



Current Drug Trends and Treatment

January 31, 2013

3:30 p.m. to 4:30 p.m. CST

Jim Scarpace MS, LCPC, RDDP



Today's Agenda

Definition of Abuse and Dependence

- What is Addiction?

Overview of Most Abused Substances

- Trends
- Signs and Symptoms

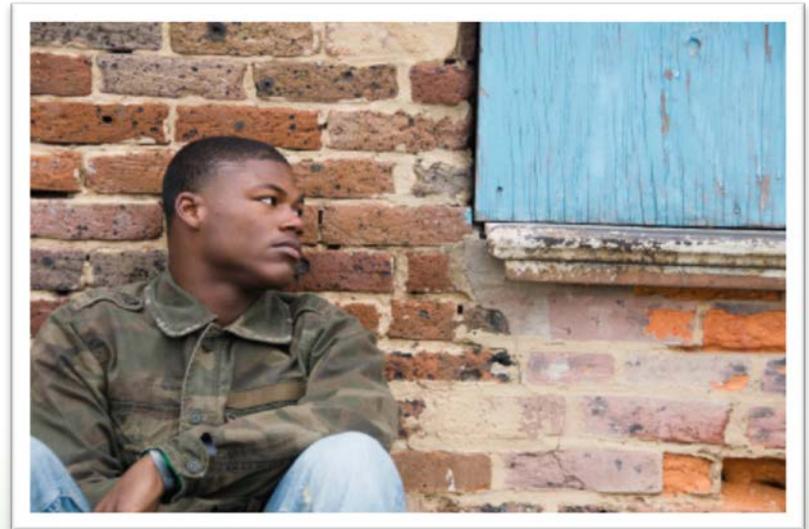
Treatment Options

- Levels of Care
- Evidenced-Based Practices & Treatment

Substance Abuse in America

Did you know?

- 1 in 10 American adults and teenagers have a drug and/or alcohol dependence problem?
- Yet only 11% of those who need treatment received it at a specialty facility.



Defining Addiction & Substance Abuse

Addiction:

Compulsion to use alcohol or other drugs regardless of negative or adverse consequences. Addiction is characterized by physical and psychological **dependence**.

- **Tolerance:** Physical and behavioral
- **Withdrawal:** Physical and psychological

Substance Abuse:

The continued use of drugs or alcohol in spite of adverse consequences in one or more area's of an individual's life (e.g. family, job, legal, financial).

Substance Dependence DSM-IV-TR Criteria

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:

- **Tolerance:** A need for increased amounts to achieve desired effect (body needs more or inability to stop).
- **Withdrawal:** Substance is taken to relieve or avoid withdrawal symptoms (physical and psychological symptoms).
- The substance is taken in larger amounts or over a longer period than was attended.

Substance Dependence DSM-IV-TR Criteria (cont.)

- There is a persistent desire or unsuccessful efforts to cut down or control use.
- A great deal of time is spent in activities necessary to obtain the substances (doctor shopping, “*drug seeking*” behavior, giving up enjoyable activities), use the substance or recover from effects.
- Substance use is continued despite knowledge of having a persistent physical or psychological problem that is likely to have been caused or exacerbated by the substance.

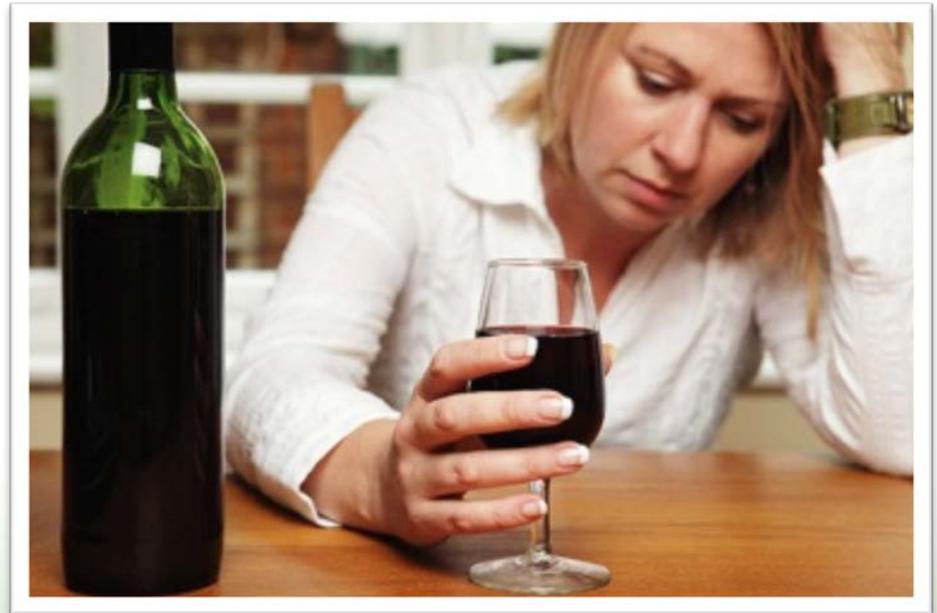


Dopamine: The Brain's Reward System

- Drugs hijack the brain's reward center releasing large amounts of dopamine (neurotransmitter which creates feelings of pleasure).
- Flood of dopamine is what causes the “high” or euphoria associated with drug abuse.
- Reward center circuitry changes (down regulation), brain makes less dopamine, person feels flat, lifeless and depressed.
- Without drugs life feels joyless and individual requires substances just to feel “normal” (tolerance).
- *Drug-seeking cycle:* brain changes drive addiction, engage in any behavior despite consequences.

Signs of Substance Abuse

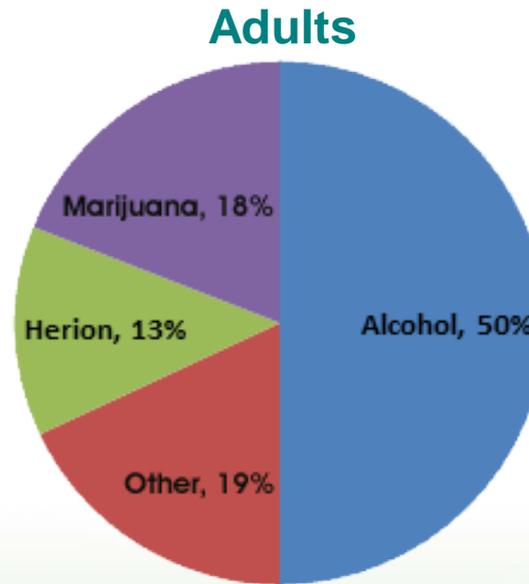
- Decline in grades or performance at work
- Chronic tardiness or absences
- Changes in behavior
- Changes in friends
- Disrupted sleeping
- Changes in eating habits



Drugs of Choice

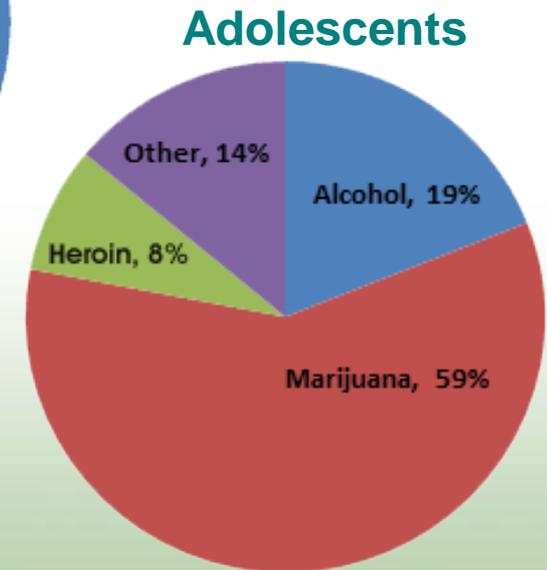
Adults

1. Alcohol – 50%
2. Marijuana – 18%
3. Heroin – 13%
4. Other – 19%



Adolescents

1. Marijuana – 59%
2. Alcohol – 19%
3. Heroin – 8%
4. Other – 14%



Drugs of Abuse

- Alcohol
- Marijuana
- Heroin
- K2
- Bath Salts

Alcohol (Depressant)

- Consumed: orally (beer, wine, liquor, cooler)
- Effects: relaxation, calmness, disinhibition, reduction of anxiety
 - **CNS Depressant**
 - Impaired judgment and motor skills
 - Slurred speech
 - Nausea
 - Vomiting
 - Impaired learning
 - Disturbed sleep
 - Aggressive behavior
 - Fetal alcohol syndrome
 - **Respiratory depression and death**
 - Addiction

Audience Poll

Alcohol withdrawal can be fatal.

True or False?



Audience Poll

Alcohol withdrawal can be fatal.

True



Effects of Alcohol: BIO-PSYCHO-SOCIAL

- Alcohol is the most dangerous psychoactive drug to the human body and society.
- Effects every organ system.
- Chronic effects include permanent loss of memory (black outs), gastritis, esophagitis, ulcers, pancreatitis, cirrhosis of the liver (esophageal bleeding), weakened heart muscles.
- Other chronic effects: self-perception (denial), family, social, occupational, financial.
- Traffic fatalities, other accidents, crime (\$185 billion-cost to U.S., \$58 billion for underage drinking!)

Marijuana

- Various cannabinoids include marijuana, hashish, charas, bhang, gahja and sinsemilla.
- Synthetic marijuana: K2, Spice (This is actually quite a different substance than marijuana, more details later on this!)
- Active ingredient is delta-9-tetrahydrocannabinol (THC)

Marijuana: (Hallucinogen, Sedative or Stimulant?)

- Consumed: usually smoked but can also be ingested by baking in cookies or brownies.
- Effects: Impairments in learning, memory, perception, and judgment
 - Altered cognition, making acquisition of new information difficult
 - Difficulty speaking, listening effectively, thinking, retaining knowledge, problem solving and forming concepts
 - *Amotivational Syndrome*: apathy, loss of goals, dulled emotions
 - Alertness
 - Concentration
 - Perception
 - Coordination and reaction time
 - Smoking marijuana leads to changes in the brain that are similar to those caused by cocaine, heroin and alcohol

Marijuana Physical and Mental Health

- An abuser's risk of heart attack more than quadruples in the first hour after smoking.
- Marijuana smoke contains 50 to 70 % more carcinogens than tobacco smoke.
- Studies have shown an association between chronic marijuana use and increased rates of:
 - Anxiety
 - Depression
 - Suicidal ideation
 - Schizophrenia
- Used in attempt to self-medicate symptoms of mental health disorders (co-occurring disorders).

Marijuana Alert!

- The effects of marijuana (and other drugs) on both the body and the brain are potentially more intense now than in the past because they are more potent.
- New growing and harvesting techniques produce marijuana that is about *275 percent* more potent than it was just 10 years ago.
- Marijuana (and other drugs) may be laced with other drugs such as PCP, Fentanyl or crack cocaine.
- The environment of the drug culture is more dangerous today. Studies show that youth who use alcohol or illegal drugs are more likely to be involved in violent crimes.



Heroin: Too Close for Comfort

2010 Roosevelt University Study

Determined the city with the highest prevalence of heroin use and associated problems in the U.S. is Chicago.



Facts about Heroin

Super-Addictive

- Highly addictive because it enters the brain so rapidly.
- It particularly affects those regions of the brain responsible for producing physical dependence.

Know the Risks

- The strength of heroin varies and its impact is more unpredictable when used with alcohol or other drugs, users do not know what might happen with the next dose.
- Can cause death and is one of the more frequently reported drugs by medical examiners in drug abuse deaths.

How Do Users Take Heroin?

- Use typically begins by snorting or smoking heroin to avoid the social stigma attached to injection drug use.
- Users often mistakenly believe that snorting or smoking heroin will not lead to addiction.
- Users who snort or smoke heroin at times graduate to injection because as their bodies become conditioned to the drug, the effects it produces are less intense.
- They then turn to injection—a more efficient means of administering the drug—to try to attain the more intense effects they experienced when they began.



Heroin Addiction

Over time heroin users can develop a tolerance

- Increasingly larger doses must be used to achieve the same intensity or effect experienced when someone first began using heroin.

Heroin ceases to produce feelings of pleasure in users who develop tolerance.

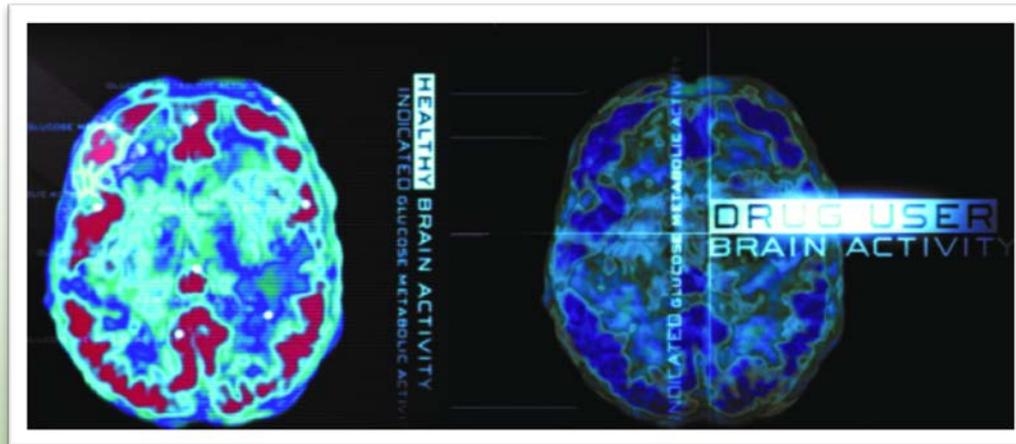
- Instead, heroin users must continue taking the drug simply to feel normal.

Addicted individuals who stop using the drug may experience withdrawal symptoms.

- Including cravings, restlessness, vomiting, muscle and bone pain.

Heroin Effects on the Brain

- When heroin enters the brain, it is converted to morphine and binds to receptors known as opioid receptors.
- These receptors are located in many areas of the brain (and in the body), especially those involved in the perception of pain and in reward.
- Opioid receptors are also located in the brain stem.
 - Important for automatic processes critical for life, such as breathing (respiration), blood pressure and arousal.
 - Heroin overdoses frequently involve a suppression of respiration.



Synthetic Drugs

Synthetic Marijuana/K2

Products Referred to as Synthetic Marijuana:

- K2 and Spice are brands of synthetic marijuana.
- K2 has emerged as a generic term for synthetic marijuana.
- Products are a blend of herbs sprayed with chemical compounds that are marketed as incense.
- K2 can be produced using chemical compounds called JWH-018, JWH-073, JWH-200, CP-47,497 and cannabicyclohexanol. These compounds are structured similar to THC, the active ingredient in marijuana, and can be sprayed onto varying mixtures of dried herbs, flowers and tobacco leaves.



Audience Poll

Sellers of synthetic drugs have reported profits reaching:

- A. \$1000 Daily
- B. \$2,000-4,000 Daily
- C. \$4,000-6,000 Monthly
- D. \$12,000 Daily

Audience Poll

Sellers of synthetic drugs have reported profits reaching:

D. \$12,000 Daily

Synthetic Marijuana/K2

Synthetic Marijuana is Sold As:

- Herbal incense
- Herbal blends
- Spice
- K2/K3
- Spike



Numerous other Brand Names (more than 140) Include:

- Spice Gold
- Space
- Yucatan Fire
- Aroma
- Krypton



Trends Related to K2

- An explosion of the use of K2 started in the U.S. in early 2010. The increased number of emergency room visits related to the substance sparked attention of the media.
- Gateway Foundation has noticed a trend in increased admissions for K2 abuse since Fall 2011.

So why the sudden popularity?

- Use of synthetic marijuana is alarmingly high. According to the 2011 Monitoring the Future survey sponsored by National Institute on Drug Abuse, 11.4% of high school seniors used Spice or K2 in the past year, making it the second most commonly used illicit drug among seniors.

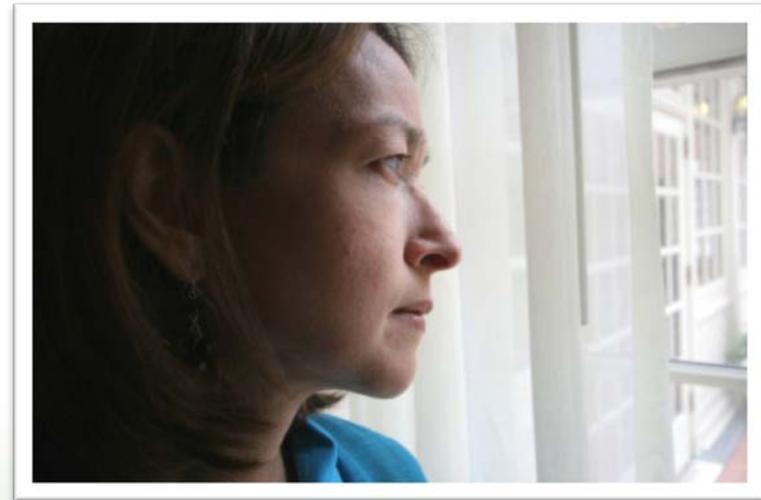
Signs and Symptoms of K2

According to Gateway Foundation, those in treatment for abusing K2 report the following:

- K2 can induce a limitless high
- Significant agitation and aggression
- “Dark” or “scary” thoughts
- Users who overdosed reported blacking out, having seizures and vomiting.
- Hallucinations, paranoia, seizures, anxiety and over-activation of the central nervous system (e.g., elevated temperature, rapid heartbeat) are common.

Long-Term Effects of K2

- Research on the safety of synthetic K2 is only now becoming available. Initial studies are focused on the role of synthetic cannabis and psychosis.
- It seems likely that synthetic cannabis precipitate psychosis and in some is prolonged.
- Studies suggest that synthetic marijuana is associated with acute psychosis, worsening of previously stable psychotic disorders, and also may have the ability to trigger a chronic psychotic disorder among vulnerable individuals, such as those with a family history of mental illness.



Bath Salts

- This is not the same product you use in your bathtub, it's not like Epsom salts.
- The product is sold as bath salts and labeled “not for human consumption” to bypass FDA regulation.
- Effects are similar to methamphetamine, ecstasy and cocaine.
- Seems most popular with people ages 20 to 29 years old.



Audience Poll

Bath salts may be:

- A. Taken orally
- B. Snorted
- B. Injected
- C. Smoked
- D. All of the above



Audience Poll

Bath salts may be:

D. All of the above



Trends Related to Bath Salts

- Gateway Foundation has seen an increased number of admissions from people abusing bath salts.
- Calls to Poison Control Centers about exposures to Bath Salts:
 - 6,138 Jan 1 to Dec 31, 2011
 - 2,654 Jan 1 to Dec 31, 2012



*American Association of Poison Control Centers. Bath salts data.
<http://www.aapcc.org/dnn/Portals/0/Bath%20Salts%20Data%20for%20Website%202.8.2012.pdf>. Accessed May 25, 2012.

Signs and Symptoms of Bath Salts Abuse

- Anxious and jittery behavior
- Decreased need for sleep
- Lack of appetite
- Severe paranoia
- Erratic behavior with potential for hallucinations, violence mutilation



Effects of Using Bath Salts

- Use of bath salts brings on a prolonged high lasting six to eight hours.
- Like cocaine, users have expressed fleeting euphoric feelings followed by some very bad feelings, like paranoia, depression and intense cravings for more.
- Bath salts are addictive.

Users reported effects include:

- Hallucinations
- Suicidal thoughts
- Paranoia

Effects of Using Bath Salts

More serious side effects associated with bath salts include:

- Kidney failure.
- Blood circulation problems—including increased blood pressure and renal failure.
- A powerful high, first-time users have accidentally overdosed on bath salts.
- It can kill users.

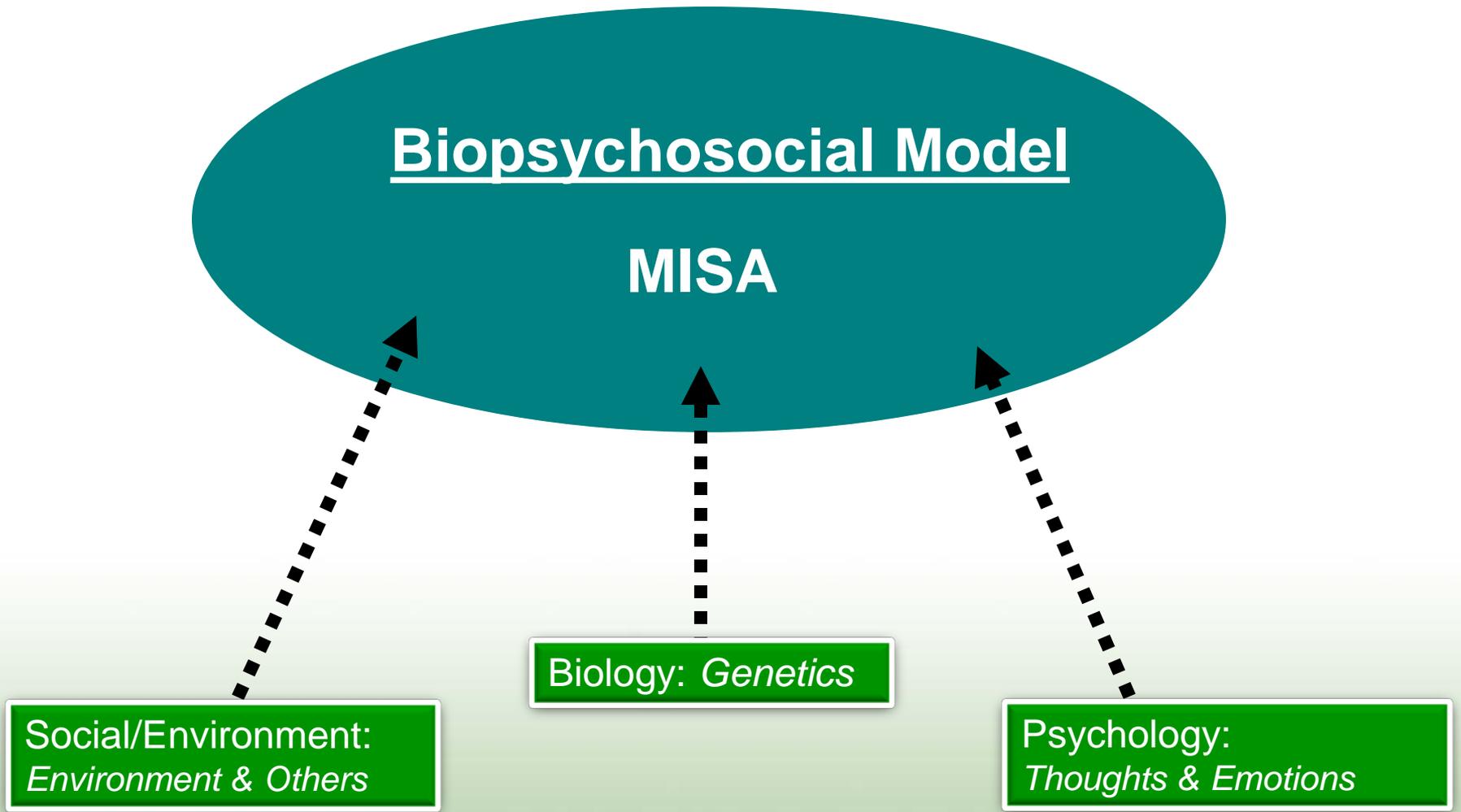
US Navy produced an intense video about signs and symptoms related to bath salts:

<http://www.youtube.com/watch?v=mh1aHwnErBI>

(Length: 6 minutes)

Additional Articles & Resources:

- [Drugabuse.gov/drugs-abuse/emerging-drugs](https://www.drugabuse.gov/drugs-abuse/emerging-drugs)
- [Drugabuse.gov/publications/drugfacts/spice-synthetic-marijuana](https://www.drugabuse.gov/publications/drugfacts/spice-synthetic-marijuana)
- [Justice.gov/dea/index.shtml](https://www.justice.gov/dea/index.shtml)
- abcnews.go.com/topics/lifestyle/health/synthetic-marijuana.htm
- [cbssports.com/collegefootball/story/19814416/where-theres-smoke-theres-fire-when-it-comes-to-synthetic-marijuana](https://www.cbssports.com/collegefootball/story/19814416/where-theres-smoke-theres-fire-when-it-comes-to-synthetic-marijuana)
- RecoverGateway.org



What kind of help is available?

On any given day, approximately 1 million Americans receive treatment for alcohol or drug addiction.

Treatment varies by individual based on:

- Acute intoxication/withdrawal
- Biomedical
- Emotional/behavioral
 - Dangerousness/lethality
 - Interference with addiction recovery efforts
 - Social functioning and ability for self-care
- Readiness to change
- Relapse potential
- Recovery environment

Continuum of Care

Higher and Lower levels of Care

- **Self Help:**
 - Alcoholics Anonymous or other 12-step recovery programs
- **Intensive After Work/After School Outpatient:**
 - Three hour group counseling sessions held three or four times per week for four to six weeks.
- **Day Treatment:** (partial hospitalization program)
 - Clients attend treatment during the day but go home at night.
- **Residential:** Variable length of stay, highly structured
- **Recovery Home:**
 - Placement for those who may not be able to return home after residential treatment.

Principles of Effective Treatment

- 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 drug use.
- Evidence-based practices.
- Remain in treatment for adequate period of time.
- Medical detox just the first stage.
- Medications helpful/assess for co-occurring disorder.



Evidenced-Based Practices & Treatment

Evidence-based practices integrate professional research and clinical expertise to achieve the best outcome for an individual. They are proven to work!

Motivational Interviewing

- For individuals who are ambivalent about quitting alcohol and other drugs, with more than 300 professional journal articles reporting favorable research outcomes.

Twelve-Step Facilitation (TSF) and Twelve-Step Recovery

- Introducing and acquainting individuals to Alcoholics Anonymous (AA) and Narcotics Anonymous (NA).

Evidenced-Based Practices & Treatment

Family Involvement

- Family involvement in treatment can have a huge impact in helping the individual overcome the substance abuse that has most likely affected every aspect of an individual's family life.

Cognitive Behavior Therapy (CBT)

- Learning to be mindful, expanding perspectives and improving coping skills in ways that help value-oriented living.

Co-Occurring/Dual-Diagnosis Disorders Program (CDP)

- Co-occurring mental health problems such as anxiety, depression and bipolar disorder are common among those with substance abuse problems. Effectively treating these problems at the same time provides the best results for both.

Evidenced-Based Practices & Treatment

Seeking Safety

- Helps individuals realize they may have abused substances to cope with overwhelming emotional pain.
- Research shows many persons with substance abuse problems have experienced a traumatic event (12-59% suffer from PTSD).

Medication-Assisted Treatment

- Medications that can treat cravings and other withdrawal symptoms, depression, anxiety and sleeplessness.
- Reduces risk of relapse.
- Vivitrol[®] and Suboxone[®] very commonly used.

Evidenced-Based Practices & Treatment

- **Gateway Foundation**
<http://recovergateway.org/treatment/evidence-based>
- **SAMHSA**
<http://www.nrepp.samhsa.gov>

Questions

Thank You!

References

- Fisher, Gary. (2005). Substance Abuse: Information for School Social Counselors, School Social Workers, Therapists, and Counselors. Pearson Education, Inc.
- drugrecognition.com
- www.nida.nih.gov
- www.teens.drugabuse.gov
- www.drugfree.org
- www.samhsa.gov
- www.ed.gov/osdfs (Office of Safe and Drug-Free Schools)