Addictions and Substance Abuse

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There are two types of addictions; substance based addictions, and behavioral addictions. Substance based addictions include alcohol addiction and substance abuse, while behavioral addictions include things like pornography

addiction, gaming addiction, internet addiction, sex addiction, food addiction, work addiction, and shopping addiction. While behavioral addictions do not involve a foreign substance introduced into the system, research points to similar physiological pathways and mechanisms for both types of addictions.

Basic Terminology

Addiction. Another term for substance dependence.

Adverse Consequences. The substance use is continues despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance.

Continuation Despite Adverse Consequences. Important social, occupational or recreational activities are given up or reduced because of the substance use

Intoxication. Our physiological reaction to ingested substances (i.e. getting drunk or high).

Loss of Control. The substance is often taken in larger amounts or over a longer period than was intended. Persistent desire or unsuccessful efforts to cut down or control use.

Preoccupation. A great deal of time is spent in activities necessary to obtain the substance, use of the substance to recover from its effects.

Substance abuse. Defined in terms of how significantly substance use interferes with the users life. If substances disrupt your education, job, or relationships with others, and/or put individuals in physically dangerous situations, and/or if they have related legal problems they would be considered a drug abuser.

Substance dependence. A maladaptive pattern of substance use in which people organize their lives around a drug, possibly building a tolerance to it or experiencing withdrawal symptoms when they stop taking it, or both. Leads to clinically significant impairment or distress.

Substance Use. Ingestion of psychoactive substances in moderate amounts that does not significantly interfere with social, educational, or occupational functioning.

This section gives brief definitions for the terminology commonly used in this area, as well as diagnosis criteria from DSM IV.

Tolerance. A need for markedly increased amounts of the substance to achieve intoxication-desired effect. Markedly diminished effect with continued use of the same amount of the substance.

Withdrawal. The body and minds reaction to the terminated use of the substance that the body is addicted too. This can in some cases be lethal while in others lead to another relapse.

Causes

Substance abuse can affect anyone. There are factors, however, which increase the risk of becoming addicted. These risk factors include:

- Genetic predisposition
- Environment and exposure to substance
- Positive reinforcement
- Negative reinforcement
- Chaotic home environment
- Inappropriately aggressive or shy behavior in the classroom
- Poor social coping skills
- Poor school performance
- Association with a deviant peer group
- Perception of approval of drug use behavior
- Hereditary factors
- Bad family examples

Treatment and Prognosis

We know that both genetics and environment play a role in addiction to substances, but the extent to which each has an effect is not entirely understood. According to a study done on over 20,000 individuals, more than 50% of those who met the medical definition of a drug abuser also suffered from one or more mental disorders at some point in their life.

Addiction to Substances

Alcohol (Barlow & Durand, 2005).

Alcoholism and alcohol abuse are due to many interconnected factors, including genetics, how you were raised, your social environment, and your emotional health. Some racial groups, such as American Indians and Native Alaskans, are more at risk than others of developing alcohol addiction. People who have a family history of alcoholism or who associate closely with heavy drinkers are more likely to develop drinking problems. Finally, those who suffer from a mental health problem such as anxiety, depression, or bipolar disorder are also particularly at risk, because alcohol may be used to self-medicate.

DSM-IV-TR Criteria for Alcohol Intoxication
A. Recent ingestion of alcohol.
B. Clinically significant maladaptive behavioral or psychological changes (e.g., inappropriate sexual or aggressive behavior, mood lability, impaired judgment, impaired social or occupational functioning) that developed during or shortly after, alcohol use.
C. One or more of the following signs, developing during or shortly after, alcohol use: 1. Slurred speech 2. Incoordination 3. Unsteady gait 4. Nystagmus 5. Impairment in attention or memory 6. Stupor or coma. D. The symptoms are not due to a general medical condition and are not better accounted for by another mental disorder.

Signs and symptoms of alcoholism

Tolerance: The 1st major warning sign of alcoholism

Do you have to drink a lot more than you used to in order to get buzzed or to feel relaxed? Can you drink more than other people without getting drunk? These are the signs of tolerance, which can be an early warning sign of alcoholism. Tolerance means that, over time, you need more and more alcohol to feel the same effects.

Withdrawal: The 2nd Major warning sign of alcoholism

Do you need a drink to steady the shakes in the morning? Drinking to relieve or avoid withdrawal symptoms is a sign of alcoholism and a huge red flag. When you drink heavily, your body gets used to the alcohol and experiences withdrawal symptoms if it's taken away.

In severe cases, withdrawal from alcohol can also involve hallucinations, confusion, seizures, fever, and agitation. These symptoms can be dangerous, so talk to your doctor if you are a heavy drinker and want to quit.

Denial is one of the biggest obstacles to getting help for alcohol abuse and alcoholism. The desire to drink is so strong that the mind finds many ways to rationalize drinking, even when the consequences are obvious. By keeping you from looking honestly at your behavior and its negative effects, denial also exacerbates alcohol-related problems with work, finances, and relationships.

Alcoholics may deny it their problem by:

- Drastically underestimating how much they drink
- Downplaying the negative consequences of drinking in their life
- Complaining that family and friends are exaggerating the problem
- Blaming their drinking or drinking-related problems on others

Five Myths About Alcoholism and Alcohol Abuse

Myth #1: I can stop whenever I want

Maybe you can; more likely, you can't. Either way, it's just an excuse to keep drinking. The truth is you do not want to stop. Telling yourself you can quit makes you feel in control, despite all evidence to the contrary and no matter the damage it's doing.

Myth #2: my drinking is my problem. I'm the one it hurts, so no one has the right to tell me to stop.

It's true that the decision to quit drinking is up to you. But you are lying to yourself if you think that you are the only one it hurts. Alcoholism affects everyone around you especially your family and loved ones.

Myth#3: I don't drink every day, so I can't be an alcoholic OR I only drink wine or beer, so I can't be an alcoholic.

Alcoholism is NOT defined by what you drink, when you drink or even how often you drink, rather it's the EFFECTS of your drinking that define a problem. If your drinking is causing problems in your home or work life, you have a drinking problem. Whether you drink daily or on the weekends, down shots of tequila or stick to wine, drink three bottles of beers a day or three bottles of whiskey.

Myth#4: I'm not an alcoholic because I have a job and I'm doing okay.

You don't have to be homeless and drinking out of a brown paper bag to be an alcoholic. Many alcoholics are able to hold down jobs, get through school, and provide for their families. Some are even able to excel. But just because you're a high functioning alcoholic doesn't mean you're not putting yourself in danger.

Myth #5: Drinking is not a "real" addiction like drug abuse.

This myth is just silly because alcohol is a drug plain and simple. It's every bit as damaging as a drug and has even been outlawed in the United states in the past.

Helping a loved one with Alcoholism

If someone you know has a drinking problem, you may be struggling with a number of painful emotions, including shame, fear, anger, and self-blame. The problem may be so overwhelming that it seems easier to ignore it and pretend that nothing is wrong. But in the long run denying it will be more damaging to you, other family members, and the person with the drinking problem.

What not to do:

- Don't attempt to punish, threaten, bribe, or preach.
- Don't try to be a martyr.
- Avoid emotional appeals that may only increase feelings of guilt and the compulsion to drink.
- Don't cover up or make excuses for the alcoholic or problem drinkier or shield them from the realistic consequences of their behavior.
- Don't take their responsibilities, leaving them with no sense of importance or dignity
- Don't argue with the person when they are impaired.
- Don't try to drink along with the problem drinker (no brainer kids)
- Above all, don't feel guilty or responsible for another's behavior.

Adapted from: national clearing house for Alcohol & Drug Information.

Smoking Addiction (Glcuk, 2008; Orenstien, 2011).

Definition. Tobacco addiction refers to the physical and psychological dependency created by smoking cigarettes, cigars, or pipes. People who chew tobacco can also become addicted to tobacco. When a person takes a drag of a cigarette, they are introducing more than 4,000 chemicals into their body. Of these, nicotine is the highly addictive substance.

DSM-IV-TR Criteria for Nicotine Withdrawal
A. Daily use of nicotine for at least several weeks. B. Abrupt cessation of nicotine use, or deduction in the amount of nicotine used, followed within 24 hours by four (or more) of the following signs:

(1) dysphoric or depressed mood

(2) insomnia

(3) irritability, frustration, or anger

(4) anxiety

(5) difficulty concentrating

(6) restlessness

(7) decreased heart rate

(8) increased appetite or weight gain

C. The symptoms in Criterion B cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

D. The symptoms are not due to a general medical condition and are not better accounted for by another mental disorder.

Statistics

- Worldwide, 1 in 10 people are smokers
- On average, smokers die 13 to 14 years earlier than non-smokers
- Approximately 70% of smokers want to quit. About 40% try to quit every year.
- Of those who try to quit about 7% stay off nicotine for more than a year. The vast majority do not make it even a week.
- The highest rate of smoking is found in native American ethnic group at 34.4% and the lowest is the Asian community at 9.6%
- About one in five high school students smoke, although this number is falling.
- About half of those who start smoking as an adolescent will continue to smoke for 15 to 20 years.
- The cigarette industry spends about 34 Million dollars a day on advertising and promotion.

Treatment.

Medication. A variety of formulations of nicotine replacement therapies now exist-including the patch,

spray, gum, and lozenges-that are available over the counter. In addition, two prescription medications have been FDA-approved for tobacco addiction: Bupropion and varenicline. They have different relapse mechanisms of action in the brain, but both help prevent relapse in people trying to quit. Each of the above medications is recommended for use in combination with behavioral treatments, including group and individual therapies, as well as telephone quit lines.

Counseling. Therapy, support groups, and smoking cessation programs offer assistance to those wishing to quit smoking. Many people need help to quit smoking. A number of telephone help lines are available for people giving up nicotine, such as the National Cancer Institute's 800-QUITNOW.

Definition and symptoms

DSM-IV-TR Criteria for Substance Intoxication
A. The development of a reversible substance-specific syndrome due to recent ingestion of (or exposure to) a substance. Note: Different substances may produce similar or identical syndromes.
B. Clinically significant maladaptive behavioral or psychological changes that are due to the effect of the substance on the central nervous system (e.g., belligerence, mood liability, cognitive impairment, impaired judgment, impaired social or occupational functioning) and develop during or shortly after use of the substance.
C. The symptoms are not due to a general medical condition and are not better accounted for by another mental disorder.

DSM-IV-TR Criteria for Substance Abuse
A. A maladaptive pattern of substance use leading to clinically significant impairment or distress, as manifested by one (or more) of the following during the 12-month period. 1. Recurrent substance use resulting in a failure to fulfill major role obligations at work, school, or home (e.g., repeated absences or poor work performance related to substance use; substance-related absences, suspensions, or expulsions from school; neglect of children or household). 2. Recurrent substance use in situations in which it is physically hazardous (e.g., driving an automobile or operating a machine when impaired by substance use). 3. Recurrent substance-related legal problems (e.g., arrests for substance-related disorderly conduct). 4. Continued substance use despite having persistent or recurrent social or interpersonal problems caused or exacerbated b the effects of the substance (e.g., argument with spouse about consequences of intoxication, physical fights).
B. The symptoms he never met the criteria for Substance Dependence for this class of substance.

DSM-IV-TR Criteria for Substance Dependence
A maladaptive pattern of substance use, leading to clinically significant impairment or distress, as manifested by three (or more) of the following, occurring at any time in the same 12-month period: 1. Tolerance, as defined by either of the following: a. A need for markedly increased amounts of the substace to achieve intoxication or desired effect b. Markedly diminished effect with continued use of the same amount of the substance.

2. Withdrawal, as manifested by either of the following:
   a. The characteristic withdrawal syndrome for the substance (refer to Criteria A and B of the critera sets for Withdrawal from the specific substances)
   b. The same (or a closely related) substance is taken to relieve or avoid withdrawal symptoms
3. The substance is often taken in larger amounts or over a longer period than was intended
4. There is a persistent desire or unsuccessful efforts to cut down or control substance use
5. A great deal of time is spent in activities necessary to obtain the substance (e.g., visiting multiple doctors or driving long distances), use the substance (e.g., chain smoking) or recover from its effects
6. Important social, occupational, or recreational activities are given up or reduced because of substance use
7. The substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance (e.g., current cocaine use despite recognition of cocaine-induced depression, or continued drinking despite recognition that an ulcer was made worse by alcohol consumption)

Stimulants (Barlow & Durand, 2005).

Amphetamine use disorders. Amphetamines were originally developed as a treatment for asthma and as a nasal decongestant. They have also been prescribed for weight loss, for people with narcolepsy, and for children with attention deficit/hyperactivity disorder (Ritalin).

Common amphetamine drugs. Commonly abused amphetamines include methamphetamine, ecstasy, ice, as well as prescription drugs like Ritalin.

Physiology. Amphetamines stimulate the central nervous system by enhancing the activity of norepinephrine and dopamine. Too much dopamine and norepinephrine can lead to hallucinations and delusions.

Side-effects. Physical effects of amphetamine can include hyperactivity, dilated pupils, vasoconstriction, blood shot eyes, flushing, restlessness, dry mouth, bruxism,

headache, tachycardia, bradycardia, tachypnea, hypertension, hypotension, fever,

diaphoresis, diarrhea, constipation, blurred

vision, aphasia, dizziness, twitching, insomnia, numbness, palpitations, arrhythmias, tremors, dry and/or itchy

skin, acne, pallor, convulsions, and with chronic and/or high doses, seizure, stroke, coma, heart attack and may result in death. Psychological effects can include euphoria, anxiety, increased libido, alertness, concentration,

energy, self-esteem, self-confidence, sociability, irritability, aggression, psychosomatic disorders, psychomotor

agitation, grandiosity, repetitive and obsessive behaviors, paranoia, and with chronic and/or high doses, amphetamine psychosis can occur. Occasionally this psychosis can occur at therapeutic doses during chronic therapy as a treatment

emergent side effect. Withdrawal symptoms of amphetamine consist primarily of mental fatigue, mental depression and increased appetite. Symptoms may last for days with occasional use and weeks or months with chronic use, with severity dependent on the length of time and the amount of amphetamine used. Withdrawal symptoms may also include anxiety, agitation, excessive sleep, vivid or lucid dreams, deep REM sleep and suicidal ideation.

Cocaine. This substance is derived from the the leaves of the coca plant. Latin Americans have chewed coca leaves for centuries to get relief from hunger and fatigue. As late as the 1980's cocain was still considered a wonder drug with no serious side effects and no addictive properties. Dependence does not resemble that of many other drugs early on. Typically people find that they have a growing inability to resist taking more.

Statisitcs. White males account for about a third of all admissions to emergency rooms for cocaine related problems (29%), followed by Black males (23%), White females (18%), and Black females (12%). Approximately 17% of cocaine users have also used crack cocaine.

DSM-IV-TR Criteria for Cocaine Intoxication
A. Recent use of cocaine. B. Clinically significant maladaptive behavioral or psychological changes (e.g.,euphoria or affective blunting; changes in sociability; hypervigilance; interpersonal sensitivity; anxiety, tension, or anger; stereotyped behaviors; impaired judgment; or impaired social or occupational functioning) that developed during, or shortly after, use of cocaine. C. Two (or more) of the following, developing during, or shortly after, cocaine use: (1) tachycardia or bradycardia (2) pupillary dilation (3) elevated or lowered blood pressure (4) perspiration or chills (5) nausea or vomiting (6) evidence of weight loss (7) psychomotor agitation or retardation (8) muscular weakness, respiratory depression, chest pain, or cardiac arrhythmias (9) confusion, seizures, dyskinesias, dystonias, or coma

D. The symptoms are not due to a general medical condition and are not better accounted for by another mental disorder.

Physiology. Cocaine works primarily on the dopamine system by blocking the reuptake of dopamine in the brain. . Chronic cocaine intake causes brain cells to adapt functionally to strong imbalances of transmitter levels in order to compensate extremes. Thus, receptors disappear from the cell surface or reappear on it, resulting more or less in an "off" or "working mode" respectively, or they change their susceptibility for binding partners (ligands) – mechanisms called down-/upregulation. However, studies suggest cocaine abusers do not show normal age-related loss of striatal dopamine transporter (DAT) sites, suggesting cocaine has neuroprotective properties for dopamine neurons. The experience of insatiable hunger, aches, insomnia/oversleeping, lethargy, and persistent runny nose are often described as very unpleasant. Depression with suicidal ideation may develop in very heavy users. Finally, a loss of vesicular monoamine transporters, neurofilament proteins, and other morphological changes appear to indicate a long term damage of dopamine neurons. All these effects contribute a rise in tolerance thus requiring a larger dosage to achieve the same effect.

The lack of normal amounts of serotonin and dopamine in the brain is the cause of the dysphoria and depression felt after the initial high. Physical withdrawal is not dangerous, and is in fact restorative. Physiological changes caused by cocaine withdrawal include vivid and unpleasant dreams, insomnia or hypersomnia, increased appetite and psychomotor retardation or agitation.

Effects. Cocaine increases alertness, feelings of well-being and euphoria, energy and motor activity, feelings of competence and sexuality. Athletic performance may be enhanced in sports where sustained attention and endurance is required.

Side-effects. Anxiety, paranoia and restlessness can also occur, especially during the comedown. With excessive dosage, tremors, convulsions and increased body temperature are observed. With excessive or prolonged use, the drug can cause itching, tachycardia, hallucinations, and paranoid delusions. Overdoses cause hyperthermia and a marked elevation of blood pressure, which can be life-threatening

Physical side effects from chronic smoking of cocaine include hemoptysis, bronchospasm, pruritus, fever, diffuse alveolar infiltrates without effusions, pulmonary and systemic eosinophilia, chest pain, lung trauma, sore throat, asthma, hoarse voice, dyspnea(shortness of breath), and an aching, flu-like syndrome. Cocaine constricts blood vessels, dilates pupils, and increases body temperature, heart rate, and blood pressure. It can also cause headaches and

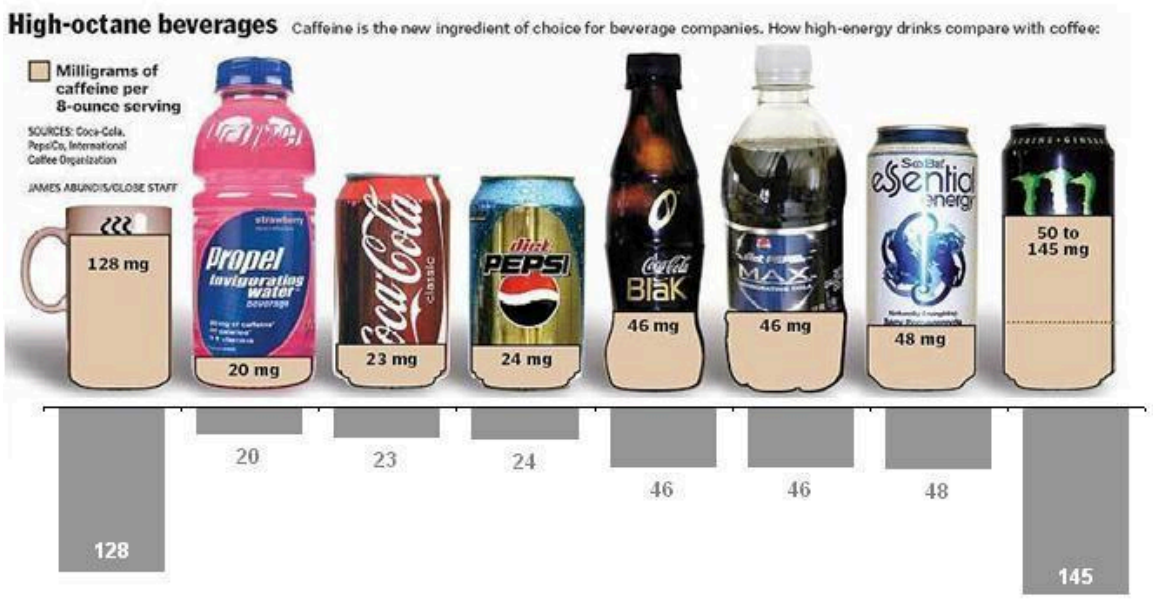
gastrointestinal complications such as abdominal pain and nausea. A common but untrue belief is that the smoking of cocaine chemically breaks down tooth enamel and causes tooth decay. However, cocaine does often cause involuntary tooth grinding, known as bruxism, which can deteriorate tooth enamel and lead to gingivitis. Additionally, stimulants like cocaine, methamphetamine, and even caffeine cause dehydration and dry mouth. Since saliva is an important mechanism in maintaining one's oral pH level, chronic stimulant abusers who do not hydrate sufficiently may experience demineralization of their teeth due to the pH of the tooth surface dropping too low (below 5.5).

Chronic intranasal usage can degrade the cartilage separating the nostrils (the septum nasi), leading eventually to its complete disappearance. Due to the absorption of the cocaine from cocaine hydrochloride, the remaining hydrochloride forms a dilute hydrochloric acid.

Cocaine may also greatly increase this risk of developing rare autoimmune or connective tissue diseases such as lupus, Goodpasture's disease, vasculitis, glomerulonephritis, Stevens–Johnson syndrome and other diseases. It can also cause a wide array of kidney diseases and renal failure.

Cocaine misuse doubles both the risks of hemorrhagic and ischemic strokes, as well as increases the risk of other infarctions, such as myocardial infarction.

Caffeine use disorder. Caffeine is the most common of the psychoactive substances. It is generally regarded as safe (GRAS) by the food and drug administration since typical doses are only 500mg and the toxic level is 10g. Little research has been conducted on the effects of caffeine and child development, and there may be cause for concern. For more information on issues with caffeine and child/youth development visit http://www.ncsf.org/enew/articles/articles-CaffeineConsumptionChildrenAdolescents.aspx.



Statisics. Caffeine is used regularly by 90% of all Americans. Recent research shows 90% of middle school and highschool students are also regularly consuming caffeine.

DSM-IV-TR Criteria for Caffeine Intoxication

A. Recent consumption of caffeine, usually in excess of 250 mg (e.g., more than 2-3 cups of coffee).

B. Five (or more) of the following signs, developing during, or shortly after, caffeine use:

1. restlessness
2. nervousness
3. excitement
4. insomnia
5. flushed face
6. diuresis
7. gastrointestinal disturbance
8. muscle twitching
9. rambling flow of thought and speech
10. tachycardia or cardiac arrhythmia
11. periods of in inexhaustibility
12. psychomotor agitation

C. The symptoms in criterion B cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

The symptoms are not due to a general medical condition and are not better accounted for by another mental disorder (e.g., an anxiety disorder).

Effects. Caffeine works by stimulating the central nervous system (CNS), heart, muscles, and the centers that control blood pressure .

Side-effects. Caffeine can raise blood pressure, but might not have this effect in people who use it all the time. Caffeine can also act like a "water pill" that increases urine flow. But again, it may not have this effect in people who use caffeine regularly. Also, drinking caffeine during moderate exercise is not likely to cause dehydration.

Caffeine is **LIKELY SAFE** for most adults when used appropriately. Caffeine can cause insomnia, nervousness and restlessness, stomach irritation, nausea and vomiting, increased heart rate and respiration, and other

side effects. Caffeine can make sleep disorders in patients with acquired immunodeficiency syndrome (AIDS) worse. Larger doses might cause headache, anxiety, agitation, chest pain, and ringing in the ears.

Pregnancy and breast-feeding. Caffeine is **POSSIBLY SAFE** in pregnant or breast-feeding women in daily amounts of less than 200 mg. This is about the amount in 1-2 cups of coffee. Consuming larger amounts during pregnancy might increase the chance of miscarriage and other problems. Caffeine passes into breast milk, so nursing mothers should closely monitor caffeine intake to make sure it is on the low side. Caffeine in large amounts is **POSSIBLY UNSAFE** during breast-feeding. Caffeine can cause sleep disturbances, irritability, and increased bowel activity in breast-fed infants.

Anxiety disorders. Caffeine might make these conditions worse. Use with care.

Bipolar disorder. Too much caffeine might make this condition worse. In one case, a 36-year-old man with controlled bipolar disorder was hospitalized with symptoms of mania after drinking several cans of an energy drink containing caffeine, taurine, inositol, and other ingredients (Red Bull Energy Drink) over a period of 4 days. Use caffeine with care and in low amounts if you have bipolar disorder.

Bleeding disorders. There is concern that caffeine might aggravate bleeding disorders. Use caffeine with care if you have a bleeding disorder.

Heart conditions. Caffeine can cause irregular heartbeat in sensitive people. Use caffeine with caution.

Diabetes. Some research suggests that caffeine may affect the way the body uses sugar and might worsen diabetes. But the effect of caffeinated beverages and herbs has not been studied. If you have diabetes, use caffeine with caution.

Diarrhea. Caffeine, especially when taken in large amounts, can worsen diarrhea.

Irritable bowel syndrome (IBS). Caffeine, especially when taken in large amounts, can worsen diarrhea and might worsen symptoms of IBS.

Glaucoma. Caffeine increases the pressure inside the eye. The increase occurs within 30 minutes and lasts for at least 90 minutes after drinking caffeinated beverages.

High blood pressure. Consuming caffeine might increase blood pressure in people with high blood pressure. However, this effect might be less in people who use caffeine regularly.

Weak bones (osteoporosis). Caffeine can increase the amount of calcium that is flushed out in the urine. If you have osteoporosis or low bone density, caffeine should be limited to less than 300 mg per day (approximately 2-3 cups of coffee). It's also a good idea to get extra calcium to make up for the amount that may be lost in the urine. Older

women with an inherited disorder that affects the way vitamin D is used should use caffeine with caution. Vitamin D works with calcium to build bones.

Opioid Use Disorder (Barlow & Durand, 2005).

The word opiate refers to the natural chemicals in the opium poppy that have anarcotic effect. The broader term opiods refers to the family of substances that includes natural opiates, synthetic variations, and comparable substances that occur naturally in the brain. This includes the most commonly abused prescription drugs.

DSM-IV-TR Criteria for Opioid Intoxication

A. Recent use of an opioid.

B. Clinicaly significant maladaptive behavioral or psychological changes (e.g., initial euphoria followed by apathy, dysphoria, psychomotor agitation or retardation, impaired judgment, or impaired social or occupational functioning) that developed during, or shortly after, opioid use.

C. Pupillary constriction (or pupillary dilation due to anoxia from severe overdose) and one (or more) of the following signs, developing during or shortly after, opioid use:

1. Drowsiness or coma
2. Slurred speech
3. Impairment in attention or memory

D. The symptoms are not due to a general medical condition and are not better accounted for by another mental disorder.

Effects. Effects of opiods include euphoria, drowsiness, analgesia, and slowed breathing.

Side-effects. Side effects include nausea, constipation, drowsiness, and urinary retention. The most dangerous side effect is respiratory depression; high doses can depressed breathing enough to cause death. Since most opioids are taken intravenously opioid users are at a much higher risk for HIV infection.

Hallucinogens(Barlow & Durand, 2005).

DSM-IV-TR Criteria for Cannabis Intoxication

A. Recent use of cannabis

B. Clinically significant maladaptive behavioral or psychological changes (e.g., impaired motot coordination, euphoria, anxiety, sensation of slowed time, impaired judgment, social withdrawal) that developed during or shortly after, cannabis use.

C. Two (or more) of the following signs, developing within 2 hours of cannabis use:

1. Conjunctival injection
2. Increased appetite.
3. Dry mouth
4. Tachycardia

D. The symptoms are not due to a general medical condition and are not better accounted for by another mental disorder.

Effects. Dreamlike state, mood swings, sense of time standing still and heightened sensory experiences.

Side-effects. The feelings of well-being produced by small doses can change to paranoia, hallucinations, and dizziness when larger doses are taken. Research on frequent marijuana users suggests that impairment of memory, concentration, motivation, self-esteem, relationships with others, an employment or common negative outcomes of long-term use.

in the 1940's it remained in the laboratories until it the 1960's when it began to be distributed illegally. Other hallucinogenic substances include psilocybin (found in certain species of mushrooms); lysergic acid amide (found in the seeds of the morning glory plant); dimethyltryptamin (found in the bark of the Virola tree), and mescaline (found in the peyote cactus plant).

DSM-IV-TR Criteria for Hallucinogen Intoxication

A. Recent us of a hallucinogen.

B. Clinically significant maladaptive behavioral or psychological changes (e.g., marked anxiety or depression, ideas of reference, fear of losing one's mind, paranoid ideation, impaired judgment, or impaired social or occupational functioning) that developed during, or shortly after, hallucinogen use.

C. Perceptual changes occurring in a state of full wakefulness and alertness (e.g., subjective intensification of perceptions, depersonalization, derealization, illusions, hallucinations, synesthesia) that developed during, or shortly after, hallucinogen use.

D. Two (or more) of the following signs developing during , or shortly after, hallucinogen use:

1. Pupillary dilation
2. Tachycardia
3. Sweating
4. Palpitations
5. Blurring of vision
6. Tremors
7. Incoordination

E. The symptoms are not due to a general medical condition and are not better accounted for by another mental disorder.

Effects. LSD can cause pupil dilation, reduced or increased appetite, and wakefulness. Other physical reactions to LSD are highly variable and nonspecific, some of which may be secondary to the psychological effects of LSD. Among the reported symptoms are numbness, weakness, nausea, hypothermia or hyperthermia, elevated blood sugar, goose bumps, heart rate increase, jaw clenching, perspiration, saliva production, mucus production, sleeplessness, hyperreflexia, and tremors. Some users, including Albert Hofmann, report a strong metallic taste for the duration of the effects. LSD's psychological effects (colloquially called a "trip") vary greatly from person to person, depending on factors such as previous experiences, state of mind and environment, as well as dose strength. They also vary from one trip to another, and even as time passes during a single trip. An LSD trip can have long-term

psychoemotional effects; some users cite the LSD experience as causing significant changes in their personality and life perspective. Some psychological effects may include an experience of radiant colors, objects and surfaces appearing to ripple or "breathe", colored patterns behind the closed eyelids (eidetic imagery), an altered sense of time (time seems to be stretching, repeating itself, changing speed or stopping), crawling geometric patterns overlaying walls and other objects, morphing objects, a sense that one's thoughts are spiraling into themselves, loss of a sense of identity or the ego (known as "ego death"), and other powerful psycho-physical reactions. Many users experience a dissolution between themselves and the "outside world". This unitive quality may play a role in the spiritual and religious aspects of LSD. The drug sometimes leads to disintegration or restructuring of the user's historical personality and creates a mental state that some users report allows them to have more choice regarding the nature of their own personality.

Side-effects. There is some indication that LSD may trigger a dissociative fugue state in individuals who are taking certain classes of antidepressants such as lithium salts and tricyclics. In such a state, the user has an impulse to wander, and may not be aware of his or her actions, which can lead to physical injury. LSD may trigger panic attacks or feelings of extreme anxiety, colloquially referred to as a "bad trip". No real prolonged effects have been proven, however people with such conditions as schizophrenia and depression can worsen with LSD (Barlow & Durand, 2005).

Other Drugs

Other drugs of abuse include designer drugs, steroids, and inhalants.
Inhalants are most common among young males (age 13-15 years) who are economically disadvantaged. The effects are similar to alcohol.

Behavioral Addictions

Pornography

Pornography addiction is not recognized in the DSM-IV, but suggested definitions have been put forward. Currently there is debate on whether pornography is different than sex addiction. For the purpose of this packet we view them as different enough problems to warrant to be addressed separately. Classic sex addiction involves real partners, while many pornography addicts often have decreased interest in real partners, and trouble becoming aroused without pornography.

Stephen Andert, states "For many people pornography is a problem. Like alcohol, gambling or drugs, it can take control of a person's life and drag them kicking and screaming or voluntarily into the gutter. The addictive and

progressive (or regressive) nature of pornography is well documented." Psychologists who see pornography as addictive may consider online, often Internet pornography more addictive than ordinary pornography because of its wide availability, explicit nature, and the privacy that online viewing offers. Some claim that addicts regularly spend extended periods of time searching the Internet for new or increasingly hardcore pornography.


Statistics. Statistics for behaviors that people are secretive about are difficult to generate. Conservative estimates state 80% of males and 40% of females regularly view pornography. These number were generated defining pornography as images, but the number may rise for female pornography addicts may rise dramatically if erotic literature is classified as pornography (Safe Families). Utah spends more per capita on pornography viewing than any other US state (Schenk, 2009).

Side-effects. The downside to pornographic viewing is that it can take over one's life. Pornographic viewing is frequently subtle, slowly creeping its way into one's life. According to Dr. Asa Don Brown, an author for the Canadian Counselling and Psychotherapy Association:

Pornography's downside is its ability to overtake one's mind, body, and spirit. For so many, they become so enthralled with this alternative to sex, that it clouds their judgments leading to an acceptable denial. The man who spends more time masturbating over images and videos, than seeking to have intimacy with his wife. A woman who has been cybersexing discovers a pathway to turn her online romance into her own reality .

Therapy is needed in many cases to overcome the strong arming of pornography. Likewise, those who are addicted to pornography are frequently feeling hopelessness, depression,anxiety, stress, and a feeling that they are incapable of overcoming their addictive issue when needed for co-occurring.

Sex Addiction

The American Psychiatric Association (APA) is debating whether sex addiction should be added to its diagnostic and statistical manual of mental disorders. The addition of what the APA is calling "hypersexual disorder" would legitimize sex addiction in a way that was unthinkable just a few years ago. Sex addiction is related to

pornography but extends beyond consuming erotic images.

Today the proposed APA definition of hypersexual disorder says you have an illness if you spend so much time pursuing intercourse or masturbation as to interfere with your job or other important activities. According to the working language of the diagnosis, “repetitively engaging” in sexual behaviors when you are anxious, depressed or stressed would be considered a major warning sign for the disorder.

Symptoms/Characteristics

A pattern of out-of-control behavior, (b) Sever consequences due to sexual behavior, (c) an inability to stop the behavior(s) despite adverse consequences, (d) an ongoing desire or effort to limit sexual behavior, (e) Sexual obsession and fantasy as a primary coping strategy, (f) Increasing amounts of sexual experience because of current level of activity is no longer sufficient (g) sever mood changes around sexual activity, (h)inordinate amounts of time spent in obtaining sex, being sexual, or recovering form sexual experience , and (I) neglect of important social, occupational, or recreational activities because of sexual behavior.

Treatment. No one has figured out how to solve the conundrum of an addiction that must be mitigated but not eradicated. (A good analogy is to those who chronically binge on food and must be taught to eat moderately). Doctors have one reliable way to stop people form having sex: give them anti-hormone drugs that result in what is known as “chemical castration.” But the side effects, for instance, the feminization of men who take them make them only recommended to sex offenders who have sexual addictions.

So what can be done for those spending thousands on porn and seeing six prostitutes a week? According to Robert Weiss, who runs the Sexual Recovery Institute, the most seriously affected patients must enter the facility where they have no access to porn or sex workers. They start individual and group therapy that is, ideally, grounded in a cognitive-behavioral model designed to help them find rewarding activities other than sex-and consider the consequences of, say, looking at porn at work. But Wiess admits there is no simple way to teach sex addicts how to have healthy romantic relationships.

Shopping Addiction (Hatfield, 2004)

Spending on a budget. “Often times a person will spend over their budget and get into deep financial trouble, spending will above their income,” says Engs. “the normal person will say, ‘oops, I can’t afford to buy this or that.’ But not someone who has an addiction,” Explains Engs – he or she will not recognize the boundaries of a budget.

Compulsive Buying. “When a person with a shopping addiction goes shopping, they often compulsively buy, meaning they go for one pair of shoes and come out with 10.” It’s a chronic problem. “A shopping addiction is a continuous problem,” says Engs. “It’s more than two or three months of the year, and more than a once-a-year Christmas spree.”

Hiding the problem. “Shopaholics will hide their purchases because they don’t want their significant other to know they bought it because they’ll be criticized,” says Engs. “They may have secret credit card accounts, too. Because this problem affects mostly women, as alcoholism affects mostly men, husbands will all of the sudden be told their wife is $20,000 to $30,000 in debt and they are responsible, and many times, this comes out in divorce.”

A vicious circle. “Some people will take their purchases back because they feel guilty,” says Engs. “That guilt can trigger another shopping spree, so it’s a vicious circle.” And in these people, debt may not be an issue because they’re consistently returning clothes out of guilt but the problem still exists.

Impaired relationships. “It is not uncommon for us to see impairments in relationships from excessive spending or shopping,” says Rick Zehr, vice president of addictions and behavioral services at Proctor hospital at the Illinois Institute for Addiction Recovery. “Impairment can occur because the person spends time away from home to shop, covers up debt with deception, and emotionally and physically starts to isolate themselves from others as they become preoccupied with their behavior.”

Work Addiction (Gluck, 2009)

Confronting the workaholic will generally meet with denial. Co-workers, family members and friends may

need to engage in some type of an interventioni to communicate the effects of the workaholic's behavior on them. They may enlist the help of a therapist who works with workaholics to assess the person and recommend treatment options for work addiction.

Therapy may begin by exploring childhood experiences, since the workaholic's rigid beliefs and behaviors are formed in childhood. The work addict has often taken on parental responsibilities as a child to manage a chaotic family life or to take refuge form emotional storms, or physical/sexual abuse.

An important step in workaholic's treatment is to establish the workaholic's right to give attention to his/her own health and well being, rather than constantly responding to others' needs. Cognitive-behavioral therapy will assist him/her to examine the rigid beliefs and attitudes that fuel overwork.

A core belief such as "I Am only lovable if I succeed" may be replaced by the more functional belief, "I am lovable for who I am, not for what I accomplish."

Gambling Addiction (Saisan, J., Segal, J., Smith, M., & Robinson, L., 2012**)**

Definition Gambling addiction, also known as compulsive gambling, is a type of impulse-control disorder. Compulsive gamblers can't control the impulse to gamble, even when they know their gambling is hurting themselves or their loved ones. Gambling is all they can think about and all they want to do, no matter the consequences. Compulsive gamblers keep gambling whether they're up or down, broke or flush, happy or depressed. Even when they know the odds are against them, even when they can't afford to lose, people with a gambling addiction can't "stay off the bet."

Gamblers can have a problem, however, without being totally out of control. Problem gambling is any

gambling behavior that disrupts your life. If you're preoccupied with gambling, spending more and more time and money on it, chasing losses, or gambling despite serious consequences, you have a gambling problem. (1)

Treatment. Group support for gambling addiction and problem gambling

Gamblers Anonymous is a twelve-step program patterned after alcoholics anonymous. A key part of a 12 step-program is choosing a sponsor. A sponsor is a former gambler who has time and experience and is willing to help you conquer your addiction. Cognitive-behavioral therapy for problem gambling focuses on changing unhealthy gambling behaviors and thoughts, such as rationalizations and false beliefs. It also teaches problem gamblers how to fight gambling urges, deal with uncomfortable emotions rather than escape through gambling, and solve financial, work, and relationship problems caused by the addiction.

The goal of treatment is to "rewire" the addicted brain by thinking about gambling in a new way. A variation of cognitive behavioral therapy, called the Four steps program, has been used in treatment of compulsive gambling as well. The goal is to change your thoughts and beliefs about gambling in four steps; re-label, reattribute, refocus, and revalue. More comprehensive information about cognitive behavioral therapy and applying it to your situation is found below.

DSM-IV-TR Criteria for Sedative, Hypnotic, or Anxiolytic Intoxication
A. Recent use of a sedative, hypnotic, or anxiolytic drug.
B. Clinically significant maladaptive behavioral or psychological changes that are due to the effect of the substance on the central nervous system (e.g., belligerence, mood liability, cognitive impairment, impaired judgment, impaired social or occupational functioning) and develop during or shortly after sedative, hypnotic, or anxiolytic use. C. One or more of the following signs, developing during, or shortly after sedative, hypnotic, or anxiolytic use: 1. Slurred speech 2. Incoordination 3. Unsteady gait 4. Nystagmus 5. Impairment in attention or memory

6. Stupor or coma.

D. The symptoms are not due to a general medical condition and are not better accounted for by another mental disorder.

Video Game Addiction (Rauh, 2006).

According to Rauh (2006) a video game addiction may be present if:

1. The person needs more and more of the gaming behavior to keep him going.
2. The person uses gaming to escape from real-life problems, anxiety, or depression.
3. If the person does not get more of the substance or behavior, he becomes irritable and miserable.
4. Important social, occupational, or recreational activities are given up or reduced because of gaming, (e.g., thinking about gaming during other activities, lying to friends and family to conceal gaming).

Side-effects. Video game addiction can ruin lives. Children who play four to five hours per day have no time for socializing, doing homework, or playing sports, he says. "That takes away from normal social development. You can get a 21-year-old with the emotional intelligence of a 12-year-old. He's never learned to talk to girls. He's never learned to play a sport." In older addicts, compulsive gaming can jeopardize jobs or relationships. Howard, a 33-year-old project manager who asked to be identified only by his first name, started playing an online role-playing game about six months ago. He plays for three to four hours almost every day -- more on weekends -- occasionally putting off meals or sleep.

Treatment. Treatment for video game addiction is similar to detox for other addictions, with one important difference. Computers have become an important part of everyday life, as well as many jobs, so compulsive gamers can't just look the other way when they see a PC. Because video game addicts can't avoid computers, they have to learn to use them responsibly, which means no gaming for addicts.

Therapeutic Recreation

Therapeutic recreation can aid in the treatment of addiction in several ways. First, research indicates that leisure boredom can be a contributing factor to many negative leisure activities including alcohol consumption, risky sex, pornography, and drug use (Schenk, 2009). Effective leisure education activities can help patients reduce the

leisure boredom they experience, by opening other leisure options that can provide a flow experience (Brademas, 1994). Women report being able to use leisure to take healthy risks helped enable full recovery (Hood, 2003). Second, the physiologic effect of exercise often brings a'natural high,' or increased blood flow to the brain and increased dopamine, serotonin, and other neurotransmitters. This is important in helping the brain re-wire after being wired for addiction. This would fall under the area of improved functioning. Finally, a focus on family recreation participation for the family of patients can help everyone strengthen relationships that may have been strained by addiction (Caldwell, 2005). "The limited research available about the outcomes of recreation, leisure, and activity services in substance abuse does not bode well for the future. Increasingly, insurance carriers, state licensing and monitoring groups and managed care organizations are demanding outcome-based measures of client success.

Another important implication for your work as a TRS, is to participate in, or initiate program evaluation. In a review of the literature Malkin, Benshoff, Beck, & Toriello (1996) stated "The failure to provide this research data may have serious negative consequences for continued support of therapeutic recreation interventions in substance abuse treatment programs." Adding to the body of knowledge to legitimize TR as an effective treatment for substance abuse, will make TR service more universally available to those who need them.

Additional Resources

The national drug abuse website offers many resources on statistics, specific side-effects of substances, street vernacular of drugs, current research, and treatments. http://www.drugabuse.gov

Here's the link to U of U's addiction research page which includes the fabulous interactive "Mouse Party." http://learn.genetics.utah.edu/content/addiction/

And for anyone interested in stats on substance abuse for the state of Utah: http://www.dsamh.utah.gov/docs/seow_final_epi_report_2010.pdf

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