

Drug Addiction Toolkit



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The Definition of Addiction

In updating our national discourse on drug abuse, we should keep in mind this simple definition:

- Addiction is a brain disease expressed in the form of compulsive behavior.

Both developing and recovering from it depend on biology, behavior, and social context.

It is also important to correct the common misimpression that drug use, abuse and addiction are points on a single continuum along which one slides back and forth over time, moving from user to addict, then back to occasional user, then back to addict.

Clinical observation and more formal research studies support the view that, once addicted, the individual has moved into a different state of being.

- It is as if a threshold has been crossed.

Very few people appear able to successfully return to occasional use after having been truly addicted.

What is Drug Addiction ?

Drug addiction is a complex but treatable brain disease. It is characterized by compulsive drug craving, seeking, and use that persist even in the face of severe adverse consequences. For many people, drug addiction becomes chronic, with relapses possible even after long periods of abstinence. In fact, relapse to drug abuse occurs at rates similar to those for other well-characterized, chronic medical illnesses such as diabetes, hypertension, and asthma. As a chronic, recurring illness, addiction may require repeated treatments to increase the intervals between relapses and diminish their intensity, until abstinence is achieved. Through treatment tailored to individual needs, people with drug addiction can recover and lead productive lives.

The ultimate goal of drug addiction treatment is to enable an individual to achieve lasting abstinence, but the immediate goals are to reduce drug abuse, improve the patient's ability to function, and minimize the medical and social complications of drug abuse and addiction. Like people with diabetes or heart disease, people in treatment for drug addiction will need to change behavior to adopt a more healthful lifestyle.

In 2004, approximately 22.5 million Americans aged 12 or older needed

treatment for substance (alcohol or illicit drug) abuse and addiction. Of these, only 3.8 million people received it.

Untreated substance abuse and addiction add significant costs to families and communities, including those related to violence and property crimes, prison expenses, court and criminal costs, emergency room visits, healthcare utilization, child abuse and neglect, lost child support, foster care and welfare costs, reduced productivity, and unemployment.

The latest estimate for the costs to society of illicit drug abuse alone is \$181 billion (2002). When combined with alcohol and tobacco costs, they exceed \$500 billion including healthcare, criminal justice, and lost productivity. Successful drug abuse treatment can help reduce this cost; crime; and the spread of HIV/AIDS, hepatitis, and other infectious diseases. It is estimated that for every dollar spent on addiction treatment programs, there is a \$4 to \$7 reduction in the cost of drug-related crimes. With some outpatient programs, total savings can exceed costs by a ratio of.

Basis for Effective Treatment

Scientific research since the mid-1970s shows that treatment can help many people change destructive behaviors, avoid relapse, and successfully remove themselves from a life of substance abuse and addiction. Recovery from drug addiction is a long-term process and frequently requires multiple episodes of treatment. Based on this research, key principles have been identified that should form the basis of any effective treatment program:

- No single treatment is appropriate for all individuals.
- Treatment needs to be readily available.
- Effective treatment attends to multiple needs of the individual, not just his or her drug addiction.
- An individual's treatment and services plan must be assessed often and modified to meet the person's changing needs.
- Remaining in treatment for an adequate period of time is critical for treatment effectiveness.
- Counseling and other behavioral therapies are critical components of virtually all effective treatments for addiction.
- For certain types of disorders, medications are an important element of treatment, especially when combined with counseling and other behavioral therapies.
- Addicted or drug-abusing individuals with coexisting mental disorders should have both disorders treated in an integrated way.
- Medical management of withdrawal syndrome is only the first stage of addiction treatment and by itself does little to change long-term drug use.
- Treatment does not need to be voluntary to be effective.

- Possible drug use during treatment must be monitored continuously.
- Treatment programs should provide assessment for HIV/AIDS, hepatitis B and C, tuberculosis, and other infectious diseases, and should provide counseling to help patients modify or change behaviors that place themselves or others at risk of infection.
- As is the case with other chronic, relapsing diseases, recovery from drug addiction can be a long-term process and typically requires multiple episodes of treatment, including "booster" sessions and other forms of continuing care.

Effective Treatment Approaches

Medication and behavioral therapy, alone or in combination, are aspects of an overall therapeutic process that often begins with detoxification, followed by treatment and relapse prevention. Easing withdrawal symptoms can be important in the initiation of treatment; preventing relapse is necessary for maintaining its effects. And sometimes, as with other chronic conditions, episodes of relapse may require a return to prior treatment components. A continuum of care that includes a customized treatment regimen, addressing all aspects of an individual's life, including medical and mental health services, and followup options can be crucial to a person's success in achieving and maintaining a drug-free lifestyle.

Medications can be used to help with different aspects of the treatment process.

Withdrawal: Medications offer help in suppressing withdrawal symptoms during detoxification. However, medically assisted withdrawal is not in itself "treatment"—it is only the first step in the treatment process. Patients who go through medically assisted withdrawal but do not receive any further treatment show drug abuse patterns similar to those who were never treated.

Treatment: Medications can be used to help re-establish normal brain function and to prevent relapse and diminish cravings throughout the treatment process. Currently, we have medications for opioid (heroin, morphine) and tobacco (nicotine) addiction, and are developing others for treating stimulant (cocaine, methamphetamine) and cannabis (marijuana) addiction.

Methadone and buprenorphine, for example, are effective medications for the treatment of opiate addiction. Acting on the same targets in the brain as heroin and morphine, these medications block the drug's effects, suppress withdrawal symptoms, and relieve craving for the drug. This helps patients to disengage from drug-seeking and related criminal behavior and be more receptive to behavioral treatments.

Buprenorphine: This is a relatively new and important treatment medication. NIDA-supported basic and clinical research led to the development of buprenorphine (Subutex or, in combination with naloxone, Suboxone), and demonstrated it to be a safe and acceptable addiction treatment. While these products were being developed in concert with industry partners, Congress passed the Drug Addiction Treatment Act (DATA 2000), permitting qualified physicians to prescribe narcotic medications (Schedules III to V) for the treatment of opioid addiction. This legislation created a major paradigm shift by allowing access to opiate treatment in a medical setting rather than limiting it to specialized drug treatment clinics. To date, nearly 10,000 physicians have taken the training needed to prescribe these two medications, and nearly 7,000 have registered as potential providers.

Behavioral Treatments help patients engage in the treatment process, modify their attitudes and behaviors related to drug abuse, and increase healthy life skills. Behavioral treatments can also enhance the effectiveness of medications and help people stay in treatment longer.

Outpatient behavioral treatment encompasses a wide variety of programs for patients who visit a clinic at regular intervals. Most of the programs involve individual or group drug counseling. Some programs also offer other forms of behavioral treatment such as:

- *Cognitive Behavioral Therapy*, which seeks to help patients recognize, avoid, and cope with the situations in which they are most likely to abuse drugs.
- *Multidimensional Family Therapy*, which addresses a range of influences on the drug abuse patterns of adolescents and is designed for them and their families.
- *Motivational Interviewing*, which capitalizes on the readiness of individuals to change their behavior and enter treatment.
- *Motivational Incentives* (contingency management), which uses positive reinforcement to encourage abstinence from drugs.

Residential treatment programs can also be very effective, especially for those with more severe problems. For example, therapeutic communities (TCs) are highly structured programs in which patients remain at a residence, typically for 6 to 12 months. Patients in may include those with relatively long histories of drug addiction, involvement in serious criminal activities, and seriously impaired social functioning. TCs are now also being designed to accommodate the needs of women who are pregnant or have children. The focus of the TC is on the re-socialization of the patient to a drug-free, crime-free lifestyle.

Treatment within the criminal justice system can succeed in preventing an offender's return to criminal behavior, particularly when treatment

continues as the person transitions back into the community. Studies show that treatment does not need to be voluntary to be effective. Research from the Substance Abuse and Mental Health Services Administration suggests that treatment can cut drug abuse in half, reduce criminal activity up to 80 percent, and reduce arrests up to 64 percent.*

What Is Alcoholism?

Alcoholism, also known as “alcohol dependence,” is a disease that includes four symptoms:

- Craving: A strong need, or compulsion, to drink.
- Loss of control: The inability to limit one’s drinking on any given occasion.
- Physical dependence: Withdrawal symptoms, such as nausea, sweating, shakiness, and anxiety, occur when alcohol use is stopped after a period of heavy drinking.
- Tolerance: The need to drink greater amounts of alcohol in order to “get high.”

People who are not alcoholic sometimes do not understand why an alcoholic can’t just “use a little willpower” to stop drinking. However, alcoholism has little to do with willpower. Alcoholics are in the grip of a powerful “craving,” or uncontrollable need, for alcohol that overrides their ability to stop drinking. This need can be as strong as the need for food or water.

Although some people are able to recover from alcoholism without help, the majority of alcoholics need assistance. With treatment and support, many individuals are able to stop drinking and rebuild their lives.

Many people wonder why some individuals can use alcohol without problems but others cannot. One important reason has to do with genetics. Scientists have found that having an alcoholic family member makes it more likely that if you choose to drink you too may develop alcoholism. Genes, however, are not the whole story. In fact, scientists now believe that certain factors in a person’s environment influence whether a person with a genetic risk for alcoholism ever develops the disease. A person’s risk for developing alcoholism can increase based on the person’s environment, including where and how he or she lives; family, friends, and culture; peer pressure; and even how easy it is to get alcohol.

What Is Alcohol Abuse?

Alcohol abuse differs from alcoholism in that it does not include an extremely strong craving for alcohol, loss of control over drinking, or physical

dependence. Alcohol abuse is defined as a pattern of drinking that results in one or more of the following situations within a 12-month period:

Failure to fulfill major work, school, or home responsibilities;

- Drinking in situations that are physically dangerous, such as while driving a car or operating machinery;
- Having recurring alcohol-related legal problems, such as being arrested for driving under the influence of alcohol or for physically hurting someone while drunk; and
- Continued drinking despite having ongoing relationship problems that are caused or worsened by the drinking.
- Although alcohol abuse is basically different from alcoholism, many effects of alcohol abuse are also experienced by alcoholics.

What Are the Signs of a Problem?

How can you tell whether you may have a drinking problem? Answering the following four questions can help you find out:

- Have you ever felt you should cut down on your drinking?
- Have people annoyed you by criticizing your drinking?
- Have you ever felt bad or guilty about your drinking?
- Have you ever had a drink first thing in the morning (as an “eye opener”) to steady your nerves or get rid of a hangover?

One “yes” answer suggests a possible alcohol problem. If you answered “yes” to more than one question, it is highly likely that a problem exists. In either case, it is important that you see your doctor or other health care provider right away to discuss your answers to these questions. He or she can help you determine whether you have a drinking problem and, if so, recommend the best course of action.

Even if you answered “no” to all of the above questions, if you encounter drinking-related problems with your job, relationships, health, or the law, you should seek professional help. The effects of alcohol abuse can be extremely serious—even fatal—both to you and to others.

The Decision To Get Help

Accepting the fact that help is needed for an alcohol problem may not be easy. But keep in mind that the sooner you get help, the better are your chances for a successful recovery.

Any concerns you may have about discussing drinking-related problems with your health care provider may stem from common misconceptions about alcoholism and alcoholic people. In our society, the myth prevails that an

alcohol problem is a sign of moral weakness. As a result, you may feel that to seek help is to admit some type of shameful defect in yourself. In fact, alcoholism is a disease that is no more a sign of weakness than is asthma. Moreover, taking steps to identify a possible drinking problem has an enormous payoff—a chance for a healthier, more rewarding life.

When you visit your health care provider, he or she will ask you a number of questions about your alcohol use to determine whether you are having problems related to your drinking. Try to answer these questions as fully and honestly as you can. You also will be given a physical examination. If your health care provider concludes that you may be dependent on alcohol, he or she may recommend that you see a specialist in treating alcoholism. You should be involved in any referral decisions and have all treatment choices explained to you.

Alcoholism Treatment

The type of treatment you receive depends on the severity of your alcoholism and the resources that are available in your community. Treatment may include detoxification (the process of safely getting alcohol out of your system); taking doctor-prescribed medications, such as disulfiram (Antabuse®) or naltrexone (ReVia™), to help prevent a return (or relapse) to drinking once drinking has stopped; and individual and/or group counseling. There are promising types of counseling that teach alcoholics to identify situations and feelings that trigger the urge to drink and to find new ways to cope that do not include alcohol use. These treatments are often provided on an outpatient basis.

Because the support of family members is important to the recovery process, many programs also offer brief marital counseling and family therapy as part of the treatment process. Programs may also link individuals with vital community resources, such as legal assistance, job training, childcare, and parenting classes.

Alcoholics Anonymous

Virtually all alcoholism treatment programs also include Alcoholics Anonymous (AA) meetings. AA describes itself as a “worldwide fellowship of men and women who help each other to stay sober.” Although AA is generally recognized as an effective mutual help program for recovering alcoholics, not everyone responds to AA’s style or message, and other recovery approaches are available. Even people who are helped by AA usually find that AA works best in combination with other forms of treatment, including counseling and medical care.

Can Alcoholism Be Cured?

Although alcoholism can be treated, a cure is not yet available. In other words, even if an alcoholic has been sober for a long time and has regained health, he or she remains susceptible to relapse and must continue to avoid all alcoholic beverages. "Cutting down" on drinking doesn't work; cutting out alcohol is necessary for a successful recovery.

However, even individuals who are determined to stay sober may suffer one or several "slips," or relapses, before achieving long-term sobriety. Relapses are very common and do not mean that a person has failed or cannot recover from alcoholism. Keep in mind, too, that every day that a recovering alcoholic has stayed sober prior to a relapse is extremely valuable time, both to the individual and to his or her family. If a relapse occurs, it is very important to try to stop drinking once again and to get whatever additional support you need to abstain from drinking.

Help for Alcohol Abuse

If your health care provider determines that you are not alcohol dependent but are nonetheless involved in a pattern of alcohol abuse, he or she can help you to:

- Examine the benefits of stopping an unhealthy drinking pattern.
- Set a drinking goal for yourself. Some people choose to abstain from alcohol. Others prefer to limit the amount they drink.
- Examine the situations that trigger your unhealthy drinking patterns, and develop new ways of handling those situations so that you can maintain your drinking goal.

Some individuals who have stopped drinking after experiencing alcohol-related problems choose to attend AA meetings for information and support, even though they have not been diagnosed as alcoholic.

Drug addiction

You may be hooked emotionally and psychologically. You may have a physical dependence, too. If you have a drug addiction — whether to a legal or illegal drug — you have intense cravings for it. You want to use the drug again and again. When you stop taking it, you may have unpleasant physical reactions.

While not everyone who uses drugs becomes addicted, many people do. Drug addiction involves compulsively seeking to use a substance, regardless of the potentially negative social, psychological and physical consequences.

Certain drugs, such as narcotics and cocaine, are more likely to cause physical dependence than are other drugs.

Breaking a drug addiction is difficult, but not impossible. Support from your doctor, family, friends and others who have a drug addiction, as well as inpatient or outpatient drug addiction treatment, may help you beat your drug dependence.

Signs and symptoms

The range of drugs to which you can become addicted is wide. The drugs include:

- **Cannabis compounds.** These compounds are found in marijuana and hashish.
- **Central nervous system depressants.** Barbiturates and benzodiazepines are examples of central nervous system depressants. Phenobarbital, amobarbital (Amytal) and secobarbital (Seconal) are examples of barbiturates. Benzodiazepines include tranquilizers such as diazepam (Valium), alprazolam (Xanax), oxazepam (Serax), lorazepam (Ativan), clonazepam (Klonopin) and chlordiazepoxide (Librium).
- **Central nervous system stimulants.** This class of drugs includes amphetamines, methamphetamine, cocaine and methylphenidate (Ritalin).
- **Designer drugs.** Synthetic compounds, such as Ecstasy, which has both amphetamine-like and hallucinogenic effects, are included in this category.
- **Hallucinogens.** LSD, phencyclidine (PCP) and ketamine (special K) are examples of hallucinogens.
- **Inhalants.** Glue, paint, solvents and nitrous oxide can all be used as inhalant drugs.
- **Opioids.** Opioids are narcotic, painkilling drugs produced naturally from opium or made synthetically. This class of drugs includes heroin, morphine, codeine, methadone and oxycodone (Oxycontin).

General signs and symptoms

Addiction to any drug may include these general characteristics:

- Feeling that you need the drug regularly and, in some cases, many times a day
- Making certain that you maintain a supply of the drug
- Failing repeatedly in your attempts to stop using the drug
- Doing things to obtain the drug that you normally wouldn't do, such as stealing
- Feeling that you need the drug to deal with your problems

- Driving or doing other activities that place you and others at risk of physical harm when you're under the influence of the drug

The particular signs and symptoms of drug use and dependence vary depending on the type of drug.

Cannabis compounds: Signs and symptoms

- A sense of relaxation and happiness
- A heightened sense of visual, auditory and taste perception
- Poor memory
- Increased blood pressure and heart rate
- Red eyes
- Decreased coordination
- Difficulty concentrating
- Increased appetite
- Slowed reaction time
- Paranoid thinking

Central nervous system depressants: Signs and symptoms

- Drowsiness
- Slurred speech
- Lack of coordination
- Memory impairment
- Confusion
- Slowed breathing and decreased blood pressure
- Dizziness
- Depression

Central nervous system stimulants: Signs and symptoms

- Euphoria
- Decreased appetite
- Rapid speech
- Irritability
- Restlessness
- Depression as the drug wears off
- Nasal congestion and damage to the mucous membrane of the nose in users who snort drugs
- Insomnia
- Weight loss
- Increased heart rate, blood pressure and temperature
- Paranoia

Designer drugs: Signs and symptoms

Signs and symptoms of using designer drugs vary depending on the drug. You might be able to tell that a family member or a friend is using or abusing a drug based on the physical and behavioral signs and symptoms associated with the drug. Ecstasy produces a mild hallucinogenic effect and a feeling of euphoria. It also causes an increased heart rate, overheating, high blood pressure, kidney and liver toxicity, and memory problems.

Hallucinogens: Signs and symptoms

Use of hallucinogens produces different signs and symptoms depending on the drug. The most common hallucinogens are LSD, PCP and ketamine, a so-called "club drug."

Signs and symptoms of LSD use include:

- Hallucinations
- Greatly impaired perception of reality, for example, interpreting input from one of your senses as another, such as hearing colors
- Permanent mental changes in perception
- Rapid heart rate
- High blood pressure
- Tremors
- Flashbacks, a re-experience of the hallucinations — even years later

Signs and symptoms of PCP use include:

- Hallucinations
- Euphoria
- Delusions
- Panic
- Loss of appetite
- Depression
- Aggressive, possibly violent behavior

Signs and symptoms of ketamine use include:

- Increased heart rate
- Nausea and vomiting
- Numbness
- Impaired motor function
- Loss of memory

Inhalants: Signs and symptoms

The signs and symptoms of inhalant use vary depending on what substance is inhaled. Some commonly inhaled substances include glue, paint thinners, correction fluid, felt tip marker fluid, gasoline, cleaning fluids and household aerosol products. When inhaled, these products can cause brief intoxication and a decreased feeling of inhibition. Long-term use may cause seizures and damage to the brain, liver and kidneys. Inhalant use can also cause death.

Opioids: Signs and symptoms

- Reduced sense of pain
- Sedation
- Depression
- Confusion
- Constipation
- Slowed breathing
- Needle marks (if injecting drugs)

Recognizing drug abuse in teenagers

Possible indications that your teenager is using drugs include:

- **School performance.** Your child suddenly shows an active dislike of school and looks for excuses to stay home. Contact your school officials to see if your child's attendance record matches what you know about his or her absent days. A student who experiences a drop in performance, possibly failing courses or receiving only minimally passing grades, may be using drugs.
- **Physical health.** Listlessness and apathy may indicate your child is using certain drugs.
- **Appearance.** How they look is extremely important to adolescents. A sudden lack of interest in clothing, grooming or looks may be a warning sign of drug use.
- **Personal behavior.** Teenagers enjoy privacy, but exaggerated efforts to bar family members from entering their rooms or knowing where they go with their friends might indicate drug use. Also, drastic changes in behavior and in relationships with family and friends may signal drug use.
- **Money.** Sudden requests for money without a reasonable explanation for its use may be a sign of drug use. You may also discover money stolen from previously safe places at home. Items may disappear from your home because they're being sold to support a drug habit.

Causes of Drug Addiction

Drug use or abuse crosses the line into drug addiction when you feel you have to have the drug, and you increase the amount of the drug you take. Various factors, such as your personality, your genetic makeup and peer pressure, affect your likelihood of becoming addicted to a drug. In addition, some drugs, such as heroin and cocaine, more quickly produce a physical addiction than other drugs do for many people.

Physical addiction appears to occur when repeated use of a drug alters reward pathways in your brain. The addicting drug causes physical changes to some nerve cells (neurons) in your brain.

Neurons use chemicals called neurotransmitters to communicate. Neurons release neurotransmitters into the gaps (synapses) between nerve cells; neurotransmitters are received by receptors on other neurons and on their own cell bodies. The changes that occur in this communication process vary with the type of drug to which you're addicted, though researchers have discovered that addictive drugs, such as cocaine and morphine, affect some areas of the brain in the same manner. If further research confirms findings such as this, it would be possible to develop more effective medications to combat addiction to more than one drug.

Here are some of the ways specific drugs may contribute to addiction:

- **Cannabis compounds.** The main active agent in cannabis compounds, delta-9-tetrahydrocannabinol (THC), affects the neurotransmitter communication process. Some people perceive the effects of THC as enjoyable, and this sensation reinforces use of the drug. For others, THC causes uncomfortable feelings or anxiety, which doesn't reinforce use of the drug.
- **Central nervous system depressants.** Benzodiazepines and barbiturates produce long-term cellular changes partly by enhancing the actions of the inhibitory neurotransmitter gamma-aminobutyric acid (GABA). Released into the synapses, GABA binds to receptors and ultimately lowers cell excitability, which slows down brain activity.
- **Central nervous system stimulants.** These drugs raise the levels of dopamine and serotonin in the synapses. Brain cells release dopamine as part of the reward system through which you learn to seek stimuli, such as food and sex. Serotonin is a chemical in the brain that regulates mood. Stimulants block the reabsorption of dopamine after its release and can physically alter the sensitivities of some dopamine and serotonin receptors.
- **Opioids.** These drugs affect the nerve cells of the reward pathways in your brain in ways similar to that of stimulants, producing positive reinforcement for the use of these drugs. There are opioid receptors in the brain, spinal cord and gastrointestinal tract.

Risk Factors of Drug Addiction

These factors increase the likelihood of your having an addiction to a legal or an illegal drug:

- **Personality.** If you have another psychological problem, such as depression, attention-deficit/hyperactivity disorder and post-traumatic stress disorder, you're more likely to become dependent on drugs. Children who exhibit aggression, a lack of self-control and a difficult temperament may be at greater risk of drug addiction.
- **Social environment.** Particularly for young people, peer pressure is a strong factor in starting to use and abuse drugs. A lack of attachment with your parents may increase the risk of addiction, as can a lack of parental supervision.
- **Anxiety, depression and loneliness.** Using drugs can become a way of coping with these painful psychological feelings.
- **Genetics.** Drug addiction is more common in some families and likely involves the effects of many genes. If you have family members with alcohol or drug problems, you're at greater risk of developing a drug addiction.
- **Type of drug.** Some drugs, such as heroin and cocaine, more quickly result in physical addiction than do others.

When to Seek Medical Advice

Addiction is a chronic relapsing disorder, meaning you tend to fall back into old addictive behaviors, including drug use, even after treatment. The sooner you seek help, the greater your chances are for a long-term recovery. If you're initially reluctant to approach a doctor, help lines or hot lines may be a good place to start to learn about treatment. You can find these lines listed in the phone book or on the Internet.

Because denial is often a characteristic of addiction, many people who are addicted to or who abuse drugs won't seek medical treatment on their own. Family members, friends or co-workers may need to persuade the user to undergo screening for drug addiction. Breaking a drug addiction may involve counseling, an outpatient treatment program or residential treatment.

Screening and diagnosis

Diagnosing a drug addiction often starts at the family doctor level, often after one family member has raised concerns about another family member's behavior. Your doctor may ask questions about the frequency of drug use, whether any family member has criticized your drug use or whether you've ever felt you might have a problem.

A definitive diagnosis of drug addiction usually occurs after an evaluation by a psychiatrist, psychologist or a specialized addiction counselor. Blood tests often aren't able to result in a diagnosis of a drug addiction, but these tests can help a doctor detect the presence of a drug when its use has been denied.

Complications

Aside from the physical and psychological problems it causes, dependence on drugs can create a number of other disruptions in your life:

- **Family.** Behavioral changes may cause marital or family strife.
- **Work.** Work performance may decline, and you may be absent from work more often.
- **Social.** You may lose or alienate longtime friends.
- **School.** Academic performance and motivation to excel in school may suffer.
- **Legal.** Stealing to support your drug addiction and driving while impaired are just two of the possible legal problems drug addiction can cause.
- **Financial.** Spending money to support your habit takes away money from your other needs, could put you into debt and could lead you into behaviors that are contrary to your values.
- **Health.** Drug use and addiction has many physical consequences that vary depending on which drug you use. Using drugs may make you more likely to participate in other unsafe behaviors, such as sharing needles or having unprotected sex, which can increase your chances of contracting HIV or hepatitis. People who are addicted to drugs are also at a higher risk of overdosing because addicts need more and more of the drug to achieve the same feeling.

Treatment

Treatment typically involves steps to help you withdraw from using the drug, followed by counseling and attending self-help groups to help you resist using the addictive drug again.

Withdrawal

therapy

The goal of withdrawal therapy (detoxification) is for you to stop taking the addicting drug as quickly and safely as possible. Detoxification may involve gradually reducing the dose of the drug or temporarily substituting other substances, such as methadone, that have less severe side effects. For some people, it may be safe to undergo withdrawal therapy on an outpatient basis; others may require placement in a hospital or a residential treatment center.

Withdrawal from different categories of drugs produces different side effects and requires different approaches.

- **Central nervous system depressants.** Minor side effects of withdrawal may include restlessness, anxiety, sleep problems and sweating. More serious signs and symptoms also could include hallucinations, whole-body tremors, seizures, and increased blood pressure, heart rate and body temperature. The most serious stage of withdrawal may include delirium, which is potentially life-threatening. Withdrawal therapy may involve gradually scaling back the amount of the drug.
- **Central nervous system stimulants.** Side effects of withdrawal typically include depression, fatigue, anxiety and intense cravings. In some cases, signs and symptoms may include suicidal thoughts and suicide attempts, paranoia and impaired contact with reality (acute psychosis). Treatment during withdrawal is usually limited to emotional support from your family, friends and doctor. Your doctor may recommend medications to treat paranoid psychosis or depression.
- **Opioids.** Side effects of withdrawal of opioids, such as heroin, morphine, oxycodone or codeine, can range from relatively minor to severe. On the minor end, they may include runny nose, sweating, yawning, feeling anxiety and craving the drug. Severe reactions can include sleeplessness, depression, dilated pupils, rapid pulse, rapid breathing, high blood pressure, abdominal cramps, tremors, bone and muscle pain, vomiting, and diarrhea. Doctors may substitute a synthetic opiate, such as methadone, to reduce the craving for heroin and to gently ease people away from heroin. The most recently approved medication to ease withdrawal from opiates is buprenorphine (Suboxone, Subutex). Buprenorphine is a milder opioid that was approved in the United States to manage cravings in individuals who decide to stop using stronger opiates. This drug is the first narcotic medication used for the treatment of addiction that may be prescribed in a doctor's office rather than a treatment center.

Continuing treatment

After detoxification, therapies such as counseling, addiction treatment programs and self-help group meetings can help you stay sober.

- **Counseling.** Individual or family counseling with a psychologist, psychiatrist or addiction counselor may help you resist the temptation to resume using addicting drugs. Behavior therapies can help you develop ways to cope with your drug cravings, suggest strategies to avoid drugs and prevent relapse, and offer suggestions on how to deal with a relapse if it occurs. Counseling also can involve talking about your job, legal problems and relationships with family and friends. Counseling with family members can help them to develop better communication skills and to be more supportive.
- **Treatment programs.** Treatment programs generally include educational and therapy sessions focused on establishing sobriety and

preventing relapse. This may be accomplished in individual, group or family sessions. These programs are available in various settings from outpatient to residential and inpatient programs.

- **Self-help groups.** Many, though not all, of these groups tend to use the 12-step model first developed by Alcoholics Anonymous. Self-help groups, such as Narcotics Anonymous, exist for people addicted to drugs, such as cocaine, sedatives and narcotics. The message is that addiction is a chronic disorder with a danger of relapse and that ongoing maintenance treatment — which may include medications, counseling and attending self-help group meetings — is necessary to prevent a relapse. Your doctor or counselor can help you locate a self-help group. You also can find listings for self-help groups in the phone book, at the library and on the Internet.

The best way to prevent an addiction to an illegal drug is not to take the drug at all. Your doctor may prescribe narcotics to relieve pain, benzodiazepines to relieve anxiety or insomnia, or barbiturates to relieve nervousness or irritation. Doctors prescribe these medications at safe doses and monitor their use so that you're not given too great a dose or for too long a time. If you feel you need to take more than the prescribed dose of a medication, talk to your doctor.

Parents can take the following steps to help prevent drug dependency in their children:

- **Communicate.** Talk to your children about the risks of drug use and abuse.
- **Listen.** Be a good listener when your children talk about peer pressure, and be supportive of their efforts to resist it.
- **Set a good example.** Don't abuse alcohol or addictive drugs. Children of parents who abuse drugs are at greater risk of drug addiction.
- **Strengthen the bond.** Work on your relationship with your children. A strong, stable bond between you and your child will reduce your child's risk of using or abusing drugs.

Coping skills

Along with counseling and attending self-help groups, talk with your doctor or counselor about other ways you can boost your chances of staying drug-free. Following are some suggestions:

- **Give yourself time.** For most people, it takes about three months before significant improvement occurs, so don't give up on your treatment program too soon.
- **Promptly seek treatment for other mental health disorders.** Since people with other mental health problems, such as depression, are twice as likely to become addicted to drugs, seek immediate

treatment from a qualified mental health professional if you have any signs or symptoms of mental illness.

- **Avoid high-risk situations.** Don't go back to the neighborhood where you used to get your drugs. And, stay away from your old drug crowd.

Club Drugs

MDMA (Ecstasy), Rohypnol, GHB, and Ketamine are among the drugs used by teens and young adults who are part of a nightclub, bar, rave, or trance scene. Raves and trance events are generally night-long dances, often held in warehouses. Many who attend raves and trances do not use drugs, but those who do may be attracted to the generally low cost, seemingly increased stamina, and intoxicating highs that are said to deepen the rave or trance experience.

Current science, however, is showing change to critical parts of the brain from use of these drugs. Also, in high doses most of these drugs can cause a sharp increase in body temperature (malignant hyperthermia) leading to muscle breakdown and kidney and cardiovascular system failure.

MDMA (Ecstasy)

MDMA is a synthetic, psychoactive drug with both stimulant (amphetamine-like) and hallucinogenic (LSD-like) properties. Street names for MDMA include Ecstasy, Adam, XTC, hug, beans, and love drug. Its chemical structure (3,4-methylenedioxymethamphetamine, "MDMA") is similar to methamphetamine, methylenedioxyamphetamine (MDA), and mescaline - these are synthetic drugs known to cause brain damage. MDMA usually is taken in pill form, but some users snort it, inject it, or use it in suppository form.

Many problems MDMA users encounter are similar to those found with the use of amphetamines and cocaine. Psychological difficulties can include confusion, depression, sleep problems, severe anxiety, and paranoia. Physical problems can include muscle tension, involuntary teeth clenching, nausea, blurred vision, faintness, and chills or sweating. Use of the drug has also been associated with increases in heart rate and blood pressure, which are special risks for people with circulatory or heart disease. Recent research also links MDMA use to long-term damage to those parts of the brain critical to thought, memory, and pleasure.

MDMA use is increasing in most metropolitan areas of the United States.* In Boston and New York City, it appears to be spreading beyond the club scene to the streets. Content of the MDMA pills also varies widely, and may include caffeine, dextromethorphan, heroin, and mescaline. In some areas of the country, the MDMA-like substance paramethoxyamphetamine (PMA) has

been involved in the deaths of people who mistakenly thought they were taking true MDMA. The deaths were due to complications from hyperthermia.

In a 5-year retrospective of emergency room mentions of club drugs,** the Substance Abuse and Mental Health Services Administration reports that emergency room mentions involving MDMA increased from 250 in 1994 to 2,850 in 1999.

Rohypnol GHB and Ketamine

GHB, Rohypnol, and ketamine are predominantly central nervous system depressants. Because they are often colorless, tasteless, and odorless, they can be added to beverages and ingested unknowingly.

These drugs emerged a few years ago as "date rape" drugs. Because of concern about their abuse, Congress passed the "Drug-Induced Rape Prevention and Punishment Act of 1996" in October 1996. This legislation increased Federal penalties for use of any controlled substance to aid in sexual assault.

GHB

Since about 1990, GHB (gamma hydroxybutyrate) has been abused in the U.S. for euphoric, sedative, and anabolic (body building) effects. It is a central nervous system depressant that was widely available over-the-counter in health food stores during the 1980s and until 1992. It was purchased largely by body builders to aid fat reduction and muscle building. Street names include Liquid Ecstasy, Soap, Easy Lay, and Georgia Home Boy. Even though GHB may be difficult to distinguish from water, it has appeared in law enforcement indicators, including seizures of large amounts in Minneapolis/St. Paul and Phoenix.*

Coma and seizures can occur following abuse of GHB and, when combined with methamphetamine, there appears to be an increased risk of seizure. Combining use with other drugs such as alcohol can result in nausea and difficulty breathing. GHB may also produce withdrawal effects, including insomnia, anxiety, tremors, and sweating.

GHB and two of its precursors, gamma butyrolactone (GBL) and 1,4 butanediol (BD) have been involved in poisonings, overdoses, date rapes, and deaths. These products, obtainable over the internet and sometimes still sold in health food stores, are also available at some gyms, raves, nightclubs, gay male parties, college campuses, and the street. They are commonly mixed with alcohol (which may cause unconsciousness), have a short duration of action, and are not easily detectable on routine hospital toxicology screens.*

GHB emergency room mentions increased from 55 in 1994 to 2,973 in 1999.** In 1999, GHB accounted for 32 percent of illicit drug-related poison center calls in Boston. In Chicago and San Francisco, GHB use is reportedly low compared with MDMA, although GHB overdoses seem frequent compared with overdoses related to other club drugs.

Rohypnol

Rohypnol, a trade name for flunitrazepam, has been of particular concern for the last few years because of its abuse in date rape. It belongs to a class of drugs known as benzodiazepines. When mixed with alcohol, Rohypnol can incapacitate victims and prevent them from resisting sexual assault. It can produce "anterograde amnesia," which means individuals may not remember events they experienced while under the effects of the drugs. Also, Rohypnol may be lethal when mixed with alcohol and/or other depressants.

Rohypnol is not approved for use in the United States, and its importation is banned. Illicit use of Rohypnol started appearing in the United States in the early 1990s, where it became known as "rophies," "roofies," "roach," and "rope." Emergency room mentions of Rohypnol were 13 in 1994 and increased to 624 in 1998; they decreased to 540 in 1999.**

Abuse of two other similar drugs appears to be replacing Rohypnol abuse in Miami, Texas, and Boston. These are clonazepam, marketed in the U.S. as Klonopin and in Mexico as Rivotril, and alprazolam (marketed as Xanax). Rohypnol, however, continues to be a problem among treatment admissions in Texas, particularly among young Hispanic males along the Mexican border.

Ketamine

Ketamine is an anesthetic that has been approved for both human and animal use in medical settings since 1970; about 90 percent of the ketamine legally sold is intended for veterinary use. It can be injected or snorted. Ketamine is also known as "Special K" or "vitamin K".

Certain doses of ketamine can cause dream-like states and hallucinations, and it has become common in club and rave scenes and has been used as a date rape drug.

At high doses, ketamine can cause delirium, amnesia, impaired motor function, high blood pressure, depression, and potentially fatal respiratory problems.

Emergency room mentions of ketamine rose from 19 in 1994 to 396 in 1999.** Recent use has been reported more frequently among white youth in many cities, including Atlanta, Baltimore, Boston, Chicago, Minneapolis/St. Paul, Newark, New York City, Phoenix, San Diego, Texas, and Washington, DC.*

Be especially scrutinizing as you determine the drug rehab program that meets your specific needs. This site has listings of drug rehab programs and treatment centers, alcohol rehabilitation programs, teen rehabs, sober houses, drug detox and alcohol detox centers.

Heroin Addiction

Heroin is an illegal, highly addictive drug. It is both the most abused and the most rapidly acting of the opiates. Heroin is processed from morphine, a naturally occurring substance extracted from the seed pod of certain varieties of poppy plants. It is typically sold as a white or brownish powder or as the black sticky substance known on the streets as "black tar heroin." Although purer heroin is becoming more common, most street heroin is "cut" with other drugs or with substances such as sugar, starch, powdered milk, or quinine. Street heroin can also be cut with strychnine or other poisons. Because heroin abusers do not know the actual strength of the drug or its true contents, they are at risk of overdose or death. Heroin also poses special problems because of the transmission of HIV and other diseases that can occur from sharing needles or other injection equipment.

What is the scope of heroin use in the United States?

According to the 1998 National Household Survey on Drug Abuse, which may actually underestimate illicit opiate (heroin) use, an estimated 2.4 million people had used heroin at some time in their lives, and nearly 130,000 of them reported using it within the month preceding the survey. The survey report estimates that there were 81,000 new heroin users in 1997. A large proportion of these recent new users were smoking, snorting, or sniffing heroin, and most (87 percent) were under age 26. In 1992, only 61 percent were younger than 26.

The 1998 Drug Abuse Warning Network (DAWN), which collects data on drug-related hospital emergency department (ED) episodes from 21 metropolitan areas, estimates that 14 percent of all drug-related ED episodes involved heroin. Even more alarming is the fact that between 1991 and 1996, heroin-related ED episodes more than doubled (from 35,898 to 73,846). Among youths aged 12 to 17, heroin-related episodes nearly quadrupled.

NIDA which provides information about the nature and patterns of drug use in 21 cities, reported in its December 1999 publication that heroin was mentioned most often as the primary drug of abuse in drug abuse treatment admissions in Baltimore, Boston, Los Angeles, Newark, New York, and San Francisco.

How is heroin used?

Heroin is usually injected, sniffed/snorted, or smoked. Typically, a heroin abuser may inject up to four times a day. Intravenous injection provides the greatest intensity and most rapid onset of euphoria (7 to 8 seconds), while intramuscular injection produces a relatively slow onset of euphoria (5 to 8 minutes). When heroin is sniffed or smoked, peak effects are usually felt within 10 to 15 minutes. Although smoking and sniffing heroin do not produce a "rush" as quickly or as intensely as intravenous injection, NIDA researchers have confirmed that all three forms of heroin administration are addictive.

Injection continues to be the predominant method of heroin use among addicted users seeking treatment; however, researchers have observed a shift in heroin use patterns, from injection to sniffing and smoking. In fact, sniffing/snorting heroin is now the most widely reported means of taking heroin among users admitted for drug treatment in Newark, Chicago, and New York.

With the shift in heroin abuse patterns comes an even more diverse group of users. Older users (over 30) continue to be one of the largest user groups in most national data. However, the increase continues in new, young users across the country who are being lured by inexpensive, high-purity heroin that can be sniffed or smoked instead of injected. Heroin has also been appearing in more affluent communities.

Drug Addiction and Drug Abuse

drug addiction and drug abuse, chronic or habitual use of any chemical substance to alter states of body or mind for other than medically warranted purposes. Traditional definitions of addiction, with their criteria of physical dependence and withdrawal (and often an underlying tenor of depravity and sin) have been modified with increased understanding; with the introduction of new drugs, such as cocaine (kōkān`, kō`kān), alkaloid drug derived from the leaves of the coca shrub. A commonly abused illegal drug, cocaine has limited

Definitions of drug abuse and addiction are subjective and infused with the political and moral values of the society or culture. For example, the stimulant caffeine (kăfēn`), odorless, slightly bitter alkaloid found in coffee, tea, kola nuts (see cola), ilex plants (the source of the Latin American drink maté), and, in small amounts, in cocoa (see cacao).

The United States has the highest substance abuse rate of any industrialized nation. Government statistics (1997) show that 36% of the United States population has tried marijuana, cocaine, or other illicit drugs. By comparison,

71% of the population has smoked cigarettes and 82% has tried alcoholic beverages. Marijuana is the most commonly used illicit drug.

Types of Abused Substances

There are many levels of substance abuse and many kinds of drugs, some of them readily accepted by society.

Legal Substances

Legal substances, approved by law for sale over the counter or by doctor's prescription, include [caffeine](#), alcoholic beverages (see [alcoholism](#) alcoholism, disease characterized by impaired control over the consumption of alcoholic beverages. Alcoholism is a serious problem worldwide; in the United States the wide availability of alcoholic beverages makes alcohol the most accessible drug, and alcoholism is the most prevalent of the nation's addictions (see drug addiction and drug abuse).

Illegal Substances

Prescription drugs are considered illegal when diverted from proper use. Some people shop until they find a doctor who freely writes prescriptions; supplies are sometimes stolen from laboratories, clinics, or hospitals. Morphine morphine, principal derivative of opium , which is the juice in the unripe seed pods of the opium poppy , *Papaver somniferum*. It was first isolated from opium in 1803 by the German pharmacist F. W. A. Sertürner, who named it after Morpheus , the god of dreams. Given intravenously, it is still considered the most effective drug for the relief of pain.

Motivations for Drug Use

People take drugs for many reasons: peer pressure, relief of stress, increased energy, to relax, to relieve pain, to escape reality, to feel more self-esteem, and for recreation. They may take stimulants to keep alert, or cocaine for the feeling of excitement it produces. Athletes and bodybuilders may take anabolic steroids anabolic steroid or androgenic steroid

Effects of Substance Abuse

The effects of substance abuse can be felt on many levels: on the individual, on friends and family, and on society.

On the Individual

People who use drugs experience a wide array of physical effects other than those expected. The excitement of a cocaine high, for instance, is followed by

a "crash": a period of anxiety, fatigue, depression, and an acute desire for more cocaine to alleviate the feelings of the crash. Marijuana and alcohol interfere with motor control and are factors in many automobile accidents. Users of marijuana and hallucinogenic drugs may experience flashbacks, unwanted recurrences of the drug's effects weeks or months after use. Sudden abstinence from certain drugs results in withdrawal symptoms. For example, heroin withdrawal can cause vomiting, muscle cramps, convulsions, and delirium. With the continued use of a physically addictive drug, tolerance develops; i.e., constantly increasing amounts of the drug are needed to duplicate the initial effect. Sharing hypodermic needles used to inject some drugs dramatically increases the risk of contracting [AIDS](#) AIDS or acquired immunodeficiency syndrome, fatal disease caused by a rapidly mutating retrovirus that attacks the immune system and leaves the victim vulnerable to infections, malignancies, and neurological disorders. It was first recognized as a disease in 1981.

Effects on the Family

The user's preoccupation with the substance, plus its effects on mood and performance, can lead to marital problems and poor work performance or dismissal. Drug use can disrupt family life and create destructive patterns of codependency, that is, the spouse or whole family, out of love or fear of consequences, inadvertently enables the user to continue using drugs by covering up, supplying money, or denying there is a problem. Pregnant drug users, because of the drugs themselves or poor self-care in general, bear a much higher rate of low birth-weight babies than the average. Many drugs (e.g., crack and heroin) cross the placental barrier, resulting in addicted babies who go through withdrawal soon after birth, and fetal alcohol syndrome fetal alcohol syndrome (FAS), pattern of physical, developmental, and psychological abnormalities seen in babies born to mothers who consumed alcohol during pregnancy . The abnormalities include low birthweight, facial deformities, and mental retardation, and there appears to be

Effects on Society

Drug abuse affects society in many ways. In the workplace it is costly in terms of lost work time and inefficiency. Drug users are more likely than nonusers to have occupational accidents, endangering themselves and those around them. Over half of the highway deaths in the United States involve alcohol. Drug-related crime can disrupt neighborhoods due to violence among drug dealers, threats to residents, and the crimes of the addicts themselves. In some neighborhoods, younger children are recruited as lookouts and helpers because of the lighter sentences given to juvenile offenders, and guns have become commonplace among children and adolescents. The great majority of homeless people have either a drug or alcohol problem or a mental illness—many have all three.

The federal government budgeted \$17.9 billion on drug control in 1999 for interdiction, prosecution, international law enforcement, prisons, treatment, prevention, and related items. In 1998, drug-related health care costs in the United States came to more than \$9.9 billion.

Treatment

Treatment of substance abusers depends upon the severity and nature of the addiction, motivation, and the availability of services. Some users may come into treatment voluntarily and have the support of family, friends, and workplace; others may be sent to treatment by the courts against their will and have virtually no support system. Most people in drug treatment have a history of criminal behavior; approximately one third are sent by the criminal justice system.

Both pharmacological and behavioral treatments are used, often augmented by educational and vocational services. Treatment may include detoxification, therapy, and support groups, such as the 12-step groups Alcoholics Anonymous, Narcotics Anonymous, and Cocaine Anonymous. Nonresidential programs serve the largest number of patients. Residential facilities include hospitals, group homes, halfway houses, and therapeutic communities, such as Phoenix House and Daytop Village; most of the daily activities are treatment-related. Programs such as Al-Anon, CoAnon, and Alateen, 12-step programs for family and friends of substance abusers, help them to break out of codependent cycles.

Some treatment programs use medicines that neutralize the effects of the drug. Antabuse, trade name for the drug tetraethylthiuram disulfide, used in the treatment of alcoholism .

For every person in drug treatment there are an estimated three or four people who need it. Many who attempt to get treatment, especially from public facilities, are discouraged by waits of over a month to get in. Evaluating the effectiveness of treatment is difficult because of the chronic nature of drug abuse and alcoholism and the fact that the disease is usually complicated by personal, social, and health factors.

Signs and Symptoms

Alcohol: Odor on the breath. Intoxication. Difficulty focusing; glazed appearance of the eyes. Uncharacteristically passive behavior; or combative and argumentative behavior. Gradual (or sudden in adolescents) deterioration in personal appearance and hygiene. Gradual development of dysfunction, especially in job performance or school work. Absenteeism (particularly on Monday). Unexplained bruises and accidents. Irritability. Flushed skin. Loss of memory (blackouts). Availability and consumption of

alcohol becomes the focus of social or professional activities. Changes in peer-group associations and friendships. Impaired interpersonal relationships (troubled marriage, unexplainable termination of deep relationships, alienation from close family members).

Marijuana/Pot: Rapid, loud talking and bursts of laughter in early stages of intoxication. Sleepy or stuporous in the later stages. Forgetfulness in conversation. Inflammation in whites of eyes; pupils unlikely to be dilated. Odor similar to burnt rope on clothing or breath. Tendency to drive slowly - below speed limit. Distorted sense of time passage - tendency to overestimate time intervals. Use or possession of paraphernalia including roach clip, packs of rolling papers, pipes or bong. Marijuana users are difficult to recognize unless they are under the influence of the drug at the time of observation. Casual users may show none of the general symptoms. Marijuana does have a distinct odor and may be the same color or a bit greener than tobacco.

Cocaine/Crack/Methamphetamines/Stimulants: Extremely dilated pupils. Dry mouth and nose, bad breath, frequent lip licking. Excessive activity, difficulty sitting still, lack of interest in food or sleep. Irritable, argumentative, nervous. Talkative, but conversation often lacks continuity; changes subjects rapidly. Runny nose, cold or chronic sinus/nasal problems, nose bleeds. Use or possession of paraphernalia including small spoons, razor blades, mirror, little bottles of white powder and plastic, glass or metal straws.

Depressants: Symptoms of alcohol intoxication with no alcohol odor on breath (remember that depressants are frequently used with alcohol). Lack of facial expression or animation. Flat affect. Flaccid appearance. Slurred speech. Note: There are few readily apparent symptoms. Abuse may be indicated by activities such as frequent visits to different physicians for prescriptions to treat "nervousness", "anxiety", "stress", etc.

Narcotics/Prescription Drugs/Opium/Heroin/Codeine/Oxycontin: Lethargy, drowsiness. Constricted pupils fail to respond to light. Redness and raw nostrils from inhaling heroin in power form. Scars (tracks) on inner arms or other parts of body, from needle injections. Use or possession of paraphernalia, including syringes, bent spoons, bottle caps, eye droppers, rubber tubing, cotton and needles. Slurred speech. While there may be no readily apparent symptoms of analgesic abuse, it may be indicated by frequent visits to different physicians or dentists for prescriptions to treat pain of non-specific origin. In cases where patient has chronic pain and abuse of medication is suspected, it may be indicated by amounts and frequency taken.

Inhalants: Substance odor on breath and clothes. Runny nose. Watering eyes. Drowsiness or unconsciousness. Poor muscle control. Prefers group activity to being alone. Presence of bags or rags containing dry plastic

cement or other solvent at home, in locker at school or at work. Discarded whipped cream, spray paint or similar chargers (users of nitrous oxide). Small bottles labeled "incense" (users of butyl nitrite).

Solvents, Aerosols, Glue, Petrol: Nitrous Oxide - laughing gas, whippits, nitrous.

Amyl Nitrate - snappers, poppers, pearlers, rushamies. Butyl Nitrate - locker room, bolt, bullet, rush, climax, red gold. Slurred speech, impaired coordination, nausea, vomiting, slowed breathing. Brain damage, pains in the chest, muscles, joints, heart trouble, severe depression, fatigue, loss of appetite, bronchial spasm, sores on nose or mouth, nosebleeds, diarrhea, bizarre or reckless behavior, sudden death, suffocation.

LSD/Hallucinogens: Extremely dilated pupils, (see note below). Warm skin, excessive perspiration and body odor. Distorted sense of sight, hearing, touch; distorted image of self and time perception. Mood and behavior changes, the extent depending on emotional state of the user and environmental conditions Unpredictable flashback episodes even long after withdrawal (although these are rare). Hallucinogenic drugs, which occur both naturally and in synthetic form, distort or disturb sensory input, sometimes to a great degree. Hallucinogens occur naturally in primarily two forms, (peyote) cactus and psilocybin mushrooms. Several chemical varieties have been synthesized, most notably LSD, MDA , STP, and PCP. Hallucinogen usage reached a peak in the United States in the late 1960's, but declined shortly thereafter due to a broader awareness of the detrimental effects of usage. However, a disturbing trend indicating a resurgence in hallucinogen usage by high-school and college age persons nationwide has been acknowledged by law enforcement. With the exception of PCP, all hallucinogens seem to share common effects of use. Any portion of sensory perceptions may be altered to varying degrees. Synesthesia, or the "seeing" of sounds, and the "hearing" of colors, is a common side effect of hallucinogen use. Depersonalization, acute anxiety, and acute depression resulting in suicide have also been noted as a result of hallucinogen use. Note: there are some forms of hallucinogens that are considered downers and constrict pupil diameters.

PCP: Unpredictable behavior; mood may swing from passiveness to violence for no apparent reason. Symptoms of intoxication. Disorientation; agitation and violence if exposed to excessive sensory stimulation. Fear, terror. Rigid muscles. Strange gait. Deadened sensory perception (may experience severe injuries while appearing not to notice). Pupils may appear dilated. Mask like facial appearance. Floating pupils, appear to follow a moving object. Comatose (unresponsive) if large amount consumed. Eyes may be open or closed.

Ecstasy: Confusion, depression, headaches, dizziness (from hangover/after effects), muscle tension, panic attacks, paranoia, possession of pacifiers

(used to stop jaw clenching), lollipops, candy necklaces, mentholated vapor rub, severe anxiety, sore jaw (from clenching teeth after effects), vomiting or nausea (from hangover/after effects)

Signs that your teen could be high on Ecstasy: Blurred vision, rapid eye movement, pupil dilation, chills or sweating, high body temperature, sweating profusely, dehydrated, confusion, faintness, paranoia or severe anxiety, trance-like state, transfixed on sites and sounds, unconscious clenching of the jaw, grinding teeth, very affectionate.

Fighting Substance Abuse

Efforts at fighting substance abuse are dictated by the attitudes of the public and their perceptions of a substance's dangers. These attitudes may be framed by personal experience, media portrayals, news events, or drug education. Most drug enforcement is local, but the international and interstate nature of the drug trade has gradually resulted in more federal involvement. The Drug Enforcement Administration (DEA), created in 1973, is responsible for enforcing federal laws and policies and coordinates information sharing between agencies. Approaches to combating the drug problem have traditionally focused on reducing both supply and demand.

Supply Reduction

The policy of supply reduction aims to decrease the available amount of a drug and make its cost prohibitively high due to the short supply. One strategy for supply reduction is the passage and enforcement of strict laws that govern the prescribing of narcotic drugs. Other strategies are aimed at disrupting drug trafficking. In general, heroin and the other opiates come into the United States from SW and SE Asia, Central America, and Colombia, cocaine from South America, marijuana from domestic sources, Mexico, Colombia, and Jamaica, and designer drugs from domestic clandestine laboratories. The Bureau of Immigration and Customs Enforcement is charged with interdicting smuggled drugs that come in across land borders, the U.S. Coast Guard with interdiction on the seas. Other attempts to disrupt the flow of drugs involve the seizure of clandestine labs, arrest and conviction of drug dealers and middlemen, and international efforts to break up drug cartels and organized crime distribution networks. Asset seizure is a controversial but effective strategy that allows authorities to confiscate any profits derived from or property used in drug trafficking, including cars, houses, and legal fees paid to defense attorneys. Eradication of crops was the strategy behind the spraying of paraquat on Mexican marijuana crops in the 1970s. Some attempts at reducing drug production by creating more lucrative markets for nondrug crops in drug-producing areas also have been made.

Reduction of Demand for Drugs

Attempts to reduce the demand for drugs in the main involve education and treatment. For the most part, responsibility for education falls to local schools and for treatment to local public hospitals or private treatment centers. The federal government gathers statistics and provides funds for treatment and rehabilitation programs. Certain laws are designed to promote education of the public (e.g., those requiring warning labels on cigarettes and alcoholic beverages), and all states have Driving While Intoxicated (DWI) laws. Other drug laws attempt to reduce the demand for drugs by imposing stiff penalties for drug possession, manufacture, and trafficking. Drug testing in the workplace has been a controversial measure, weighing productivity and the safety of the workers and those for whom they are responsible against an individual's right to privacy, but it has resulted in increased public awareness. Some grassroots groups have had a profound effect; MADD (Mothers Against Drunk Driving) was instrumental in raising the drinking ages in many states.

The Hijacked Brain

We do not yet know all the relevant mechanisms, but the evidence suggests that those long-lasting brain changes are responsible for the distortions of cognitive and emotional functioning that characterize addicts, particularly including the compulsion to use drugs that is the essence of addiction.

It is as if drugs have hijacked the brain's natural motivational control circuits, resulting in drug use becoming the sole, or at least the top, motivational priority for the individual.

Thus, the majority of the biomedical community now considers addiction, in its essence, to be a brain disease:

This brain-based view of addiction has generated substantial controversy, particularly among people who seem able to think only in polarized ways.

- Many people erroneously still believe that biological and behavioral explanations are alternative or competing ways to understand phenomena, when in fact they are complementary and integrative.

Modern science has taught that it is much too simplistic to set biology in opposition to behavior or to pit willpower against brain chemistry.

- Addiction involves inseparable biological and behavioral components. It is the quintessential bio-behavioral disorder.

Many people also erroneously still believe that drug addiction is simply a failure of will or of strength of character. Research contradicts that position.

Responsible For Our Recovery

However, the recognition that addiction is a brain disease does not mean that the addict is simply a hapless victim. Addiction begins with the voluntary behavior of using drugs, and addicts must participate in and take some significant responsibility for their recovery.

- Thus, having this brain disease does not absolve the addict of responsibility for his or her behavior.

But it does explain why an addict cannot simply stop using drugs by sheer force of will alone.

The Essence of Addiction

The entire concept of addiction has suffered greatly from imprecision and misconception. In fact, if it were possible, it would be best to start all over with some new, more neutral term.

The confusion comes about in part because of a now archaic distinction between whether specific drugs are “physically” or “psychologically” addicting.

The distinction historically revolved around whether or not dramatic physical withdrawal symptoms occur when an individual stops taking a drug; what we in the field now call “physical dependence.”

- However, 20 years of scientific research has taught that focusing on this physical versus psychological distinction is off the mark and a distraction from the real issues.

From both clinical and policy perspectives, it actually does not matter very much what physical withdrawal symptoms occur.

- Physical dependence is not that important, because even the dramatic withdrawal symptoms of heroin and alcohol addiction can now be easily managed with appropriate medications.
- Even more important, many of the most dangerous and addicting drugs, including methamphetamine and crack cocaine, do not produce very severe physical dependence symptoms upon withdrawal.

What really matters most is whether or not a drug causes what we now know to be the essence of addiction, namely

- The uncontrollable, compulsive drug craving, seeking, and use, even in the face of negative health and social consequences.

This is the crux of how the Institute of Medicine, the American Psychiatric Association, and the American Medical Association define addiction and how we all should use the term.

It is really only this compulsive quality of addiction that matters in the long run to the addict and to his or her family and that should matter to society as a whole.

Thus, the majority of the biomedical community now considers addiction, in its essence, to be a brain disease:

- A condition caused by persistent changes in brain structure and function.

This results in compulsive craving that overwhelms all other motivations and is the root cause of the massive health and social problems associated with drug addiction.

The Altered Brain - A Chronic Illness

Unfortunately, we do not yet have a clear biological or behavioral marker of that transition from voluntary drug use to addiction.

However, a body of scientific evidence is rapidly developing that points to an array of cellular and molecular changes in specific brain circuits. Moreover, many of these brain changes are common to all chemical addictions, and some also are typical of other compulsive behaviors such as pathological overeating.

- Addiction should be understood as a chronic recurring illness.
- Although some addicts do gain full control over their drug use after a single treatment episode, many have relapses.

The complexity of this brain disease is not atypical, because virtually no brain diseases are simply biological in nature and expression. All, including stroke, Alzheimer's disease, schizophrenia, and clinical depression, include some behavioral and social aspects.

What may make addiction seem unique among brain diseases, however, is that it does begin with a clearly voluntary behavior- the initial decision to use drugs. Moreover, not everyone who ever uses drugs goes on to become addicted.

- Individuals differ substantially in how easily and quickly they become addicted and in their preferences for particular substances.

Consistent with the bio-behavioral nature of addiction, these individual differences result from a combination of environmental and biological, particularly genetic, factors.

In fact, estimates are that between 50 and 70 percent of the variability in susceptibility to becoming addicted can be accounted for by genetic factors. Although genetic characteristics may predispose individuals to be more or less susceptible to becoming addicted, genes do not doom one to become an addict.

- Over time the addict loses substantial control over his or her initially voluntary behavior, and it becomes compulsive. For many people these behaviors are truly uncontrollable, just like the behavioral expression of any other brain disease.

Schizophrenics cannot control their hallucinations and delusions. Parkinson's patients cannot control their trembling. Clinically depressed patients cannot voluntarily control their moods.

Thus, once one is addicted, the characteristics of the illness- and the treatment approaches- are not that different from most other brain diseases. No matter how one develops an illness, once one has it, one is in the diseased state and needs treatment.

Environmental Cues

Addictive behaviors do have special characteristics related to the social contexts in which they originate.

- All of the environmental cues surrounding initial drug use and development of the addiction actually become "conditioned" to that drug use and are thus critical to the development and expression of addiction.

Environmental cues are paired in time with an individual's initial drug use experiences and, through classical conditioning, take on conditioned stimulus properties.

- When those cues are present at a later time, they elicit anticipation of a drug experience and thus generate tremendous drug craving.

Cue-induced craving is one of the most frequent causes of drug use relapses, even after long periods of abstinence, independently of whether drugs are available.

The salience of environmental or contextual cues helps explain why reentry to one's community can be so difficult for addicts leaving the controlled

environments of treatment or correctional settings and why aftercare is so essential to successful recovery.

- The person who became addicted in the home environment is constantly exposed to the cues conditioned to his or her initial drug use, such as the neighborhood where he or she hung out, drug-using buddies, or the lamppost where he or she bought drugs.
- Simple exposure to those cues automatically triggers craving and can lead rapidly to relapses.

This is one reason why someone who apparently overcame drug cravings while in prison or residential treatment could quickly revert to drug use upon returning home.

In fact, one of the major goals of drug addiction treatment is to teach addicts how to deal with the cravings caused by inevitable exposure to these conditioned cues.

Implications

It is no wonder addicts cannot simply quit on their own.

They have an illness that requires biomedical treatment.

- People often assume that because addiction begins with a voluntary behavior and is expressed in the form of excess behavior, people should just be able to quit by force of will alone.
- However, it is essential to understand when dealing with addicts that we are dealing with individuals whose brains have been altered by drug use.

They need drug addiction treatment.

We know that, contrary to common belief, very few addicts actually do just stop on their own.

Observing that there are very few heroin addicts in their 50s or 60s, people frequently ask what happened to those who were heroin addicts 30 years ago, assuming that they must have quit on their own.

- However, longitudinal studies find that only a very small fraction actually quit on their own. The rest have either been successfully treated, are currently in maintenance treatment, or (for about half) are dead.

Consider the example of smoking cigarettes: Various studies have found that between 3 and 7 percent of people who try to quit on their own each year actually succeed.

Science has at last convinced the public that depression is not just a lot of sadness; that depressed individuals are in a different brain state and thus require treatment to get their symptoms under control. It is time to recognize that this is also the case for addicts.

The Role of Personal Responsibility

The role of personal responsibility is undiminished but clarified.

Does having a brain disease mean that people who are addicted no longer have any responsibility for their behavior or that they are simply victims of their own genetics and brain chemistry? Of course not.

Addiction begins with the voluntary behavior of drug use, and although genetic characteristics may predispose individuals to be more or less susceptible to becoming addicted, genes do not doom one to become an addict.

This is one major reason why efforts to prevent drug use are so vital to any comprehensive strategy to deal with the nation's drug problems. Initial drug use is a voluntary, and therefore preventable, behavior.

Moreover, as with any illness, behavior becomes a critical part of recovery. At a minimum, one must comply with the treatment regimen, which is harder than it sounds.

- Treatment compliance is the biggest cause of relapses for all chronic illnesses, including asthma, diabetes, hypertension, and addiction.
- Moreover, treatment compliance rates are no worse for addiction than for these other illnesses, ranging from 30 to 50 percent.

Thus, for drug addiction as well as for other chronic diseases, the individual's motivation and behavior are clearly important parts of success in treatment and recovery.

Methods for Preventing Drug Abuse and Addiction

The research-based evidence suggests that prevention efforts be aimed towards reducing risk factors among children and adolescents. The National Institute on Drug Abuse published a booklet called *Preventing Drug Use: A Research-Based Guide*, which outlined 16 prevention principles to help parents, educators, and community leaders develop and implement effective drug prevention programs. Some of the key findings were:

- **Risk factors change with age.** Risk factors within the family have greater impact on a younger child, while association with drug-abusing peers may be a more significant risk factor for an adolescent.
- **Early intervention with risk factors** (e.g., aggressive behavior and poor self-control) **often has a greater impact than later intervention** by changing a child's life path (trajectory) away from problems and toward positive behaviors.
- **Family bonding is the bedrock of the relationship between parents and children.** Bonding can be strengthened through skills training on parent supportiveness of children, parent-child communication, and parental involvement.
- **Parental monitoring and supervision are critical for drug abuse prevention.** These skills can be enhanced with training on rule-setting; techniques for monitoring activities; praise for appropriate behavior; and moderate, consistent discipline that enforces defined family rules.

Some of the most promising trends in prevention aim at school-based programs that integrate social and life skills training to teach kids how to resist drugs. This is a practical training program based on real-life examples that teaches adolescents coping skills, rather than merely giving them facts about drug abuse and the consequent health risks.

The *Life Skills Training program*, developed at Cornell University and used in middle schools, teaches students to develop skills in resisting social pressures to use drugs and encourages anti-drug attitudes in them. The program has shown it can reduce use of tobacco, alcohol, and marijuana among teenagers by as much as 75 percent. Likewise, the message that parents send to their kids about drug use, either overtly or through example, greatly increases the probability of their children using. Karol Kumpfer, Ph.D., president of the Society for Prevention Research, says it is important for parents to set rules and stay connected to their children. "Teens actually listen to their parents. Setting rules about substance abuse has a major effect."

Advice to a Drug Addict

"Since there is glaring evidence all over of the damage that drug taking has done to people both physically and spiritually as well as the adverse and detrimental effects it has on society, I do not wish to emphasise and elaborate on its harms. However, I do request you to take heed and ponder over the following points:

MILLIONS TO BUY HEALTH.

People, everywhere, are found to be spending millions in order to buy health. We have not found anyone spending money to buy ill-health. Millions are spent on health foods, proper diets, exercise equipment and the like to get good health. Not only do people exert themselves physically for good health but, they freely spend their money as well to achieve this.

Therefore, consider whether you are buying health or ill health in spending money on drugs. Be it cocaine, crack, heroin or Marijuana, ill health is being purchased sometimes at an astronomical cost. Is it not foolish to spend money to buy sickness, disease and ill health?

Then consider how ironic it is that the consequences of such expenditure are that you cannot think straight and you indulge in deeds or actions you would never otherwise think of doing in your right frame of mind.

FORTUNES TO BUY RESPECT

Then again, consider the many people who are spending fortunes at the doors of courts to buy their respect, which they deem they lost in the form of defamation of character. Such people will be proud and happy when judgment is given in their favour and it is found that indeed they had been defamed, their good character had been tarnished and a bad image had thus been created.

Thus, when a person successfully sued for defamation of character, he is rewarded a sum of money - the value and worth of his name and character! All this trouble for what? For his respect and dignity back. If it was due to a newspaper article, then he requests a written apology as well.

People spend hundreds of thousands on lavish weddings, birthdays, engagement functions, etc. Presidents spend millions of taxpayers monies on inauguration celebrations. All this for what? Name, respect and honour. So, whether justified or not, money is spent to 'buy' respect and honour.

RESPECT

What does a drug addict do? He spends his money buying disrespect, distrust, shame, humiliation and disgrace. Who respects a drug addict? Who would like to give his daughter in marriage to a drug addict? How many marriages have ended and how many relationships and friendships have been severed due to the same?

As a result of drug addition, you are not trusted at home .. your father hides his cash and your mother hides her jewellery due to the fear that their son would stoop to any level to maintain his drug addiction. Neither are you trusted in the business you work for ... your employer will be wary and perpetually on guard due to the same fear. Is this a respectable life?

If on the other hand you seek employment and your habit is known, then you get a straightforward 'No' as an answer.

TRAUMA

What of the trauma that young and innocent children have to experience and endure, having to contend with a father who has a very, very shameful habit? What of the negative effect this evil addiction has on the education and upbringing of those children? What if they follow suit - take to the same habit and lead the same miserable, unhappy life? What of the stigma that you carry for the rest of your life?

... These are the returns on money squandered in supporting a thriving drug market.

A friend is one who is concerned about a friend's welfare and health. An enemy desires the destruction of a person's life, health, wealth and respect. So can the 'friend' who encourages you or offers you drugs be called a friend? Nay, he is your enemy. He is encouraging you to destroy your happiness, your marriage, your family, your respect ... your life.

MY ADVICE

Whenever you buy drugs, stop.

Look at it carefully

Think. Contemplate. Ponder. Reflect: "If this goes into my system, then what? ... Then the consequences that follow will be harmful, injurious and detrimental to my health; that same health which is a priceless gift, blessing and bounty of Allah Ta'ala and for which I will be accountable on the Day of Qiyaamat.

GRATITUDE

What will be my reply when Allah Ta'ala will say, 'We granted you sound and healthy limbs ... hands, feet, eyes, ears, nose, etc. What have you done to express your gratitude for all these gifts?' And what will be my reply when questioned as to how I spent the wealth given to me by Allah Ta'ala.

Added to this, this drug is most damaging to my respect and dignity in society. I will be denounced and condemned by society because I am another problem to them."

FLUSH IT AWAY

After having pondered in this manner, throw it into the toilet and flush it away ... before it flushes more of your health, wealth and respect away. Insha Allah, within a flush or two of a few drugs, a change of company and by attendance of Deeni programmes your habit will be flushed away.

Finally, say to the friend who is encouraging you to take drugs: 'If you are my friend, then you would not help in the destruction of my body and soul. By offering me drugs, you are increasing my dependence on something most ruinous to my health and respect. Your 'moral support' is imbibing more poison into my system. The friendship you thus express and project is in reality one of enmity. Since such friendship is no friendship ... farewell.'

There is enough information at this website for you to totally recover from any addiction, e.g., alcohol, crank, crack, heroin, opiates, sex and porn addiction, overeating, computer addiction, gambling, or other personal behavior that goes against your own better judgment.

- Bookmark this website, *now*. Make this page your home base for a few months, until you're *totally recovered* from your addiction — a normal, healthy, securely abstinent person.
- If you're drinking/using today, you won't learn much of anything. Come back in the morning or when you aren't under the influence.
- To *quit* your addiction you must first *stop* drinking/using long enough to learn AVRT®.
- Addiction recovery is not a group project; it is an individual responsibility. *You are ultimately on your own.*
- **There are no Rational Recovery groups anywhere in the world!** Your desire for "support" is nothing more, and nothing less, than a plan to get loaded in the absence of support.
- There is nothing in your past, in your genes, in your brain, or in your personality that compels you to drink or use. Using is voluntary, purposeful behavior.
- The *sole cause* of your addiction is a voice in your head that tells you to "Do it!" in a thousand different ways. That is your Addictive Voice.
- Personal problems don't cause addiction; addiction causes your personal problems.

- Self-improvement does not result in addiction recovery. Recovery leads to self-improvement.
- You drink or use because you love to get high. *Admit it!*
- The worst possible way to quit something you love is one-day-at-a-time.
- Stay away from recovery groups of all kinds; you can't possibly recover there. They'll never let you go, and you'll be "in recovery" forever.
- Stay away from shrinks; most substance abuse counselors are members of recovery groups, unable to trust themselves without evening supervision. The rest have never been addicted, and can only guess at what addiction is and what to do about it.
- Your physician can't help you with your addiction; he may even be supporting it. Most refer to recovery groups, to which many of them belong. However, they do have good treatments for *withdrawal*, if you are in danger of seizures.
- Consider that the real truth about addiction and recovery lies in the *exact opposite* of most popular beliefs.
- Recall your original family values, the ideas about right and wrong you knew by the age of 5 or 6. *Those* are your foundation for addiction recovery.
- Your beliefs about God are perfect for now. If you try to create a god of your own understanding, it will only be made in the image of your addiction. Seek God only if you are interested once you are fully recovered.
- AVRT-based recovery is as difficult as you make it, and takes as long as you choose.
- If you won't trust yourself, why should anyone else?

When to seek medical advice

Addiction is a chronic relapsing disorder, meaning you tend to fall back into old addictive behaviors, including drug use, even after treatment. The sooner you seek help, the greater your chances are for a long-term recovery. If you're initially reluctant to approach a doctor, help lines or hot lines may be a good place to start to learn about treatment. You can find these lines listed in the phone book or on the Internet.

Because denial is often a characteristic of addiction, many people who are addicted to or who abuse drugs won't seek medical treatment on their own. Family members, friends or co-workers may need to persuade the user to

undergo screening for drug addiction. Breaking a drug addiction may involve counseling, an outpatient treatment program or residential treatment.

Principles of Drug Addiction Treatment

Preface

Three decades of scientific research and clinical practice have yielded a variety of effective approaches to drug addiction treatment.

Drug addiction is a complex illness. It is characterized by compulsive, at times uncontrollable drug craving, seeking, and use that persist even in the face of extremely negative consequences. For many people, drug addiction becomes chronic, with relapses possible even after long periods of abstinence.

The path to drug addiction begins with the act of taking drugs. Over time, a person's ability to choose not to take drugs can be compromised. Drug seeking becomes compulsive, in large part as a result of the effects of prolonged drug use on brain functioning and, thus, on behavior.

The compulsion to use drugs can take over the individual's life. Addiction often involves not only compulsive drug taking but also a wide range of dysfunctional behaviors that can interfere with normal functioning in the family, the workplace, and the broader community. Addiction also can place people at increased risk for a wide variety of other illnesses. These illnesses can be brought on by behaviors, such as poor living and health habits, that often accompany life as an addict, or because of toxic effects of the drugs themselves.

Because addiction has so many dimensions and disrupts so many aspects of an individual's life, treatment for this illness is never simple. Drug treatment must help the individual stop using drugs and maintain a drug-free lifestyle, while achieving productive functioning in the family, at work, and in society. Effective drug abuse and addiction treatment programs typically incorporate many components, each directed to a particular aspect of the illness and its consequences.

Three decades of scientific research and clinical practice have yielded a variety of effective approaches to drug addiction treatment. Extensive data document that drug addiction treatment is as effective as are treatments for most other similarly chronic medical conditions. In spite of scientific evidence that establishes the effectiveness of drug abuse treatment, many people believe that treatment is ineffective. In part, this is because of unrealistic expectations. Many people equate addiction with simply using drugs and therefore expect that addiction should be cured quickly, and if it is not, treatment is a failure. In reality, because addiction is a chronic disorder, the

ultimate goal of long-term abstinence often requires sustained and repeated treatment episodes.

Of course, not all drug abuse treatment is equally effective. Research also has revealed a set of overarching principles that characterize the most effective drug abuse and addiction treatments and their implementation.

Effective Treatments

1. **No single treatment is appropriate for all individuals.** Matching treatment settings, interventions, and services to each individual's particular problems and needs is critical to his or her ultimate success in returning to productive functioning in the family, workplace, and society.
2. **Treatment needs to be readily available.** Because individuals who are addicted to drugs may be uncertain about entering treatment, taking advantage of opportunities when they are ready for treatment is crucial. Potential treatment applicants can be lost if treatment is not immediately available or is not readily accessible.
3. **Effective treatment attends to multiple needs of the individual, not just his or her drug use.** To be effective, treatment must address the individual's drug use and any associated medical, psychological, social, vocational, and legal problems.
4. **An individual's treatment and services plan must be assessed continually and modified as necessary to ensure that the plan meets the person's changing needs.** A patient may require varying combinations of services and treatment components during the course of treatment and recovery. In addition to counseling or psychotherapy, a patient at times may require medication, other medical services, family therapy, parenting instruction, vocational rehabilitation, and social and legal services. It is critical that the treatment approach be appropriate to the individual's age, gender, ethnicity, and culture.
5. **Remaining in treatment for an adequate period of time is critical for treatment effectiveness.** The appropriate duration for an individual depends on his or her problems and needs (see pages 11-49). Research indicates that for most patients, the threshold of significant improvement is reached at about 3 months in treatment. After this threshold is reached, additional treatment can produce further progress toward recovery. Because people often leave treatment prematurely, programs should include strategies to engage and keep patients in treatment.
6. **Counseling (individual and/or group) and other behavioral therapies are critical components of effective treatment for addiction.** In therapy, patients address issues of motivation, build skills to resist drug use, replace drug-using activities with constructive and rewarding nondrug-using activities, and improve problem-solving

abilities. Behavioral therapy also facilitates interpersonal relationships and the individual's ability to function in the family and community.

7. **Medications are an important element of treatment for many patients, especially when combined with counseling and other behavioral therapies.** Methadone and levo-alpha-acetylmethadol (LAAM) are very effective in helping individuals addicted to heroin or other opiates stabilize their lives and reduce their illicit drug use. Naltrexone is also an effective medication for some opiate addicts and some patients with co-occurring alcohol dependence. For persons addicted to nicotine, a nicotine replacement product (such as patches or gum) or an oral medication (such as bupropion) can be an effective component of treatment. For patients with mental disorders, both behavioral treatments and medications can be critically important.
8. **Addicted or drug-abusing individuals with coexisting mental disorders should have both disorders treated in an integrated way.** Because addictive disorders and mental disorders often occur in the same individual, patients presenting for either condition should be assessed and treated for the co-occurrence of the other type of disorder.
9. **Medical detoxification is only the first stage of addiction treatment and by itself does little to change long-term drug use.** Medical detoxification safely manages the acute physical symptoms of withdrawal associated with stopping drug use. While detoxification alone is rarely sufficient to help addicts achieve long-term abstinence, for some individuals it is a strongly indicated precursor to effective drug addiction treatment .
10. **Treatment does not need to be voluntary to be effective.** Strong motivation can facilitate the treatment process. Sanctions or enticements in the family, employment setting, or criminal justice system can increase significantly both treatment entry and retention rates and the success of drug treatment interventions.
11. **Possible drug use during treatment must be monitored continuously.** Lapses to drug use can occur during treatment. The objective monitoring of a patient's drug and alcohol use during treatment, such as through urinalysis or other tests, can help the patient withstand urges to use drugs. Such monitoring also can provide early evidence of drug use so that the individual's treatment plan can be adjusted. Feedback to patients who test positive for illicit drug use is an important element of monitoring.
12. **Treatment programs should provide assessment for HIV/AIDS, hepatitis B and C, tuberculosis and other infectious diseases, and counseling to help patients modify or change behaviors that place themselves or others at risk of infection.** Counseling can help patients avoid high-risk behavior. Counseling also can help people who are already infected manage their illness.

13. **Recovery from drug addiction can be a long-term process and frequently requires multiple episodes of treatment.** As with other chronic illnesses, relapses to drug use can occur during or after successful treatment episodes. Addicted individuals may require prolonged treatment and multiple episodes of treatment to achieve long-term abstinence and fully restored functioning. Participation in self-help support programs during and following treatment often is helpful in maintaining abstinence.