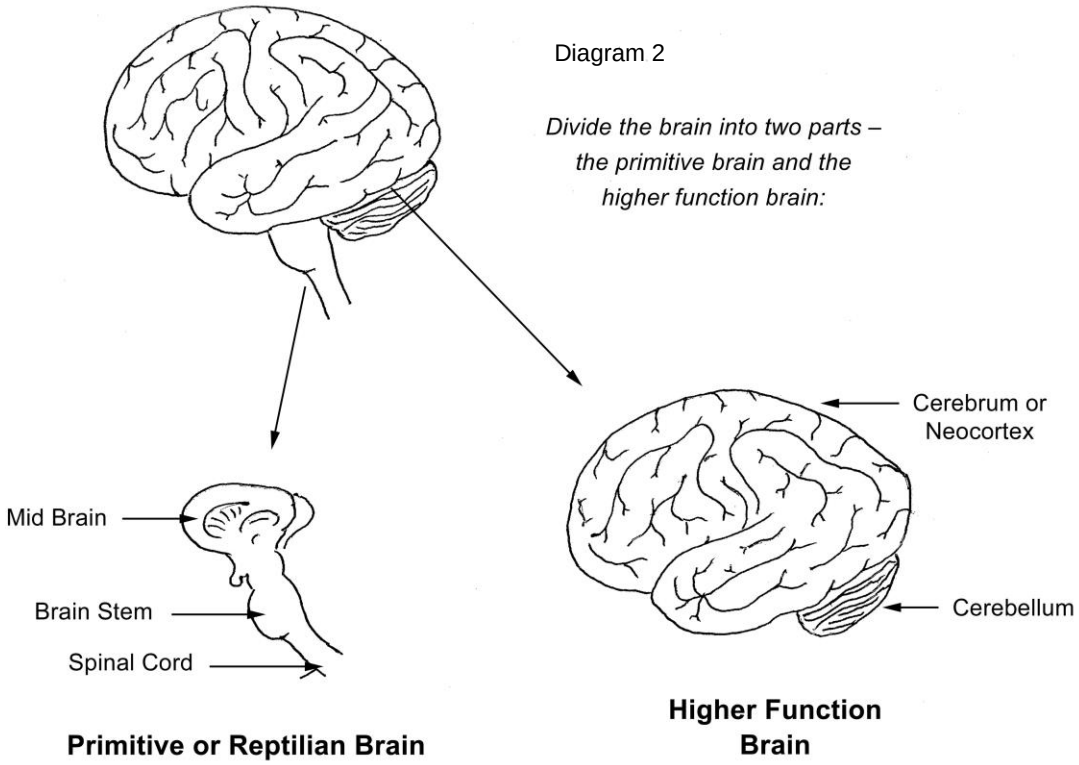
Antipsychotic and antidepressant drugs are listed to show that there are drugs that affect the brain yet do not stimulate the Reward Center and are not addictive. Those with a star are addictive.

If you are on pain medicines (narcotics/opiates) prescribed by a doctor, tell the doctor you are addiction-prone and ask the doctor not to refill the prescription without a good reason. Tell your sponsor and loved ones you are on the medicine, give the bottle of pills to someone else to give it to you as directed and get off of it as soon as possible. Go to more meetings and contact your treatment center if necessary. The 12-step program is very helpful in recovery.

It is important at this point to separate the brain into two halves (Diagram 2). Basically divide the brain into two parts: 1) the part above the ears, or the wrinkled neocortex or cerebrum that we all identify as the brain, and 2) the part below the ears which includes the midbrain and brainstem. The cerebrum or neocortex sits on top of the midbrain and brainstem. The higher functions such as logic, judgment, voluntary movement, speech, and ethics all are part of the brain above the ears, or the neocortex or cerebrum. More primitive functions such as hormone regulation, the breathing center, emotions, and the reward center are located in the midbrain or brainstem. Some experts refer to this part of the brain as the reptilian brain because it is where primitive functions or instinctual functions reside (what's more primitive than a reptile?) A person who knows very little about the anatomy of the brain which we just discussed might think that the reward center or pleasure center is a higher function and would be part of the neocortex or new part of the brain from an evolutionary point of view. This is not the case however. The reward center is a

© 2026 CEU Matrix

part of the primitive brain and in the midbrain. Rats have a reward center and this can be proved by animal research, and in fact much research on addictive substances has been done on rats in research labs. So, we have the reward center in the primitive part of the brain and the limbic lobe is also in the midbrain adjacent to the reward center. The reward center is in the mesolimbic area and more specifically the ventral tegmental area and nucleus accumbens. Researchers have been able to identify this area of the brain in humans, monkeys, and rats.



A strong message that comes from the primitive area of the brain (midbrain and brainstem) will overpower messages from the area of the brain above the ears where the higher functions reside. A good example of this can be seen in this interaction between a parent and a child at Halloween. A child continues to eat his Halloween candy and the parent says, "If you don't stop eating so much of that candy, I'll have to take it away." The child continues to eat the candy and the parent takes the sack of candy away. The child then decides he will manipulate his parent and hatches a plan to get the candy back. He goes to the parent and says, "If you don't give me that candy back, I'll hold my breath until I turn blue and die." The parent just smiles and knows that the child can't carry the plan out. But do you know why this plan won't work? The child hatches this plan in the cerebrum or higher functioning part of the brain above the ears, and even if the child has extremely strong willpower and desire to pull this plan off, he is unable to do so. The reason for this is the breathing center in the primitive or reptilian part of the brain is going to eventually tell the child he must breathe. Strong messages from the primitive part of

© 2026 CEU Matrix

the brain will trump or overpower messages from the cerebrum or higher functioning part of the brain. The child will have to breathe whether he wants to or not. His willpower is overpowered by a message from the reptilian brain.

People with the disease of chemical dependency have a super sensitive reward center to the effects of alcohol and drugs that will get you high. Not only does the person experience a stronger high from alcohol and drugs than the average person, but also the person gets extremely strong or turbo-charged reflex messages from the reward center telling them to "DO IT AGAIN!" It is these very strong messages that tell the person to repeat the experience that really get them into trouble. When these strong messages come from the primitive part of the brain they overpower willpower, logic, judgment and ethics, which are functions in the higher brain or cerebrum or neocortex. This is the basic defect in this disease. The part of the brain that registers pleasure or reward is overly reactive to these substances. And remember the reward center does two things: it registers the high and gives the message "Do it again." When this part of the brain overreacts the messages are too strong for the person to overcome them with willpower. This is why willpower will not work with this central nervous system disease.

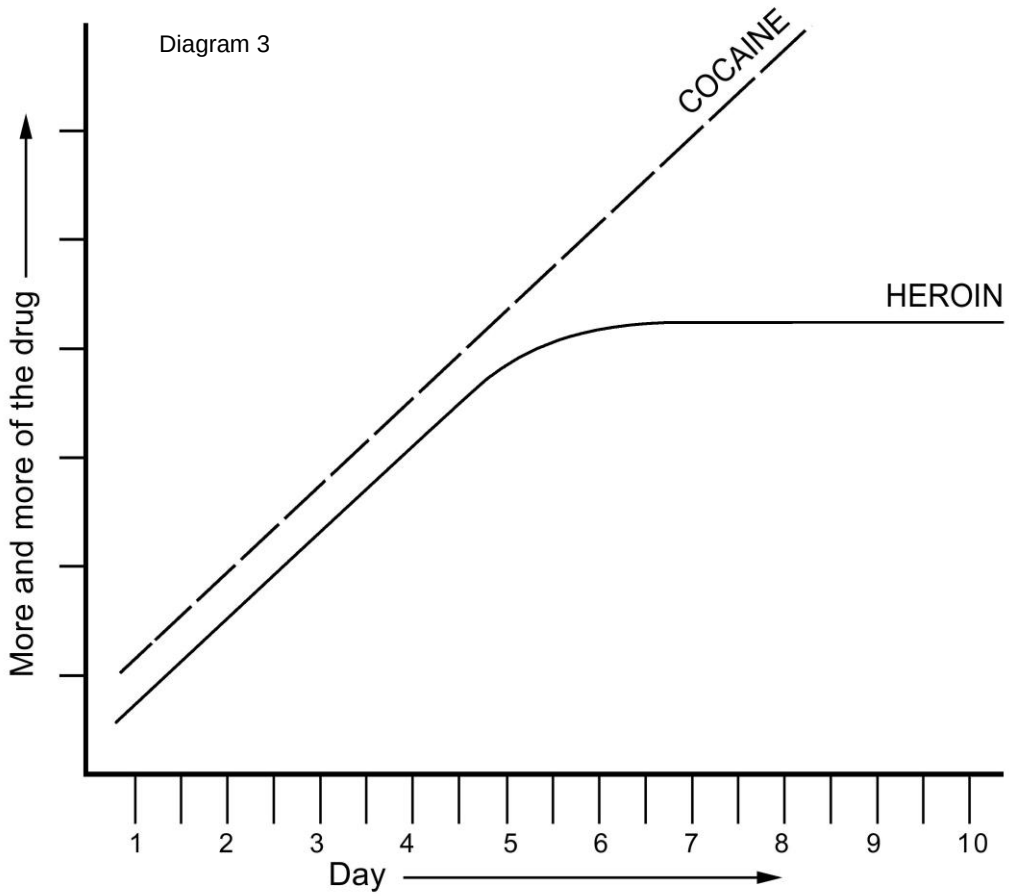
The same substances that strongly affect the reward center and give the person a high also have strong actions at the limbic lobe which is adjacent or surrounds the reward center. The limbic lobe is the area where your emotions are and the drugs that give us a high also have strong reactions at this area of the brain. These drugs are used primarily to give a euphoria or high, but secondarily are used to at least change the way a person feels. Initially, the person uses alcohol or drugs to get high, but after a period of time, the high loses some of its strength and they just don't get as high as they used to. The person continues to seek that high, however, and to remember the strong high they got when they first started using. This is referred to as "euphoric recall". The person never forgets that strong high; s/he remembers it and continues to seek it. If they can't count on the same strong high, they can count on these chemicals at least changing the way they feel. This happens at the limbic area. So the drug user uses the drugs to get high, hopefully; but if not that, at least uses the drugs to cope with uncomfortable feelings, because they can always count on the drugs at least changing the way they feel. Alcohol and drugs then become a way to
cope with uncomfortable emotions or with stress.

Researchers use rats to experiment with the effects of various drugs. This is done by putting the rat to sleep and surgically inserting a tube in one of the veins in the rat's legs. The wound is sewed up well and bandaged such that the tube stays in the vein like an IV. The rat is then awakened and put in a cage and given access to food and water and a lever in the cage. Rats will push a lever with their nose or paw out of curiosity. If something happens a rat likes when they push the lever, it will go back and push the lever again. In the drug research labs, the tube in the rat's vein is hooked up to a supply of a certain drug. If the rat pushes the lever, they will get a squirt or a dose of that drug through the tube into their vein. If the rat likes the

© 2026 CEU Matrix

sensation they get from that substance, they will hit the lever again to repeat the experience. Rats will self-administer (remember the term “self-induced”) certain drugs and basically like the same drugs that humans like, such as alcohol, cocaine, heroin, amphetamines, etc. This is one of the ways we can prove that rats have a reward center. Rats will self-administer those drugs that stimulate the reward center and make us high, but they will not bother with the lever when hooked up to other substances. For example, if you give the rat a dose of Thorazine every time it pushes the lever, the rat will push the lever once and stay on the other side of the cage, avoiding the lever. If you give the rat access to doses of antibiotics or aspirin, they will hit the lever once, but never bother with it again, because they did not get a positive experience from the drug and also do not get the messages from the reward center that tell them “DO IT AGAIN.” The drugs that stimulate the reward center and send the messages to repeat that experience are all self-administered by rats. In fact, rats abuse heroin and cocaine very much like humans abuse these drugs (Diagram 3 on following page). The X axis represents higher and higher doses of the drug. The Y axis is time in days. When you give the rat access to cocaine via the lever, rats will hit the lever over and over again. In some rat experiments where the supply of cocaine was not limited, the rats used the cocaine to the point that they died. If you graph the way the rats use cocaine, they use more and more each day, and this is represented in the broken line on the graph. When you give rats access to heroin, they will hit the lever repeatedly and will use more over the first few days of the experiment and then they get to the point where they take about the same dose of heroin each day. These are very interesting results because rats use cocaine and heroin just like humans do. When humans have access to a big supply of cocaine, they use it more and more each day to the point that they will use the whole supply up, or have a seizure, or become so ill that they can’t continue to use the cocaine. Human beings that are cocaine addicts are limited in their supply of cocaine primarily by what they can afford or what they can buy. It is a deadly combination to be a rich cocaine addict. Human heroin addicts also use heroin very much like the rats use it in the cage. The usual heroin or opiate addict finds about the dose of the opiate they need, and use about the same dose every day. Cocaine addicts tend to use cocaine in binges and take more and more over a few days, while heroin addicts can tell you how many balloons a day they need to feed their addiction and don’t use more and more each day. The reward center of the rat and that of the human has similar function and this is why rats and human beings tend to abuse the same chemicals and abuse them in the same ways.

 © 2026 CEU Matrix



Laboratory Rats Using Cocaine and Heroin

The reward center becomes overly sensitive usually because of genetics. That is, a person is born with the supersensitive reward center to these substances. Probably 80% or more of the people with the disease of chemical dependency have the disease because of genetics. Most alcoholics and addicts have some siblings, parents, or grandparents that are also addicted. This is not true of all the people who have this disease, however. Apparently, there is a way to acquire this overly-sensitive reward center, and it is believed that extended and high level abuse of these substances can cause the reward center to become overly sensitive. If a person is not born with a super-sensitive reward center, it is difficult, though for the person to abuse the substance enough to change the reward center because people who do not have the overly sensitive reward center do not get the intense pleasure from the drugs and will naturally not compulsively overuse alcohol or drugs. But, apparently the reward center can be changed to be overly sensitive or reactive to these drugs by extended use.

Once the reward center is supersensitive, it does not change back to a more normal state. Once a person has become alcoholic or drug addicted, the reward center will stay supersensitive to these chemicals and will always give the turbo-charged reflex action that says, “DO IT AGAIN.” Clinically, there are many cases of

© 2026 CEU Matrix

people who have been sober or straight and off the drugs or alcohol for ten years or more, but when they experiment again with one of these substances, they find that they become out of control in short order. The typical case is the AA member who is sober for ten years, then convinces himself or herself that it would not hurt to celebrate their sobriety with a couple of beers, only to find out that in short order their drinking escalates to the point that they are grossly out of control again and are back into heavy drinking. "Once a pickle, never a cucumber." Once the reward center is disordered and overly-sensitive in this way, it never goes back to the normal state. The person with the disease of chemical dependency can drink or use drugs again, but they can never safely drink or use drugs again because they would invariably get out of control again.

Refer to the brain diagram again and point your attention to the "drug" with the arrow going into what represents the carotid artery. When a person wants to get high or change the way they feel because they are under a lot of stress, they have to get one of these particular substances to the reward center in the limbic area for it to have its effects. The only way we know to do it is to get it into the bloodstream and carried to that part of the brain. The drugs can get into the blood stream by smoking the drug, swallowing the drug, or shooting it by a needle directly into the bloodstream. The carotid arteries are on either side of the neck and can be felt as a very strong pulse here because these are large arteries, almost the size of a diameter of a finger, carrying lots of blood to the brain. Trace the course of the drug on the diagram through the carotid artery to the limbic area and the reward center where the desired effects occur. The drug gets to these areas of the brain, but trace the drug as it goes through the other branches of the carotid artery throughout the brain. The drugs also get to all of the other parts of the brain. All drugs (including medications) have certain side effects. Drugs such as cocaine, alcohol, opiates, etc. have their share of side effects as well. You can see by tracing the course of the blood supply to the brain that the drugs also get to the social area, the areas of judgment and willpower, the speech area, the breathing center, the visual cortex and other areas of the brain with their particular functions. If cocaine or amphetamines are ingested the side effects on the speech center will be rapid speech, but if Valium or alcohol are ingested the speech becomes slurred. All of the drugs we are talking about tend to impair judgment and impair social function. Balance is affected by many of these drugs. High doses of alcohol or opiates can stop the breathing center and kill the person. With the social functioning or frontal area of the brain impaired, the person will do things they would never do if they were not impaired.

People drink alcohol and take drugs for "good" reasons. They want to give themselves pleasure or at least change the way they feel so they can cope with uncomfortable feelings. No one uses drugs and alcohol to slur his speech, impair his balance, or disorganize his behavior. There is no way a person can get the effects they are after without the side effects because the drugs go to all areas of the brain. The side effects of drugs are what get a person in the most trouble. If an addict could figure out how to inject the drug they desired directly into the reward center and limbic area, perhaps they could get away without the problems caused by

 © 2026 CEU Matrix

the side effects, but this is impossible unless it is done by a researcher to a rat in the lab. A person cannot get the effects they are after without the side effects, and these effects get worse and worse over time. Judgment becomes cloudier and "insight" (defined as the ability to assess your own behavior or tell how you are doing) is also impaired. The person with the disease of chemical dependency becomes less and less aware of their disordered behavior, and their judgment and behavior becomes more and more disordered which points to the progressive nature of this disease. The disordered bad behavior cannot be avoided and the person becomes less and less aware of it. Eventually, the side effects catch up with the person.

When someone receives an injury to a particular part of the brain and lives for awhile, then we can see what function is impaired. When that person dies, an autopsy can tell us what part of the brain was destroyed. This is one of the ways we know which parts of the brain do what. A clinical example of a disordered brain follows: A man was admitted to the hospital with a stroke in his frontal area. When his wife came to visit she was embarrassed and very upset when she saw that her husband had food dripping down the front of his pajamas, and he was pinching the nurses and acting like an out of control child. She said, "This is not my husband. You don't understand. He is a judge and wears a tie everyday and has the best manners of anyone I've ever known." But because his frontal lobe was affected, his social functioning was impaired, and he was out of control. Alcohol and abuseable drugs give a similar effect (a side effect in this case) on the frontal ("Soc") lobe of the brain.

A man has a difficult job at one of the high tech firms at his town. He works very hard and tries to meet the deadlines given him by his boss. Sometimes his boss is overbearing and by the end of the week this man is so stressed out he's "fit to be tied." To cope with this stress, when he gets off work, he lights up his marijuana pipe and drinks some of the bourbon he carries in the flask in his car. On Friday afternoon he can't wait to get to his car to smoke his pot and drink his alcohol so that he can change the way he feels from his very stressful job. He gets in his car and drives out of the parking lot so others can't see him light up and drink his bourbon during his thirty minute or more commute home. After a while he starts feeling different and less stressed out by his job because he can feel the effects of the substances he has just ingested. He keeps driving along and at one point brushes the curb with one of his front wheels. He is not really driving recklessly, but he did stray out of his lane a bit. As it turns out there is a policeman who happened to observe him brush the curb with his tire, and decides to pull him over. The policeman is not impressed by the great high this man is experiencing or the change in the way he feels - that he is not feeling so pent up. The policeman is not impressed at all with the fact that he had some strong marijuana to smoke and smooth bourbon to drink, but he is impressed by the side effects he notices. The policeman can tell the man's speech is a little bit thick and slurred. When he gives the man the field sobriety test, the man is unable to perform the heel-toe walk in a very coordinated fashion, and so the policeman decides to arrest him for driving

© 2026 CEU Matrix

under the influence. What other people see in the chemically dependent person is the side effects and these are not the effects that that person is after. The affected person of course feels the high and the change in the way s/he feels and tends to be less and less aware of their disordered behavior, but loved ones and those around the person are very aware of the side effects. No one uses drugs or alcohol to have slurred speech or bad judgment, but there's no way to stimulate the reward center and the limbic area without also experiencing the side effects.

We usually assume that our behavior is controlled by our conscious mind, and controlled by the individual. When a person has the disease of chemical dependency, their behavior will be out of control, but having this disease does not mean the person is not responsible for their behavior. For if they are not responsible for their behavior, who is? Of course, the individual is responsible for his behavior, but the impairment by drugs and alcohol will render a person out of control. It is unfortunate that the chemically dependent person has this severe and dangerous disease; but they will be held responsible for their behavior, nonetheless. Doctors and nurses often have amusing stories about people in the recovery room of the hospital where people wake up from anesthesia after they have had surgery. The recovery room is a safe place where doctors and nurses can monitor a person as they gradually wake up. Anesthetics tend to affect the brain much like many of the drugs we are talking about affect the brain. Anesthetics cause side effects such as these drugs do, and this is one of the reasons why people are kept in a special room while they recover from the anesthesia. Doctors and nurses will talk about the church lady in the recovery room who cursed like a sailor and the prim and proper businessman who propositioned all the nurses and orderlies when he was waking up from the anesthesia. In these cases the drugs were given by trained people for the purpose of surgery and the person was kept safe and the behavior was monitored closely in the recovery room. The abnormal behavior that can occur in these people is generally forgiven because of the circumstances. But in the chemically dependent person, the drug is self-administered for a self-centered reason, and the abnormal behavior is not so easily excused. The effects of the chemicals in the two circumstances are very similar, but social circumstances are quite different. In both instances the brain is impaired by the substances and consequently the behavior is disordered.

Another side effect often seen in drugs that affect the brain is <u>disinhibition</u>, which is impairment of the brain's ability to inhibit impulses. The brain expends a lot of energy and time inhibiting impulses; that is, putting the brakes on urges to act. For example, when a person becomes angry at someone, he will usually inhibit the urge to strike out at the other person. It is normal for the brain to inhibit impulses that we have. The types of drugs that are frequently abused tend to disinhibit the brain as a side effect. That is, they keep the brain from inhibiting impulses normally. Consequently, the person tends to scream out or strike out when angry, proposition attractive people inappropriately, and act on other base impulses that they would inhibit if their brain was working properly. Disinhibition is a big cause of problems in the chemically dependent person.

 © 2026 CEU Matrix

Neurologists use the term encephalopathy to refer to a “sick brain.” (*Encephalon* is brain and *pathy* is pathology or sickness). When people are encephalopathic their brain is not functioning well; and they are unable to concentrate normally, focus their attention normally or behave normally. A neurological disease such as meningitis will render a person encephalopathic, and the person may appear sleepy and confused in their thinking. When a person is encephalopathic they may be sleepy and under active or they can be overactive and agitated. The person receiving anesthesia and waking up from anesthesia is encephalopathic; similarly, the alcohol or drug addict becomes encephalopathic from the effects of the substances. Once the chemically dependent person stops using the drug, the encephalopathy will linger for a time (days or weeks and sometimes even months) after the drug is stopped. It takes the brain time to get back to its normal rhythm and balance electrical and chemical function so it can operate normally. This central nervous system disorder has many implications. The brain is impaired during the time the chemically dependent person is using the drugs, but over time and with repeated use of the drugs that affect the brain, the function of the brain becomes disordered to the point that it takes some time to clear. The terms “protracted absence” and “post-acute withdrawal syndrome” are used to describe the lingering encephalopathic problems that chemically-dependent people experience sometimes long after drugs and alcohol are stopped. After drugs and alcohol are stopped, for example, while the person is in a treatment program and detoxified, the brain doesn’t instantly go back to functioning normally. The encephalopathic changes linger and yet with time the brain starts functioning normally although it may take weeks or months depending on the amounts and types of drugs used and how long they were used. For example, an alcoholic who has been drinking heavily for ten years and abusing pot and cocaine will find that they are thinking much more clearly and their moods are more stable after they are off drugs for two to three weeks. At ninety days they are even more stable and are able to concentrate and focus much better; yet their brain may not function entirely normally for a year post-detox. The length of time it takes the brain to clear from this protracted abstinence syndrome varies, yet it is an important factor in early recovery. It is a product of the lingering encephalopathic changes.

The discussion thus far on the disease of chemical dependency has been about the anatomy of the brain. The drug effects can be explained by chemistry, but this explanation is more complicated and harder to understand. The habit-forming drugs that we are discussing tend to affect such neurotransmitters as dopamine, GABA, serotonin, and endorphins, as well as other neurochemicals that are important in the functioning of the brain. The drugs of abuse cause imbalances in these important brain chemicals. For example, cocaine and amphetamines cause depletion of dopamine. After drugs and alcohol are stopped the delicate balance of the brain chemicals takes time to return to normal.

Functional MRI scans and PET scans, as well as other sophisticated and expensive scans, used in research labs show the disordered brain in the chemically-

© 2026 CEU Matrix

dependent person; and show that the areas noted (mesolimbic area, reward center, and pre-frontal area) are strongly affected. These areas are lit-up differently in the scans of the chemically-dependent person and the uneffected person. The physiological differences we have discussed in chemically-dependent people are well accepted, and what once was described as "the disease concept" is frequently discussed among addictionists at the American Society of Addiction conferences and other scientific forums. Scientists at the National Institute of Drug Abuse (NIDA), neuropharmacologists, neurophysiologists, neuropsychologists, and other scientists do research on the disease of chemical dependency, and the addictionists (sometimes termed addictionologists) who are MDs benefit from this research as they medically treat chemically-dependent people. Many other disciplines are very important in the treatment of the chemically-dependent person, which include licensed chemical dependency counselors, psychologists, social workers, licensed professional counselors, nurses, and pastoral counselors. They are all very important in the treatment of this disease.

The first step in the treatment of this disease (literally from the AA point of view, this is the first step) is the recognition that one has this disease. Once a person has accepted that they have the disease and understand that their willpower will not work in controlling the disease, then the person can go on to learn how to manage this chronic disease. In the case of the diabetic, the treatment team will teach the diabetic how to monitor the blood sugar, take the proper dose of insulin, and stay on the proper diet. The diabetic cannot safely eat sugars and lots of carbohydrates. In a sense, the chemically-dependent person has a special diet somewhat analogous to the diabetic's special diet. In the case of the person with the disease of chemical dependency the "special diet" refers to drugs, chemicals, and medications that a person cannot safely use or ingest. Please refer to the table with lists of drugs for the "special diet" for the chemically-dependent diet. Those headings with the star* by them are substances that the chemically-dependent person cannot safely use. When you consider that the disease is basically an overly-sensitive reward center to certain substances then you realize that this is the primary problem. It is not just one particular substance or drug that is the problem. For example, a person may go to a treatment program because s/he sees his problem of drinking out of control and drinking daily as a problem of alcohol abuse. Well, of course, alcohol is a problem, but the basic problem is the reward center is overly-sensitive to abusable substances. The reward center is not just sensitive to alcohol. It is overly-reactive to all the substances that have strong effects on the reward center. Consequently, the person who considers himself an alcoholic is prone to losing control with any of the other drugs that affect the reward center, and that are listed in Table 1 with an * by the heading.

A man goes to a treatment program because his use of alcohol and cocaine is out of control, but he also smokes marijuana daily. It is clear to this person that he must give up alcohol and cocaine because his problems with these drugs are very dramatic – he gets into fights, yells at his wife, and he passes out when he drinks too much or uses cocaine. He doesn't consider pot as a problem as it is a very passive

 © 2026 CEU Matrix

drug and basically just makes him sit on the couch, watch TV, and perhaps eat too many sweets. He goes through treatment and works very hard on stopping the alcohol and cocaine and freely considers himself an alcohol and cocaine addict. When he gets out of treatment he continues to smoke marijuana because "after all, it is not much of a problem." Remember, the reward center does two things: It registers the high, and then it tells you to "do it again". When he starts smoking pot he is stimulating the reward center, and it is telling him to "do it again." But the reward center doesn't tell the rest of the brain which drug to use; it is just sending the message to the brain, "Get me high again." If the person is smoking pot, eventually he will be around other substances and may find himself at a party where he is offered a line of cocaine and also offered a beer or two. Once he has smoked pot, his reward center is telling him to get high again, and the side effects have clouded his judgment and disinhibited him to some degree. When he is offered the other substances, the chance of him using them is very high (no pun intended.) What happens is the man manages to stay off of the cocaine and alcohol for a while, but stays on the pot; eventually he is offered cocaine and alcohol and is basically unable to resist. It is not long before he is out of control again with cocaine, alcohol, and pot. The proper management of this chemical dependency problem is to avoid all the substances that stimulate the reward center because he will become out of control with any of them and cannot safely use any of them. The "special diet" of this disease of chemical dependency is to avoid any of the drugs in Table 1 noted with the headings that have a * by them. The chemically dependent person cannot safely use any of these and is in danger if exposed to any of them.

Another typical problem for the chemically dependent person is when a person becomes straight and sober for some time and then has to have surgery such as on a hernia or fractured shoulder or such. The person has the surgery and then is put on pain medication. In the hospital he might be on morphine for a time but is then discharged, often on hydrocodone. This person may never have abused opiates before, but because of the nature of the chemical dependency problem, he is prone to get out of control with hydrocodone. In many cases, the chemically dependent person finds they take the hydrocodone as directed for one or two doses, but then they find they are taking hydrocodone a little bit sooner than prescribed, and pretty soon they are taking three instead of two at a time, and then it is not long before they have taken all their pain medication prematurely. It is not unusual then to find the chemically dependent person back to abusing their drug of choice, whether it is alcohol or another drug. Therefore, this type of situation tends to be a very risky time for relapse in the person who has the disease of chemical dependency.

In summary, there is quite a bit of research done on the causes of this severe, progressive, chronic, and potentially fatal disease, and much known about the problem of chemical dependency. This disease affects a large percentage of our population – somewhere around 15% or more - and tends to have bio, psycho, social components to it. The biology has been extensively discussed, and the psychology tends to also be affected such that people with this disease tend to be

© 2026 CEU Matrix

very anxious, depressed, and at times become psychotic. The social aspects of the disease are very damaging and include dysfunctional relationships, dysfunctional families, fatal motor vehicle accidents, crimes due to disinhibition, child abuse, and other social problems caused by the encephalopathic chemically dependent person. It is a self-induced central nervous system disorder that primarily affects a certain part of the brain and secondarily other functions of the brain. It often runs in families. Unfortunately, there is no cure for this disease, but it can be effectively managed. It is a serious, chronic, progressive, and potentially fatal disease. Not only is much known about the problem of chemical dependency, but fortunately much is known about the solution and how to manage this disease, but that's another subject.

© 2026 CEU Matrix

II. THE SOLUTION - RECOVERY

People with chemical dependency problems (alcoholism and/or drug addiction) come for treatment because they have to. They are out of control with their use of the drug, or drugs of choice, and life is filled with problems and is unmanageable. Each person has tried on their own to solve the problem; and, generally, they have tried to use their willpower to stop, and they found they were unable to do so. AA members speak of a person "hitting bottom" before they come to AA or seek treatment. This occurs when a person has sustained a number of losses to the point that they feel that they must seek help. Typical losses include losing a relationship or spouse, losing a job, losing money, losing friends and family member support, losing a place to live, incurring legal problems, developing significant medical problems and losing self-respect. Some people have a very "low-bottom" and others have a "high-bottom". A low-bottom could mean eating out of dumpsters, being homeless, developing liver complications and being rejected by all of their loved ones. The high-bottom can be a sharp word from a loved one, being put on probation at work, or having a frightening blackout. Everyone that comes for treatment or seeks outside help is in some degree of crisis in their life.

Alcoholics and drug addicts have some degree of ambivalence. They are torn between wanting to continue to use and knowing that they must stop "or else". Addicts and alcoholics did not start using substances because they dislike them. In fact, they like the effects they get early on in their drug and alcohol use; and, in some respects, they love what drugs and alcohol do for them. Initially the substances "work" and do give the person something they value whether it be euphoria, a change in the way they feel, or a method for coping with stress. As chemical dependency is a progressive illness, eventually the losses pile up and tend to change the balance of the ambivalence toward a desire to seek help. Eventually the drugs and alcohol stop working.

Some people that enter treatment (such as an intensive out-patient program, in-patient treatment, residential treatment, or out-patient counseling and therapy) are forced or urged to do so by a close family member, a loved one, boss, probation officer or their lawyer. Treatment tends to work and be more effective if the person is internally motivated or seeking treatment for themselves, not because it is someone else's idea. However, treatment that is forced on someone can also be effective. Interventions push people to seek treatment; they are done by important people in the chemically-dependent person's life in a supportive but confrontational meeting. Interventions that are carefully planned and involve the important people in the chemical-dependent person's life have a high degree of success for at least bringing that person to treatment. There are particular techniques that help an intervention succeed, and trained interventionists that meet with the family and friends of the chemically-dependent person, when done with careful planning, have the best chance of success. Judges, doctors, bosses and other important people in

© 2026 CEU Matrix

the effected person's life have an opportunity to bring the bottom up for the patient or get the person's attention and help them realize that they have a problem and need help. These professionals should not under-react to the chemically-dependent person and should not enable the disease to progress, as they can hasten a person reaching bottom in a productive way. An example of this would be the internal medicine doctor who does the annual physical on his patient and finds out that the patient's liver function tests are slightly abnormal. He may be unaware of the patient's drinking, but may suspect it because of the abnormal lab results. Instead of ignoring the mild increase in the liver enzymes, like many doctors do (because often mild abnormalities in laboratory values do not indicate any crisis or need for immediate treatment), it is wise for the doctor to have an open discussion with the patient. Judges and lawyers do not do a chemically-dependent person a favor by letting them off or not holding them responsible for their actions.

Chemically-dependent people seek treatment in many different ways including NA/AA meetings, individual counseling, appointments with psychiatrists or psychologists, entering in-patient or out-patient programs, entering a residential program or seeking counseling from their pastor, for example. If the chemically-dependent person is actively using, medical withdrawal or detoxification may be necessary and may be accomplished on an out-patient basis, or may need to be done in a hospital setting. Out-patient detoxification is tricky because often the patient is unable to control the medication used for withdrawal. Detoxification is not treatment for the basic addiction itself nor does it lead to recovery; although, it is a necessary initial step for many severe alcoholics and addicts. Once detoxification, or withdrawal from the substances, is done the real business of recovery or rehabilitation starts.

A brief word about detoxification is indicated at this time. Certain addictive drugs require medical detoxification because of the danger of death during the detoxification. These substances include alcohol, benzodiazepines (Valium, Ativan, Klonopin, Xanax, et cetera), barbiturates (often ingested in the form of Fiorinal or some other headache preparation), and mixtures of one of these drugs with other drugs. The danger of death comes primarily from the risk of seizure when these substances are abruptly stopped. Medical detoxification entails giving the patient a cross-tolerant drug or one that will substitute in the brain for what the patient's drug of choice was, and then involves gradual withdrawal from that substance. In general, detoxification symptoms from a certain drug are the opposite effects of that drug. For example, withdrawal from Valium (which is a tranquillizer) involves excitement, tremulousness, a feeling of extreme alertness and possible seizures. Withdrawal from cocaine and amphetamines (stimulants) is accompanied by depression, low energy, tiredness and sometimes a psychotic reaction with agitation. Withdrawal from these stimulants may or may not require some medical treatment; but if it is accompanied by psychosis, or if the patient is suicidal, the patient will need medical attention. The withdrawal from opiates such as heroin, hydrocodone or morphine involves a flu-like syndrome with very uncomfortable symptoms: muscle aches, generalized body aches, nausea, diarrhea, abdominal cramps, chills, runny

 © 2026 CEU Matrix

nose and many of the symptoms of influenza. These withdrawal symptoms are severe and even though they will not kill the patient, the patient feels like they might die; and sometimes the syndrome is so severe that the patient cannot stand it and must leave treatment to go use drugs again. Withdrawal from alcohol can be serious and life-threatening and may cause DTs, seizures, or at least significant elevation of blood pressure, pulse rate and severe tremulousness. DTs, or delirium tremens, is a dangerous and severe form of alcohol withdrawal in which a patient is extremely confused, having hallucinations, is agitated and can become so frightened that their behavior can be dangerous. All drugs of abuse have some withdrawal syndrome but the syndrome may or may not need medical treatment. Sometimes, time off of a drug is the only answer to the withdrawal. Some patients feel that once they are withdrawn from the substance they are treated and "cured". This is far from the truth. "Abstinence" is stopping a drug use or being kept off the drug of choice. "Sobriety" is stopping the use and replacing what the drug did for the patient with healthy replacements that are not addictive. These replacements are usually not other drugs or medication. The goal of most treatment is sobriety; not just abstinence. The term "dry drunk" refers to abstinence from alcohol in particular without real sobriety. A "dry drunk" is a person who is abstinent and feels deprived as well as agitated, irritable and very unhappy. This is not a desirable state. Sobriety is the aim of recovery and involves several elements that we will discuss.

Treatment for alcoholism, drug addiction or chemical dependency aims to educate the patient or client about their basic disorder and then help the patient "get into recovery". "Recovery" is an active or pro-active process or practice. It is not an event but a process, and because chemical dependency is a chronic disease, it is a process that will need to continue to some degree throughout the patient's life. One way to think of this is that the chronic disease of chemical dependence is a part of the affected person and this part does "a hundred percent of its job". Unless the chemically-dependent person counters this with substantial changes in their life, he or she will not reach sobriety and continue to maintain sobriety. If the disease of chemical dependence does "a hundred percent of its job", it stands to reason that the affected person needs to do a hundred percent of recovery. Relapse is a possibility throughout the affected person's life, which is true of any chronic disease. If diabetics let their guard down and stop compulsively managing their diabetes, they will have the problems of low or high blood sugar. The diabetic will relapse, in other words. Likewise, if the asthmatic stops taking medications and stops avoiding dangerous situations such as dust in the air or high altitude, the asthmatic's symptoms will relapse. Chronic diseases all relapse if not managed appropriately. Managing the disease of chemical dependency is referred to as "being in recovery". If managed well, relapse is avoided.

All chronic diseases have some degree of denial or the psychological mechanism that makes it hard for a person to admit to themselves that they have a chronic or serious problem. No one wants to believe that they have a chronic disease or a disorder that they will have to live with throughout their life. No one especially wants to accept the fact that they are alcohol or drug addicted because

© 2026 CEU Matrix

there is a great deal of stigma against the addict or alcoholic in our society. It is said that "no one grows up saying that when I grow up I'm going to be an alcoholic or addict". So when an adult is confronted with the possibility that they have the disease of chemical dependency it is difficult for them to break through their psychological denial. The person must suffer enough or hit bottom to the point that they can no longer deny to themselves that they have that problem. Denial can be severe in the addict or alcoholic, but denial is present in any chronic disease including diabetes, epilepsy, asthma, hypertension, et cetera. Denial can be very severe in celebrities, star athletes, doctors, lawyers and anyone who feels they are special or better than the average person. For example in star athletes in treatment, the therapist may try to tell the athlete that "you are just like everyone else, you are unable to control the use of the drug and you are vulnerable to relapse". This star athlete has likely been a star since they were a child and has never been treated just like everyone else. It can be very difficult for this person to break through that level of denial because they have never been treated just like everyone else in other circumstances. A particularly virulent or severe form of denial is referred to as "terminal uniqueness". The person believes that they are so different and so unique in comparison to other people that they cannot accept that they are unable to control this area of their life. They are unable to accept that they have alcoholism or drug addiction. This is referred to as terminal because this form of denial may make sobriety unattainable and ensures the progression of the disease even to the point of death. Another severe form of denial can be seen in very advanced alcoholics and is physical or neurological in nature. It comes from some atrophy or injury to their brain caused by the substance and is similar to a traumatic brain injury to the right hemisphere of the brain. This is known as anosognosia and is a neurological phenomena due to a right hemisphere injury and perhaps is due to atrophy in the severe alcoholic. A person with anosognosia is unable to recognize that they have a problem even if the problem is severe and very apparent to everyone around them. If a person has a traumatic brain injury to the right hemisphere and is paralyzed on the left side, these patients with anosognosia are not aware of their problem even though they cannot walk or move that side of their body. This is a rare form of denial and a very severe one, but it is occasionally seen in the severe alcoholic.

Even with these problems with denial, many people do break through the denial, hit their bottom, whether it is high or low, and the alcoholism and/or drugs bring the person "to their knees". The founders of AA believed that the chemically dependent person, or alcoholic, needed to reach a spiritual crisis and have a spiritual change to become sober. It is said that the famous psychiatrist Carl Jung, is somewhat responsible for pointing this out to the founders of AA when he treated Roland and finally told him that his only hope was a "spiritual change". Dr. Jung said "spiritus contra spiritum" meaning it takes a spiritual change to beat the spirits (a term for alcohol).

Several forms of treatment can be successful. Project Match compared three different forms of treatment with the hypotheses that different patients would do better with certain types of treatment. Motivational interviewing, 12-Step facilitation

 © 2026 CEU Matrix

and cognitive behavioral treatment were compared. This was a large study that was done in 1993 and found that all three of these forms of treatment can be effective. It found that if the patient had no significant psychological problems, the 12-Step facilitation was more likely to give the patient long-lasting sobriety. All three forms of treatment, however, were found to be successful in some people.

Motivational interviewing is a technique that is based on the stages of change model. It involves strong empathy, warmth, client-centered counseling with techniques to help the patient overcome their ambivalence. The stages of change include pre-contemplation, contemplation, decision-making (where ambivalence is being resolved), action and maintenance. The counselor or therapist is non-confrontive, but instead is quite supportive of the patient's internal motivation and encouraging of self-efficacy. The therapist or counselor "rolls with the resistance" and tries to help the patient move through their ambivalence. Once a patient makes the decision to change, then techniques such as cognitive behavioral therapy or 12-Step facilitation can be used to help the patient take action to change their life.

Cognitive behavioral therapy (CBT) emphasizes that thinking can change behavior and emphasizes techniques to set goals and reach goals to change. CBT focuses on problems and is very goal-directed, confronting unhealthy attitudes, thoughts and beliefs. It is believed that the unhealthy thoughts are learned over time and can be altered and changed to a more healthy orientation. Attempts are made to replace irrational beliefs. Assertiveness is urged and taught, social skills are taught, relaxation techniques and copying skills are also taught. Relapse prevention strategies, techniques to deal with craving, new ways to cope with stress to prevent relapse and drug and alcohol refusal skills are practiced.

12-Step Recovery involves introducing the chemically-dependent person to the 12-Step Program including AA, NA, CA and dual recovery. Patients are taught how to work the 12 steps and helped to work through the initial steps. Meetings are held at the facility or the patients are taken to meetings in the community. Sometimes people in recovery from AA come to the facility to talk to patients or tell their story or do "12-Step work". An attempt is made to help the patient learn to use AA as a valuable tool for reaching sobriety. All well-known drug and alcohol programs use 12-Step facilitation strategies and partner with the AA community. It is important that the patient look at AA as a tool to be used to reach sobriety and realize that they are not the tool of AA. It often takes some orientation to the program because language is used differently in this sub-culture of recovery. Certain behaviors are appropriate in meetings, and it is important that the patient not just go to meetings but learn to get a sponsor and work through all 12 steps of recovery.

Using AA or the 12-Step Program as a tool to reach sobriety is analogous to using any universal tool. For example the universal tool for changing a flat tire is the jack. If you drive a car in the USA or France or Africa and have a flat tire, you will get out of the car, open the trunk and get the spare tire out, but also get the jack out

© 2026 CEU Matrix

of the trunk. The jack is a universal tool for changing a flat tire. Not everyone likes to use the jack and some who have pinched their fingers in the jack may avoid using it, but this person will use a universal tool, the jack, anyway. That person may use the jack slightly differently than someone else but they will use it just the same. In our world AA is becoming the universal tool to reach sobriety. The Big Book of AA has been translated into several languages; and AA meetings exist not only throughout the USA, but in many different countries including Europe, Caribbean countries and other foreign countries. It is interesting to note that since the late 30s, when AA began, it has not only thrived but flourished and spread all over the whole country and through many countries of the world. AA has never had a CEO, a president, a marketing director or director of missionary services (like some churches have to establish other churches) and yet it has grown in numbers year after year. No one has made money from AA and yet AA is vibrant and thrives. The only reason for this is that AA (and its other derivatives like NA and CA) is effective and helps people reach sobriety.

If a person can accept the truth of what was just said about AA, it becomes obvious that it is important for the chemically-dependent (CD) person to find a way to use the fundamentals of the AA program to reach their goal. Many CD people initially have complaints about AA meetings. But some of this negative attitude is a reflection of continued denial. Of course some complaints have validity. In 12-Step facilitation counselors can help patients work through some of their complaints and learn to use AA in their way without ignoring the fundamentals. When a person uses the universal tool for digging a hole he will use a shovel. The person may push the shovel with his foot or hack at the ground like a pickaxe or swing the shovel from side-to-side striking the ground, yet the person will dig a hole faster and better using this very valuable tool. It is a waste of time to avoid this universal tool and a waste of time to try to invent some other way of digging a hole. The point is that it's important for the CD person to find a way to use the 12-Step Program rather than try to "reinvent the wheel".

Some people may find that meetings are more important than contact with a sponsor, although these people will also need a sponsor. Some people that have social anxiety may find that more contact with their sponsor is more important because it is difficult for them to go to many meetings. Some people like small meetings rather than larger meetings. Women often tend to do better in women-only meetings. One wealthy man found that he felt more comfortable in a lower-income AA meeting and not in a meeting full of professionals like the treatment staff had initially thought. It is important for the newcomer to go to various meetings and find the meetings that are more comfortable for him or her to attend.

It is important to note that only 50 percent of working the 12-Step Program is going to meetings while the other half is work with a sponsor and working through all 12 steps. After a person finds the meeting where he feels most at home, with time he can identify the members who know what they are talking about and have some "good sobriety". At that point the newcomer can ask the "old-timer" if they will

 © 2026 CEU Matrix

sponsor him. In some AA groups, sponsors volunteer to sponsor newcomers. The sponsor helps the newcomer, but the newcomer helps the sponsor at least as much because the sponsor needs a sponsoree to work the 12th Step of the AA steps. Working the 12th Step helps the sponsor reach a higher level of sobriety. It is important to note that the newcomer does not just "sponge" off the sponsor and some even believe that the sponsor actually profits more from helping the newcomer than vice-versa. Years ago in AA often a sponsor would pick the newcomer and in some meetings today there will be a show of hands of people willing to sponsor. A sponsor should know how to work the 12 Steps and help the newcomer get through all 12 of them. Sobriety "lives" at Steps 10, 11 and 12. The sponsor needs to be available to the sponsoree and responsive to them and help them work through all 12 steps.

In the early days of AA the step work was done rather rapidly. The newcomer could get through the first three steps in a matter of several minutes or less than an hour. In a couple of hours the sponsor could help the newcomer work through Steps 4 and 5. In the last couple of decades, with the advent of treatment programs and therapists being more involved in the treatment of CD patients, step work has been done much more slowly. At one extreme therapists have recommended working one Step per month. This is definitely too slow a pace and it actually works better to work the Steps much more rapidly than this. It should be remembered that the 4th Step is not a psychoanalysis, but rather an inventory that brings up problems that might cause the person to relapse. If something is left out of the 4th Step, there should be no worry as the personal inventory will be re-visited with Step 10. Many people stall out at Step 4. It can be difficult to take the personal inventory and some people are fearful of looking at their own faults and their own contribution to their problems. It is tragic when people stall out at the 4th Step as many of these people soon relapse. After the 5th Step people start feeling better about themselves and start working through some of the problems they identify. It is very important to get through Step 4 and 5 and relief starts coming after Step 5.

When a person realizes he is losing control of his life and life is only going to get worse if he keeps going down the road of alcoholism and drug addiction, he makes an attempt to get off that road and change directions. Recovery is a journey and it is a change of direction. The newcomer is going to go down a new road and go on a new journey that might be analogous to a hike. The 4th Step is where the hiker takes off his hiking boots and empties the pebbles out of the boots that will cause friction and problems along the journey. In the AA language these are character defects and resentments, or basically conflicts and problems that will tend to make the person relapse. It helps very much to tell another person this personal inventory, and this is the 5th Step and is often done with a sponsor. The sponsor can give the sponsoree feedback and help them see certain self-destructive patterns and behavioral traits that are interfering with the person's life.

The rest of the steps are action steps and help the person deal with some of these problems and make amends and work through new problems. The method of

© 2026 CEU Matrix

admitting powerlessness and looking at ones contributions to their own problems and working through it can be used as a technique to handle various future problems in a person's life. Step work can become a coping mechanism for dealing with stress and problems. Having a sponsor (a mentor or coach so to speak) is invaluable. The fact that this relationship helps both parties is invaluable and is part of the reason AA has grown so successfully. Step 12 ensures that one generation of sober people helps and works with the new generation. The founders of AA actually found Step 12 first. Bill Wilson and the other few founders of the AA program learned early on that if they worked another alcoholic stay sober it was possible for them to stay sober themselves. They didn't know how this worked but they decided they didn't need to know why they just needed to continue doing it. The other steps were added later and some of the steps were borrowed from the Oxford Group (a philosophical and spiritual group that was popular in those days), but modified for AA. Steps have been so effective and so successful through the years that this method of dealing with compulsive disorders has been adapted for problems such as eating disorders, gambling addictions, sexual addiction, overeating and over spending.

Some other common pitfalls happen to newcomers in the 12-Step Program. Many CD people have had bad experiences with religion and have difficulty with the "higher power" referred to in the Steps. Many of these people grew up in dysfunctional families and also have authority figure problems. It is important to distinguish between religion and spirituality. Religion is a group of people who have a certain doctrine and meet as a community while spirituality is a larger concept. Spirituality is basically the relationship of a person to the "unknown" and how a person deals with certain fundamental questions about life such as "does life have meaning". One author said "we all have health but we may or may not do anything about it or take an interest in our health, yet all of us have it just the same. Just like health we all have a spiritual life." When a CD person tries to become sober it is very important that the person at least address their spiritual life and the AA program helps one do this. For those who have trouble defining their higher power it should be pointed out that Chapter Four of the Big Book entitled "For Agnostics" is a discussion of this very problem. The founders of AA had their own problems with defining their higher power. People who reject the AA program because of conflicts with the higher power can be worked with and this conflict is fairly easy to resolve. The higher power truly is up to the individual's definition and the important thing is that the individual realize that they have some higher power and it is not them. There is a famous book with the title "Not God" referring to this point, meaning that it is important that the CD person realizes that he or she is not God. The AA program itself can initially be seen as the higher power to help the person stop the drinking and drugging that they themselves do not have the power to control.

When a person becomes sober it is important to replace what drugs and alcohol do for the person with other healthy activities and habits. If you take alcohol and drugs out of a person's life and not fill the hole left behind in the persons' life, then you will only achieve abstinence. To achieve sobriety you take away drugs and

 © 2026 CEU Matrix

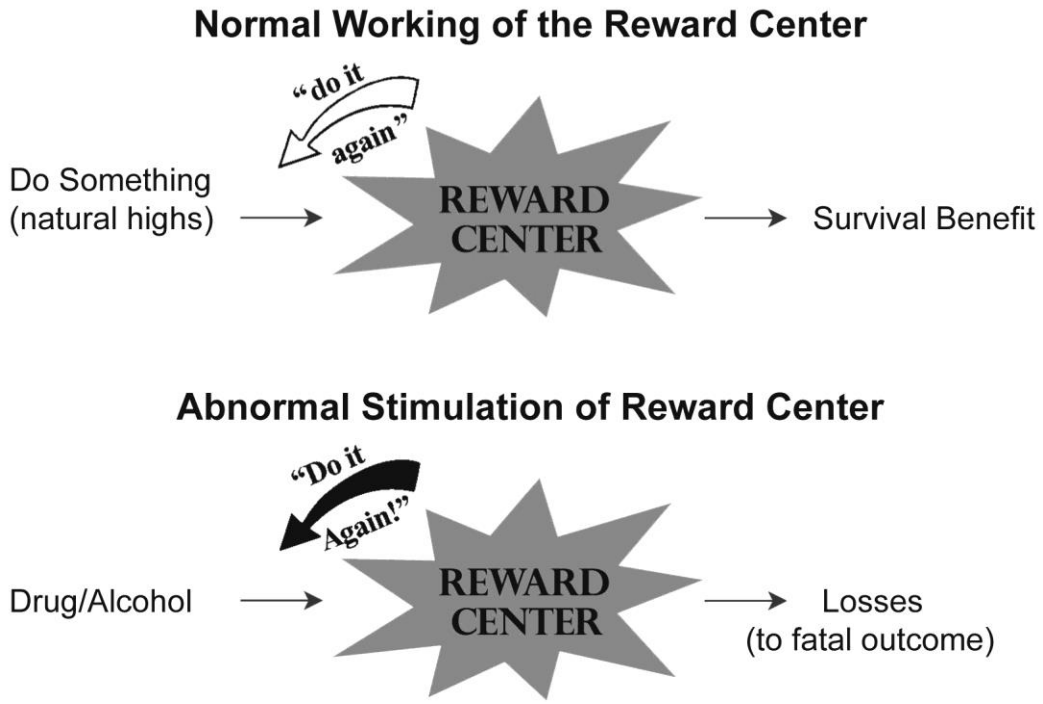
alcohol and you fill the hole left behind with healthy replacements. There are three basic parts of this hole that need to be replaced. Number One: New and safe ways to find pleasure or get high. Number Two: New and safe ways of coping with uncomfortable feelings and stress. Number Three: Address the spiritual life.

Number One: <u>New and safe ways to find pleasure</u> or non-chemical ways of getting high (becoming sober doesn't mean you give up pleasure or a high).

A chemically-dependent person can drink or drug, but they can never safely drink or drug again. They cannot safely use substances to get high. Drugs and alcohol act on the reward center of the brain to give us pleasure and the chemically-dependent person is only using substances to stimulate the reward center rather than stimulating the reward center in other manners. When a person reaches sobriety they have to find new ways to stimulate their reward center. Do we have a reward center that can make us feel pleasure or euphoria because we need a place for cocaine, pot and alcohol to work? Of course not. The reward center is in the brain because there are certain natural highs and natural pleasures that if we do these things give us this pleasure and we also get survival benefit as a result (meaning we become a healthier, happier, stronger animal). See Diagram 4 concerning normal working of the reward center. In becoming sober it is clear that the chemically-dependent person cannot safely use drugs or alcohol to stimulate the reward center so these are stopped, and it is important to replace what drugs and alcohol did for them with natural highs. They need to start having a normal relationship with their reward center, that is stimulate their reward center the way it was meant to be stimulated so that they can get survival benefit. Chemically-dependent people have been stuck in only stimulating the reward center through chemicals. As noted in a previous course the reward center when stimulated gives the person pleasure but also next tells the person to repeat that experience. The chemically-dependent person is stuck in a cycle where they are stimulating the reward center with substances and the reward center is telling them to use the substance again. In this cycle the person gets progressive losses and not survival benefit. These loses can even lead to a fatal outcome unless the disease is managed.

Diagram 4

© 2026 CEU Matrix



So what are the "do somethings" that normally stimulate the reward center? There are basically six categories. They are: (1) Sex and intimacy or closeness with another person. (2) Certain foods stimulate the reward center. (3) Certain types of active exercise such as jogging or walking. (4) Mastery or competency or in other words finishing a project such as doing a good job at work, finishing a needlepoint project or model airplane or just doing your yard work. (5) Artistic and spiritual experiences such as a beautiful piece of music or a beautiful sunset which gives us pleasure and makes us want to return for more. (6) Bargain hunting or collecting (I've given a talk on this subject for many years and stopped at number five of the natural ways of stimulating the reward center, but I always had someone in the back of the room raise their hand and say something like "I always get high from searching for bargains at garage sales." I couldn't relate to this, but I realize that I could get high from searching in a creek bed for fossils or arrowheads. At these times I could lose track of time and could do it for hours and be very focused on my task and tend to forget my trouble. I was having natural high at these times. So I believe bargain-hunting and collecting are not so different, and this is another basic natural high.)

It is very important for the chemically-dependent person to still experience pleasure and even a "high", but it is not safe to do this through chemistry any longer. We have a reward center because it can be stimulated by the basic categories I've noted. We get a good feeling from doing these things and then get a message from the reward center saying "do that again". With this normal relationship with the reward center then we get survival benefit and become a happier and healthier animal. At first these natural highs may not feel so intense when you compare them

 © 2026 CEU Matrix

to the high from snorting cocaine or drinking a lot of alcohol, but then these natural highs are safer and don't give us the side effects that drugs and alcohol give us such as disinhibition, ignoring our conscience and doing things that we would never do if we were not impaired by substance.

Number Two: <u>The CD patient needs to find new ways of coping</u> with uncomfortable feelings and with stress.

When chemically-dependent people first start using drugs and alcohol they start using them to get high, but after some time they stop getting high like they used to. They can always count on the drugs, though, at least changing the way they feel. This happens in the limbic area of the brain which is in the mid-brain adjacent to the reward center. Drugs, including alcohol, that make a person high have a lot of effects at the limbic area where we have our feelings. These chemicals then tend to alter our feelings. The chemically-dependent person continues to use the drugs to get high but also to change the way they feel and cope with uncomfortable feelings. When a person is under a great deal of stress and feels irritable or frustrated or uncomfortable they can take their drug of choice and count on it at least changing the way they feel. After a while the CD person starts using their drug of choice to alter their feelings and cope with a stressful situation. When drugs and alcohol are taken out of the person's life then it is important to find new ways of coping with stress and uncomfortable feelings. The chemically-dependent person will still have bad days and still have painful emotions. Part of sobriety then is learning how to cope with the painful emotions and finding other safe ways of getting through these painful feelings and even altering the feelings in a safe way. The AA Step Work can help in this area and going to meetings can help a great deal as well. Many clichés or platitudes or sayings are repeated in AA meetings and many of these are suggestions and tried and true ways of dealing with life that help human beings cope. A good example of this is "H.A.L.T." which stands for never get too hungry, angry, lonely or tired. This urges the CD person to manage their stress and lead a balanced life to avoid uncomfortable feelings.

Number Three: <u>Address one's spiritual life.</u>

The CD person when using drugs and alcohol tends to be very self-centered and isolated. The most important thing in the person's life is keeping a supply of drugs and altering their feelings as they see fit while still trying to "get high". The chemically-dependent person starts functioning as though they are the center of the universe. AA says that sobriety is "taking life on life's terms". When a CD person is actively using they are doing anything but taking life on its terms. The CD person is making the terms and altering their feelings as they see fit. This becomes a compulsion and a full-time job. When drugs and alcohol are taken out of the person's life, however, it doesn't take long until the CD person stops being so self-centered. The psychiatrists refer to this self-centeredness as narcissism. The CD person stops being so narcissistic and starts realizing that they are a small piece of the universe. Other people

© 2026 CEU Matrix

and situations become more important to them, and they start having to take life on its terms. Realizing that you are just a part of the universe is the beginning of spiritual thoughts and feelings. The person becomes aware that there is a bigger force involved in life than just themselves and starts thinking in terms of a flow or balance to life and then starts thinking of how they may fit into this flow. Some attention to these spiritual questions then becomes an important part of sobriety and is another part of the hole left by drugs and alcohol that needs to be filled if a person is going to reach sobriety.

The goal of recovery then is sobriety and the easiest way to attain this is by using the AA or 12-Step Program. It is important to fill the void left when drugs and alcohol are taken out of the CD person's life with healthy alternatives. This is a process and a practice and takes time. Early on in recovery it is important for the new person in recovery to spend a lot of time building up momentum, thinking through denial, learning about recovery and getting a good start on this fundamental change in how they will live their life. With time recovery becomes very rewarding in and of itself, especially when the CD person starts getting their self-esteem back and starts thinking more clearly and stops "shooting themselves in the foot" (that is causing many of their own problems in their life). Early recovery might be analogous to a child playing with a world globe the size that fits on a desk. Some children like to spin the globe by holding the base with one hand and then hitting the world globe until it spins round and round. At first the child has to hit the globe quickly over and over again. After a time the globe reaches top speed and then the child just has to hit the globe with his hand every so often just to keep the globe spinning. In the early stages of recovery building up momentum is analogous to hitting the world globe quickly time and again to build up speed. Later recovery is analogous to just hitting the globe ever so often to keep it rolling or to keep recovery rolling. Remember, recovery is not an event and there is no cure for a chronic disease. Recovery is a life-long practice that becomes more and more rewarding. We know a great deal about the solution to alcoholism and the disease of chemical dependency and we understand what it takes for a person to recover from this severe and potentially fatal disease. Managing this disease and basically conquering it over time is quite possible.

It is instructive to talk about the way many CD people fail in recovery. By doing this it is helpful to talk about an analogy. I am not a cook, but if I want to cook a basic cake. I know I will need certain ingredients, a recipe, and instructions for how to cook it. I also must have a willing attitude. That is, I must be willing to take and follow instructions. Many of us are willful, especially as adults. We tend to be stubborn and are not always very good at taking advice or taking instructions. So in this analogy it is important to have a willing attitude as well as certain ingredients. The person who knows how to cook will tell me that I need flour, baking powder, eggs, sugar, water, vanilla and oil. Then, of course, I need a recipe telling me how much of each of these ingredients to use and how to mix them together. Next I need cooking instructions and the cook might tell me to cook it at 350 degrees for 40 minutes. If I'm willing to follow these instructions, I will find that I get an eatable

 © 2026 CEU Matrix

cake. (Diagram 5.) But let's say I am willful and I'm tired and I'm hungry and I don't have all the ingredients at home. I decide that baking powder can't be that important and so I'll put a little extra flour. I don't have vanilla or oil so I'll add a little more sugar and stir it all together. Since I'm hungry and in a hurry I ought to be able to cook it at 450 degrees for 10 or 15 minutes. What do you suppose I'll get if I do it in this willful manner? One person said "a bad taco". Another one said "garbage".

This is basically how people tend to foul up their recovery or treatment. They leave out important ingredients and decide that somehow they are different and take a willful attitude and do not follow the instructions given to them by people who know about recovery. The CD patients who have to return for treatment or relapse and have to go back to frequent meetings invariably leave out valuable elements of their recovery plan. For example, treatment programs advise that a person go to frequent AA meetings, get a sponsor and work all 12 Steps as well as avoid "slippery places" or places where relapse is likely. The people who have to return for help, after relapse, tend to leave out AA altogether, a sponsor, or they go to

Diagram 5

Make the cake with a ***willing*** attitude:	Make the cake with a ***willful*** attitude:
Flour	+Flour
Sugar	+Sugar
Eggs	Eggs
Vanilla	~~Vanilla~~
Baking powder	~~Baking powder~~
Water	Water
Oil	~~Oil~~
↓	↓
Recipe	Recipe
↓	↓
350º for 40 mins.	450º for 10 mins.
	

meetings and have a sponsor but only work through the first three or four steps. They may do their step work but leave out meetings or continue to go to slippery places where relapse is likely. If the CD patient includes all the elements of their recovery such as meetings, sponsorship, step work and avoiding slippery places, it

© 2026 CEU Matrix

is very likely that they will get a good result and reach sobriety. (One exception is people with dual diagnosis – see Part III)

Reference is made to "a plan of recovery". It is important to have a plan of recovery with detailed elements such as which meetings to attend, the name of a temporary or permanent sponsor and their phone number, etc. When a CD person is actively using, it is not uncommon to have a fairly detailed plan of how to get the supply of the drug or alcohol and how to use it. For example, one alcoholic man knew his wife would be leaving town for the weekend. He made a point of calling a couple of his using buddies to come over on Friday after she would leave. One was instructed to bring a certain type of alcohol and the other was instructed to bring some other drinks, but also pot and a little cocaine if he could get it. He had planned to hang out at his house and watch sports all weekend and made sure that he had some food in the refrigerator so he wouldn't have to leave. After all, he didn't want to get a DUI. The plan was detailed and somewhat elaborate for his weekend of active drinking and drug using. When a person goes into recovery, it is important that the plan of recovery be at least as detailed and complicated as the person's plan of using. Counselors, sponsors and other experts in recovery can help the CD person make a plan of recovery which will include a relapse prevention plan. Relapse is always a possibility in a chronic disease and it is important to plan how to avoid relapse in certain critical situations and also to have a plan of what to do if a relapse occurs.

Alcoholism, drug addiction or the disease of chemical-dependency is a very serious and progressive disease. It affects around 15 or 20 percent of our population directly and affects almost everyone else in our population indirectly. Many of the problems in our society are related to impaired individuals in the community. 50 percent of drownings are related to drug and alcohol problems. Greater than 50 percent of fatal car wrecks have a drunk or drugged driver involved. Most family violence is related to drug and alcohol problems, and many other social problems have some relation to impaired people in our community. A great deal is known about the cause and progression of the problem and fortunately a great deal is known about the solution. Recovery is quite possible and many recovering people in our community are good examples of this. Counselors, therapists, doctors, psychologists, pastors, and other helping professionals are very important in educating people with this disease of chemical dependency and helping them with the various elements of recovery. A counselor can be the difference between life and death for many of these affected people. Counseling can be somewhat frustrating when the CD person is willful and struggling with their denial, but with time recovery can be quite successful and rewarding; not just with for the affected person, but also for the counselor who helps that person into recovery.

 © 2026 CEU Matrix

III. DUAL DIAGNOSIS – "TICKS AND FLEAS"

In medical school we learned to organize symptom complexes into one diagnosis in most cases. We would take a history of the illness in a patient and learn what the symptoms were and then we would observe and examine the patient to see what signs of disease were present. The patient might complain of cough and weakness and the doctor might find that fever and an abnormal chest x-ray showed congested lungs. We would put this data together for the diagnosis of pneumonia, but what if that patient also complained of constantly being thirsty and urinating a lot. Let's say the blood sugar was found to be way above normal in this same patient. These last symptoms (polydipsia and polyuria, medical terms for increased thirst and urination) and the high blood sugar just don't add up to being part of pneumonia. You then have to say "well the patient has pneumonia and is also diabetic." It takes two diagnoses to explain all the symptoms that this patient has. In medical school it is said "you can have ticks and fleas" meaning, of course, a person can have two diagnoses or two problems.

In chemical dependency treatment we refer to this phenomenon as dual diagnosis, co-occurring disorders or co-morbid problems. A person can then be alcoholic and/or drug addicted but also may have a co-occurring psychiatric problem. The dual diagnosis that is the diagnosis that accompanies the chemical dependency (CD) diagnosis usually refers to a mental disorder or a psychiatric diagnosis not a co-occurring physical diagnosis. If an alcoholic has high blood pressure and cirrhosis, you don't' refer to the patient as having a dual diagnosis or co-occurring disorder. If the addict or alcoholic has a major depression or anxiety disorder then we say he or she has a dual diagnosis.

It is a very tricky business to make a psychiatric diagnosis in a person with an active CD problem. While the alcoholic or addict is actively using during detox or even a few days or weeks after detox, that person is not expected to act or feel normal from a psychological or psychiatric perspective. In these stages of the disease it is normal or expected that the patient will be anxious, moody or depressed. During detox a stimulant addict may be hallucinating and frankly psychotic, but does that mean that they are schizophrenic? No, of course not. We can explain these symptoms and signs by the amphetamine or cocaine use and the withdrawal. When an alcoholic stops drinking and has tremors in both hands and feels very tense does that mean a person has an anxiety disorder? No, the tremor and tension are explained by abrupt withdrawal from the alcohol.

Two decades ago we were taught and it was believed that a psychiatric diagnosis could not be made on an alcoholic or addict until that person had been sober or straight for three to six months. The doctor and treatment team had to wait for the detox and post acute withdrawal symptoms to die out before such a diagnosis could be accurately made because during this phase of the disease all of the patients had psychiatric symptoms such as forgetfulness, anxiety, depression and moodiness. In many cases with time the psychiatric and psychological symptoms

© 2026 CEU Matrix

went away if the person remained abstinent. Once the encephalopathy from this stage of the chemical dependency cleared, so did these mental symptoms. If the depression persisted then the diagnosis of major depression would be considered or if mood swings continued then bipolar illness would be considered as possible diagnoses.

More research in the last 20 years found that 40 to 65 percent of CD people had other psychiatric diagnoses. And 51 percent of psychiatric patients had CD problems. A high percentage of alcoholics and addicts seeking treatment for their CD problems then also had psychiatric problems that required attention. These psychiatric problems do not wait three to six months for the doctor to get around to treatment. The symptoms of these illnesses flare up and tend to cause relapse in these CD patients if not treated.

The conventional wisdom now is that co-occurring disorders must be treated concurrently and even though difficult, an effort must be made to ferret out the psychiatric diagnosis even in the early stages of recovery for the patient to have a chance at sobriety. When a patient has a significant psychiatric diagnosis, it is very difficult if not impossible to become sober without treatment and stabilization of "nerve" and mood problems. The 12-Step Programs do work if the CD person goes to meetings, gets a sponsor and works all 12 steps unless the person has a significant psychiatric problem that is not treated. Getting and staying sober using AA, NA or CA takes effort and work, but is effective unless abnormal anxiety, depression or other psychiatric symptoms overcome a person and lead to relapse. The main exception to the 12-Step recovery being successful is dual diagnosis.

Excessive anxiety, depression, moodiness or other mental problems tend to lead the person to relapse. In AA it is said "never get too hungry, angry, lonely or tired" (H.A.L.T.) This is another way of saying "balance your stress and avoid being too anxious or depressed". If the person is unfortunate to have true chemical imbalanced depression (major depression), panic disorder or mood swing disorder, he/she will be unable to balance their moods and stress. Even if the person goes to 90 meetings in 90 days and works with their sponsor on all the steps, the psychiatric illness will still intervene. The person will become desperate for relief from the symptoms of this second illness and will want to change the way they feel. In early recovery the main alternative for relief is to go back to mood altering drugs so relapse is inevitable.

In this early stage of recovery the CD person will use the coping mechanisms that have worked in the past and in this early stage new coping skills have not yet been developed. It's as though the CD person looks back in their memory asking it "what will give me relief". In early recovery the memory has not been reprogrammed so to speak. That is, new ways of coping with uncomfortable feelings have not yet been developed so the only thing in the files of the memory is "use again". If the person is uncomfortable enough then relapse occurs. Part of gaining sobriety is learning new ways to cope with stress and new ways to change uncomfortable

 © 2026 CEU Matrix

feelings. This takes reprogramming of the memory and in the early stages of recovery this hasn't yet been accomplished. If the psychiatric symptoms are very disruptive and uncomfortable then it is natural for the CD person to use the only coping skills they have which is drink or use drugs again.

CD people with co-occurring psychiatric disorders start self-medicating their symptoms and use "drugs" not medication to find relief. They do what they can to pursue some degree of improvement or stability. This, of course, doesn't work very well. The depressed patients tend to use uppers like amphetamines or cocaine and some even find relief in hydrocodone or alcohol. Those with anxiety disorders use downers like benzodiazepines (such as Xanax or Valium) or may also use alcohol. Patients become rather innovative and out of desperation may use two or three substances to settle their nerves. When a person really works the 12-Step Program fully and yet still relapses, it is wise to look for a psychiatric problem interfering with sobriety. The CD person may be self-medicating.

So if we expect the person in early recovery to be anxious, moody, depressed and not think clearly how can we separate these post-acute detox problems from a real psychiatric disorder? One way is to look at the severity and persistence of the psychiatric symptoms. A person with a major depression will be very depressed, and it will not lift with time as we expect. Sometimes the post-acute problems or the persistent encephalopathy problems continue for weeks in a severe alcoholic or addict. So severity and persistence of symptoms alone may not be enough to make another psychiatric diagnosis. Usually the CD person's life is in shambles in early recovery. Stress abounds. The newly sober person may go home to an angry spouse, lots of debt, no job, and other fallout from his/her drug and alcohol use. Life is stressful at this early stage of recovery and this naturally causes some degree of sadness, nervousness and worry. It's important to take into account what degree of distress is expected due to the circumstances.

If the psychiatric symptoms are very severe, then the diagnosis of a second problem may be easy. This is still fraught with problems, however, and the following example may illustrate this. A person enters the psychiatric hospital because they are very agitated, paranoid, cannot sleep and they are out of touch with reality (or psychotic). Careful history of the events leading up to the hospitalization is obtained from the patient which turns out to be limited. The family and friends tell us that this patient has been using intravenous methamphetamine for over a year and his/her behavior has become more and more erratic. Prior to the methamphetamine use the patient was bright, stable and friendly. They conclude that this patient is a stimulant addict and has an amphetamine psychosis. Now what if our history-taking turns up no hint of drug use and in fact a urine drug screen is entirely negative. The mother reports that her father has spent much of his life in and out of a state hospital because of paranoia. She tells us that when her father stayed on his Thorazine (an anti-psychotic used years ago) he could stay out of the hospital and was not suspicious any more. Soon further data leads us to the conclusion that this unfortunate patient has schizophrenia paranoid type. Now let's say that the history

© 2026 CEU Matrix

did not show drug use and also didn't show hints of schizophrenia, but the family reported that he/she is often a person of high energy but at other times is very depressed and withdrawn. We find out he/she hasn't slept in four to five days and has been rather hyperactive. An uncle was on Lithium and one brother is said to be bipolar. The diagnosis could well be bi-polar illness manic type with psychosis in this circumstance.

A person with schizophrenia paranoid type who is actively psychotic and agitated; a person with amphetamine psychosis; and a bipolar who is very manic, sleep deprived and psychotic will all look about the same when they are observed and only symptoms are considered. Each of these diagnoses will present as an agitated, paranoid and psychotic person. The proper diagnosis is impossible to make without further history from the family and friends. Data concerning family history, premorbid function (how the person performed before any psychiatric problems were seen) and other information from concerned observers like family and friends has to be considered.

When a person has a CD problem it is possible to separate a co-occurring psychiatric problem by taking a careful and detailed history including a family history. It is important to get information from significant others whenever possible. History about the person's function before the CD problem flourished is very important. This may be difficult to obtain because sometimes CD problems start as early as 9 to 14 years of age, but the drug and alcohol problems usually take time to become very pathological. Suspect dual problems if the patient relapses over and over and if the symptoms do not go away with some weeks or months of abstinence. If psychiatric problems run in the family and if reactions to certain drugs are paradoxical or idiosyncratic.

Some people with bipolar illness become hyper or have racing thoughts, inability to sleep or rapid speech when put on antidepressants. This is an unexpected reaction in depressed patients without bipolar illness. One woman, when given Prozac for her depression, felt "crazy" and had difficulty sleeping because she couldn't "turn her mind off". Her husband wondered why she was overly active and very irritable with a hair-trigger temper. She was taken off of Prozac and put on a mood stabilizer which helped her a great deal because her probable diagnosis was bipolar illness not major depression. The effect from Prozac was unexpected in a person with major depression. A student got Ritalin from his roommate and used it to study while he was in college. He intended to stay up all night to study and found that the Ritalin tended to calm him and actually he could sleep just fine on it. It turns out he was able to study and did well on the test even though he did not study all night. Later in his life this bit of data was used to diagnose his ADD when he went to his doctor complaining of being disorganized and unfocused in his work. In the past the stimulant that is the Ritalin calmed him rather than stimulated him. Another patient was put on an anti-depressant because it was assumed he was depressed since he was withdrawn, unmotivated and had very low energy. After a few days on the anti-depressants, he became more

 © 2026 CEU Matrix

isolated, was very suspicious of others and started hearing voices. This patient was taken off the antidepressant and was put on an antipsychotic medication for his schizophrenia after he had such a bad reaction to the antidepressant.

Around one-half of CD patients have psychiatric problems and if these are not diagnosed and properly treated recovery is much harder or even impossible. The Big Book of AA recommends seeking help from professionals for issues and problems outside the scope of the 12-Step Program. Bill Wilson himself suffered from depression and was put on an antidepressant for this. Being "restless, irritable and discontent" is part of being alcoholic, but these feelings may also come from psychiatric problems. When a person has a dual diagnosis there may be a tendency to blame drug and alcohol use on the psychiatric problem and believe if the psychiatric problem is stabilized it will be okay to drink or use drugs. The drug and alcohol use can be looked on as "self medicating" the psychiatric problem. If the person is compulsively using substances and has other signs of alcoholism and drug addiction, then it is unlikely that the chemical use is just to "self-medicate". The person likely has two problems and it is impossible to tell which is primary. The two problems feed on each other and one makes the other worse and vice versa. There may be a tendency to blame one problem for the other. For example one person said "I drink because I am so anxious around other people" or a woman said "if I wasn't so depressed, I would never touch the cocaine". These statements sound a little bit true, but generally these are rationalizations and the man is most likely alcoholic and has social anxiety and the woman needs treatment for her depression and is addicted to cocaine.

A special form of the 12-Step Program started in 1989 and is known as "Dual Recovery Anonymous" (DRA). This is an AA program that emphasizes the need for healthy managing of the psychiatric illness. Members must have a desire to stop drinking and drugging and also a desire to manage their psychiatric illness in a healthy way. The Steps not only deal with powerlessness due to CD but also powerlessness due to the psychiatric illness. Compliance with treatment is emphasized and the group supports this. The members of DRA have two brain disorders and it is not their fault that they have them. Managing these two problems in a healthy way is their responsibility. A schedule of DRA meetings and more information on the program can be found on the Internet by searching for Dual Recovery Anonymous.

The main diagnoses that we are dealing with that compound the disease of CD are major depression, generalized anxiety disorder, panic and social anxiety disorder, bipolar illness, post-traumatic stress disorder (PTSD), schizophrenia, attention deficit disorder (ADD) and Alzheimer's disease/traumatic brain injury (TBI). We will now discuss interesting and important elements of each of these diagnoses.

I. Major depression. This is also referred to as a chemical imbalance depression or an endogenous depression. It is a fairly common psychiatric illness which is caused by a relative deficiency in one of the neurotransmitters or chemicals

© 2026 CEU Matrix

in the brain more particularly in the limbic area. Often it is due to a low serotonin level, but can also be caused by a low norepinephrine or dopamine level or even combinations of such deficiencies. Major symptoms are low energy, low motivation, anhedonia (inability to enjoy things that used to be enjoyed), interrupted sleep, persistent feelings of sadness or depression, negative thinking, irritability, crying spells and suicide ideation. Some combinations of these symptoms persist over many days. We all get depressed over losses or negative events in our lives, but normal depression lifts in time (hours or days). It is normal to grieve over death or other losses but this lifts somewhat in time and does not decrease a person's self-esteem. In major depression self-esteem is decreased. Major depression is like being stuck in a rut of depression that persists. It is also accompanied by some degree of anxiety. Treatment can be very effective with antidepressants and psychotherapy. Antidepressants are not addictive so are safe for the CD person. Being put on an antidepressant is a process that takes some time. It is not unusual to have to change the drug a time or two and it takes some adjustment of the does to make these drugs work. The drugs do not start working for two to six weeks after they are started and after they are brought to a therapeutic dose.

II. Generalized Anxiety Disorder. The person with persistent anxiety that interferes with function may complicate a CD problem. Anxiety is a subjective complaint but if the function of a person at work, play and home is interfered with then the anxiety needs to be treated. We all get anxious at certain times and some degree of healthy fear (fear has an object while anxiety does not have an object), helps warn us when something is wrong. Too much anxiety, though, can be a problem. Some people are "wired" so that the nervous system over-reacts. Benzodiazepines (Valium or Diazepam, Ativan or Lorazepan, Klonopin or Clonazapine and Xanax or Alprazolam) are minor tranquillizers but cannot be safely used by CD persons because they are addictive and cross tolerant to alcohol. Most CD patients will like these medications and tell the doctor how well they work. The person however will likely become tolerant and addicted to them. The CD person will eventually abuse these drugs and also this will lead to relapse or return to their drug of choice. CD patients should avoid benzodiazepines. Anxiety disorders can be treated with antidepressants which may seem confusing, but remember depression also is accompanied by anxiety. Antidepressants can be very effective for anxiety disorders. Non-addictive tranquillizers like hydroxyzine, Buspar, or low-dose Seroquel can be helpful. Cognitive behavioral relaxation techniques can be very effective also.

III. Social Anxiety and Panic Disorder. These problems can also be treated with antidepressants and/or cognitive behavioral therapy. Inderal is a beta-blocker agent that blocks the over- reaction of the autonomic nervous system. It is often used by public speakers who have stage fright and sometimes can be helpful for people with panic disorder. If a person has social anxiety it may be difficult for them to attend AA meetings, but smaller meetings can be chosen and the person can sit in the back of the room so that they can leave if necessary. It may be more valuable

 © 2026 CEU Matrix

for this person to work one to one with their sponsor rather than go to many meetings due to their social anxiety.

IV. Bipolar Illness. This diagnosis is being made more frequently in modern times than in the past. It is thought of as a spectrum of very severe forms (Bipolar Type I) and less severe mood swings (Bipolar Type II). Type I is dramatic with severe highs and lows and is what used to be called manic depressive illness. Type II is more subtle but is a significant problem that needs to be addressed. In Type II the mania (hyper-active mood swings) may be two or three days of over activity with not much sleep. If the speed limit for most of us is 55 they are going 75 plus. These people have two or three or more episodes of hypomania (which is hyper-activity but not extreme like true mania) such as described in their past . Depression in both Type I and Type II have similar symptoms to those of major depression, but the depressions happen recurrently or in spells lasting weeks or months. We all have some mood swings throughout our lives, but in bipolar patients the swings are pronounced and interfere with their life. Type I is fairly easy to diagnose as the mood swings are severe, but Type II may take more time to suspect and diagnose. Bipolar illness can be effectively treated with mood stabilizers like Lithium, Tegretol, Depakote and Lamictal. The mood swing disorder may require a combination of medications including a major tranquilizer and sometimes an antidepressant.

V. Post Traumatic Stress Disorder (PTSD). This is relatively common in the population of CD patients primarily because many of these patients grow up in dysfunctional families. The diagnosis of CD runs in families and often these patients have a parent who has a drug addiction or alcoholism which ensures a dysfunctional family. The only guaranteed way of having a dysfunctional family is to have one member with a chemical dependency problem. It is not unusual to see CD patients with a past history of emotional abuse, neglect, physical abuse or sexual abuse. These issues may come up in the Fourth Step. A whole body of literature exists concerning people who grew up in such dysfunctional families and they are referred to as Adult Children of Alcoholics. Some Al-Anon meetings also have meetings called ACOA, which stands for Adult Children of Alcoholics meetings. Psychotherapy can be very helpful for these patients and sometimes medications such as anti-depressants are used. Several helpful books on adult children of alcoholics exist.

VI. Schizophrenia. This is a chronic and disabling psychotic illness and half or more of these patients tend to have alcohol or drug problems. The psychotic illness can be controlled totally or to some degree with major tranquillizers which are also known as anti-psychotic drugs. A few of these drugs are Zyprexa, Seroquel, Risperdal, Haldol and others. These drugs are non-addictive. Compliance with treatment tends to be a problem and these patients are good candidates for DRA meetings.

VII. Attention Deficit Disorder (ADD). This diagnosis is made by a very careful and detailed history and/or through psychological testing. Treatment can be

© 2026 CEU Matrix

done with stimulants like Ritalin or amphetamines. These are abusable so treatment can be potentially problematic. ADD can be treated with psychological techniques, sometimes with antidepressants and also with a non-addictive drug called Strattera. It is possible sometimes to maintain a CD person with true ADD on a stimulant if closely monitored, but this is risky. It is best to use extended release preparations of the stimulants if this is done.

VIII. Alzheimer's Disease/Traumatic Brain Injury (TBI). These are both brain injuries through atrophy (shrinkage of the brain tissue in Alzheimer's disease) or from trauma (TBI). Both problems cause dementia which is a decline in memory (mainly recent memory), insight, judgment and ability to concentrate. This makes work in AA/NA difficult, but not impossible. Many people acquire a TBI because they were impaired due to their chemical dependency. For example, a frequent cause of TBI is a rollover car accident in which the person was unrestrained and was impaired from drug or alcohol use at the time of the accident. Family support becomes even more crucial in these problems. Alzheimer's disease and TBI can be profound and very severe or less severe. The problems tend to be permanent, although some rehabilitation can be done for patients with TBI.

IX. Antisocial Personality. This is a personality disorder that is deeply ingrained in the person, and is unlikely to change or respond to treatment. It used to be called psychopathic or sociopathic personality. These people have little or no conscience and are not encumbered by guilt feelings about their behavior. This frees them to gratify themselves in any way possible so that their behavior is very self-centered and they can be very manipulative. Gratification by using drugs and alcohol is frequent, but some do have the disease of chemical dependency, too. If they will go to AA/NA and use it then it will be helpful, but it is sometimes impossible for them to stop being so self-gratifying. Usually, antisocial behavior started before they turned 15, and cruelty to animals and fire setting often is in their history.

X. Borderline and Narcissistic Disorders. These are complicated psychological personality disorders that are thought to be caused by early (about age 3 or 4) problems in development. Behavior can be erratic, and relationships tend to be full of conflict. They struggle with meeting their basic narcissistic needs and struggle with a sense of entitlement. Dysphoria or depression is present, and feelings may be acted out in disturbed behavior including substance abuse or dependence. It is difficult for these people to work with others, and they tend to struggle with those trying to help them. Dialectical Behavioral Therapy (DBT) can be helpful.

Psychotherapy can help many of these patients with psychiatric disorders, but often medication is also used. Medications, of course, are drugs, but not "drugs" (those abusable substances that all CD patients know.) Medications are given by licensed professionals such as doctors, nurses and pharmacists. These are people with training and licenses in their fields. Appropriate medications are given for the

 © 2026 CEU Matrix

diagnosis or symptoms and proper doses are used. Medications are used for a particular purpose and for treating certain symptoms. “Drugs” on the other hand, are used for a feeling or to get high. “Drugs” are bought from unlicensed people such as dealers or they are acquired by dishonest means from professionals. With “drugs” more is generally better. When the CD patient says, “Well, medications are just drugs, too, aren’t they?” The differences noted above can be spelled out to the patient. The person with a dual diagnosis will likely need proper and appropriate medication for the disorder and this should not be confused with using “drugs”.

If a person has a psychiatric disorder and the disease of CD it is crucial to treat both. We don’t have the luxury to wait and treat one problem at a time and wait for the first problem to be stabilized until we go to the next one. CD interferes with treatment and aggravates the psychiatric problem and psychiatric problems lead to relapse and inflame the CD problems. Co-occurring disorders are not rare and when the usual 12-Step recovery doesn’t work, often this signals the existence of a co-occurring psychiatric problem or dual diagnosis such as bi-polar illness, depression, anxiety disorders, et cetera. Fortunately, there is effective treatment for both the disease of chemical dependency and for psychiatric disorders. It is important to seek such treatment from a psychiatrist who also has training or certification in addiction medicine.

© 2026 CEU Matrix

REFERENCES

Alcoholics Anonymous, 2001

Back to Basics by Wally P., Faith with Works Publishing Co., 1997

Blithikioti, C., Fried, E. I., Albanese, E., Field, M., & Cristea, I. A. (2025). Reevaluating the brain disease model of addiction. The Lancet Psychiatry, 12(6), 469-474. https://doi.org/10.1016/S2215-0366(25)00060-4

Bruns Vi, N., Tressler, E. H., Vendruscolo, L. F., Leggio, L., & Farokhnia, M. (2024). IUPHAR review — Glucagon-like peptide-1 (GLP-1) and substance use disorders: An emerging pharmacotherapeutic target. Pharmacological Research, 207, 107312. https://doi.org/10.1016/j.phrs.2024.107312

Chokron Garneau, H., Assefa, M. T., Jo, B., Ford, J. H., Saldana, L., & McGovern, M. P. (2022). Sustainment of integrated care in addiction treatment settings: Primary outcomes from a cluster-randomized controlled trial. Psychiatric Services, 73(3), 280-286. https://doi.org/10.1176/appi.ps.202000293

Drugs and Alcohol and Abuse by Marc A. Schuckit, M.D., Kluwer Academic/Plenum Publishers, 2000

Neyra, A., Parro-Torres, C., Ros-Cucurull, E., Carrera, I., Echarri, E., & Torrens, M. (2024). Management of schizophrenia and comorbid substance use disorders: Expert review and guidance. Annals of General Psychiatry, 23(1), 40. https://doi.org/10.1186/s12991-024-00529-7

Pickard, H. (2022). Is addiction a brain disease? A plea for agnosticism and heterogeneity. Psychopharmacology, 239(4), 993-1007. https://doi.org/10.1007/s00213-021-06013-4

Scott, K. D., & Gorey, K. M. (2025). Concurrent disorders and treatment outcomes: A meta-analysis. Journal of Dual Diagnosis, 21(3), 251-265. https://doi.org/10.1080/15504263.2025.2515015

The Recovery Book by Al J. Mooney, Arlene Eisenberg and Howard Eisenberg, Workman Publishing, 1992

The Science of Addiction by Carlton K. Erickson, W. W. Norton & Co. 2007

The Steps We Took by Joe McQ., August Home Publishers, 1990

 © 2026 CEU Matrix

Answer the following questions by selecting the most appropriate response.

1. The disease of chemical dependency is a :
    a. Biopsychosocial disease
    b. Chronic disease
    c. CNS disorder
    d. Progressive disease
    e. All of the above

2. Alcoholism and drug addiction are problems due to:
    a. Weak will power
    b. Immoral people doing bad things
    c. Physical disorder of a part of the brain
    d. Lack of intelligence
    e. All of the above

3. The self-induced CNS disorder is caused by an abnormality in the:
    a. Visual cortex
    b. Neocortex
    c. Mesolimbic area
    d. Cerebellum
    e. None of the above

4. This statement is true of the reward center:
    a. It is located in the ventral tegumental area and the nucleus accumbens
    b. It is not a part of the rat's brain
    c. It can only be stimulated by chemicals
    d. It controls social function
    e. After a year of sobriety it goes back to normal

5. Social functioning is located in _____of the brain::
    a. Brainstem
    b. Occipital area
    c. Mesolimbic area
    d. Cerebellum
    e. Frontal lobe

6. Encephalopathy can be caused by drug and alcohol abuse and lingers for a time after the alcohol and drugs are stopped.
    a. True
    b. False

7. A chemical dependency problem can be helped by stepping down to a less dangerous drug, e.g. going from heroin to marijuana.
    a. True
    b. False

© 2008 CEUMatrix

 © 2026 CEU Matrix

8. Alcoholism and drug addiction (disease of chemical dependency) causes:
    a. Low self-esteem
    b. Dysfunctional families
    c. Out of control behavior
    d. Anxiety and depression
    e. All of the above

9. Denial is a symptom of any chronic disease in the early phases.
    a. True
    b. False

10. The reward center is stimulated by:
    a. Artistic and spiritual activities
    b. Marijuana
    c. Sex and intimacy
    d. Alcohol
    e. All of the above

11. Breaking through denial and admitting powerlessness over drugs allows willpower to control drug use.
    a. True
    b. False

12. Working the AA program includes:
    a. Working with a sponsor
    b. Going to church and being more religious
    c. Going to AA meetings
    d. a and c
    e. All of the above

13. After ten years of sobriety and intense AA involvement a person should be able to socially drink.
    a. True
    b. False

14. The family is not at fault in chemical dependency problems, so has no place in treatment.
    a. True
    b. False

15. If the fundamentals of AA/NA are used and the chemically dependent person goes to meetings, works with a sponsor, and works all 12 steps, this program can be a valuable tool to reach sobriety.
    a. True
    b. False

© 2026 CEU Matrix

16. If a chemically dependent person goes to 90 meetings in 90 days and works all 12 Steps with a sponsor he/she will always become sober.
    a. True
    b. False

17. If a person stops using drugs and alcohol he/she must replace what drugs and alcohol did with:
    a. Natural highs
    b. Some spiritual thought
    c. New coping skills
    d. All of the above
    e. None of the above

18. When an addicted person quits using drugs and alcohol, it is most desirable to be:
    a. Abstinent
    b. Busy with work
    c. Sober
    d. Isolated
    e. All of the above

19. Sobriety is:
    a. Continuing to do Steps 10, 11, and 12
    b. The same as a “dry drunk”
    c. Permanent after 90 meetings in 90 days
    d. Not as good as abstinence
    e. None of the above

20. The wise doctor treats alcoholism first and once the patient is sober goes on to treat depression and anxiety.
    a. True
    b. False

21. Very few alcoholics and addicts (<20%) once sober have problems with depression, anxiety, or other psychiatric problems.
    a. True
    b. False

© 2008 CEUMatrix

 © 2026 CEU Matrix

22. Select the treatment for Dual diagnosis:
    a. Antidepressants and psychotherapy
    b. Mood stabilizers
    c. Major Tranquilizers
    d. Antidepressants and cognitive behavior techniques
    e. DRA

23. Anxious alcoholics can safely take benzodiazepines when they are sober.
    a. True
    b. False

24. Treat the discomfort and anxiety caused by a major depression and alcoholism and drug addiction goes away.
    a. True
    b. False

25. Chemically dependent people in detox and shortly after it (the post-acute withdrawal phase) all look like they have psychiatric problems.
    a. True
    b. False

26. The Reward center of the brain is located in the _____.
    a. Brainstem
    b. Occipital area
    c. Mesolimbic area
    d. Cerebellum
    e. Frontal Lobe

27. Bipolar illness is best treated by mood stabilizers.
    a. True
    b. False

28. Schizophrenia is best treated by antidepressants and psychotherapy.
    a. True
    b. False

© 2026 CEU Matrix