Review of Three Centuries: Prescription and Over-the-Counter Drugs: Has Anything Changed?

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## **Drugs in the 19th Century**

At first glance, the history of drugs shows tremendous changes since the 19th century.

Along with the noticeable differences in the manufacturing and distribution of drugs, the lawful and moral climate surrounding drugs was considerably altered when comparing the 21st century drug experience. A closer look at prescription drug abuse, however, might reveal that although there have been many discoveries regarding drugs from the 19th century to today, not much has changed in trajectory of addiction for prescription drugs.

Historically, the drug manufacturers of the 19th century were not specialized pharmaceutical firms or factories. Drugs were made, in the 19th century, by spice importers, distilleries and wineries. Cocaine and opium-laced beverages were big sellers and were produced by a person who had access to the necessary chemicals. Over-the-counter drugs also had a powerful kick and were readily distributed in neighborhood pharmacies. When unavailable in the local drug store, they were as easily obtained through the mail. Often, drugs were prepared by a local pharmacist and quality control was not a common element in the formula. Very often, the local druggist's home-made products captured the attention of investors. For example, John Pemberton gave the Coca-Cola beverage company its start in the 19th century by formulating cocaine-laced syrup in 1886.

Prior to the Food and Drug law of 1906, companies were not mandated to reveal the ingredients of their products. As long as the drugs that contained morphine, cocaine and other narcotics had a tax stamp, as with today's alcohol and tobacco products, they could be marketed. Incredibly, however, cocaine, opium and other controlled substances, or narcotics were completely legal in the 1800's. . Laudanum, a common medicine in the 19th century, suppressed coughs, quieted nerves, and eased head and back aches as well. The secret to laudanum's success—laudanum was a combination of 90-proof alcohol (similar to vodka) and a large dose of opium. The law in 1800's did not target drugs as it does today. Nineteenth century drugs, such as laudanum, were considered a remedy for an extensive variety of mental disorders, i.e. from anxiety to depression. Children were also administered a blend of opium and alcohol, similar to laudanum, to sooth coughs and colds as well as numerous childhood illnesses. Singers, actors and speakers discovered the benefits to ingest cocaine throat lozenges. And we mustn't forget the favorite party drinks and "healthy pick-me-ups" consisting of wines spiced up with cocaine.

Nineteenth century physicians had not considered the addictive aspects of cocaine and opium laced wine and syrups. The limited, or inaccurate knowledge of disease was often compounded by widespread addiction. It is noteworthy that the 19<sup>th</sup> century use of drugs, regardless of their addictive properties, was not considered unlawful. People trusted the local drug stores, doctors and merchants that dispensed their cures. By the turn of the 20<sup>th</sup> century, however, the Pure Food and Drug Act initiated the legal action against drugs and

the Harrison law of 1914 and the Jones-Miller law of 1922 criminalized the non-medical use of cocaine and opium derivatives.

Subsequently, marijuana was outlawed by federal agencies in the mid-1930's. By the close of the decade, nearly every state had approved anti-marijuana laws. All through the  $20^{th}$  century, drugs had been made far less accessible and were more regulated than their 19th century counterparts.

# What Prescription Drugs are Commonly Abused in the 21st Century?

All prescription and over-the-counter drugs can be abused and misused in more ways than one. There are, however, several classifications of medications that are commonly and widely abused among youth and adults.

The three classes of prescription drugs that are most commonly abused are:

- Opioids, which are most often prescribed to treat pain;
- Central nervous system (CNS) depressants, which are used to treat anxiety and sleep disorders; and
- Stimulants, which are prescribed to treat the sleep disorder narcolepsy and attention-deficit hyperactivity disorder (ADHD).

Below is further explanation of the three classes of commonly abused prescription drugs and their commercial names and use or abuse.

#### Opiods:

Morphine (e.g., Kadian, Avinza), codeine, oxycodone (e.g., OxyContin, Percodan, Percocet), propoxyphene (Darvon), hydrocodone (Vicodin), hydromorphone (Dilaudid), meperidine (Demerol) and related drugs are used to alleviate severe pain. Codeine, on the other hand, is often prescribed for mild pain. Also, codeine and diphenoxylate (Lomotil), for example, can be used to relieve coughs and diarrhea.

#### Depressants:

Barbiturates, such as mephobarbital (Mebaral), pentobarbital sodium (Nembutal), Amytal, Seconal, and Phenobarbital, are used to treat anxiety, tension, and sleep disorders. Benzodiazepines, such as diazepam (Valium), chlordiazepoxide HCl (Librium), and alprazolam (Xanax), are prescribed to treat anxiety, acute stress reactions, and panic attacks. The more sedating benzodiazepines, such as triazolam (Halcion) and estazolam (ProSom) are prescribed for short-term treatment of sleep disorders. Another depressant is flunitrazepam (Rohypnol) which is a powerful hypnotic drug often prescribed for insomnia. It has also been abused as a date rape drug.

#### Stimulants:

Stimulants include dextroamphetamine (Dexedrine and Adderall) and methylphenidate (Ritalin and Concerta), amphetamine (Biphetamine and Dexedrine) and methamphetamine (Desoxyn). They historically were used to treat asthma and other respiratory problems, obesity, neurological disorders, and a variety of other ailments. But as their potential for abuse and addiction became apparent, the medical use of stimulants began to wane. Now, stimulants are prescribed for the treatment of only a few health conditions, including narcolepsy, ADHD, and depression that has not responded to other treatments.

#### **Prescription Drugs and Our Teens**

"One pill makes you larger, and one pill makes you small and the ones that mother gives you, don't do anything at all go ask Alice, when she's ten feet tall." *Jefferson Airplane* 

Pot, alcohol, steroids, cigarettes, meth, Ecstasy and LSD are being used less and less by American teenagers since the 1990s, but misuse of prescription drugs has been on the rise, according to the National Institute of Drug Abuse, which has surveyed youngsters across the country since 1975. Why are kids abusing Rx drugs? According to Teens and Prescription Drugs - An Analysis of Recent Trends on the Emerging Drug Threat from the

Office of National Drug Control Policy, teens abuse prescription drugs because they believe prescription drugs will give them a medically safe high.

The Partnership for a Drug-Free America found that 19% of U.S. teenagers reported having taken prescription drugs to get high in 2005. Vicodin has been particularly popular recently; a study by the University of Michigan in 2005 found that nearly ten percent of 12th-graders had used it in the previous year and more than five percent said they had used OxyContin. Both drugs are now more popular among high school seniors than Ecstasy and cocaine. Ritalin and Adderall, used most often to treat attention-deficit-disorder, are also being abused at an alarming rate. Even drugs you might not associate with "getting high," such as those used to treat anxiety disorders such as Xanax or Valium, are popular among our teens.

Some prescription drugs are worth serious money. The estimated street value of just one OxyContin pill is about \$40. Today it is common to hear that high school students distribute Zanax, Ritalin, OxyContin, and hydrocodone to other students. School principals are usually the last to know when students take the drugs from the home medicine cabinet to sell at school unless parents discover the theft and report it to the school. Every day in schools across the United States, students sell their own medication or medication belonging to their parents or siblings. "Pharm parties" are also popular among our youth. Young people are encouraged to bring pills from their homes to share with their friends. The pills are dumped into a bowl or bag and the partiers grab whatever catches their fancy,

often mixing drugs that, in combination with each other or with alcohol, which is usually also present, can have a lethal effect. The U.S. Department of Health and Human Services defines "pharming" as "swapping prescription and/or over-the-counter medications and taking them all at once, often with alcohol, to get high -- has become a popular and dangerous trend among teens." The most unlikely students are participating in these parties. [Reports of top performing students across the U.S. are robbed of their next phase of their lives by indulging in these parties. Their bright futures are often suddenly brought to a screeching halt when they decided to go to a "pharm party." If they don't die, they are sometimes left barely hanging on in a motionless coma.

## **Prescription Drug Abuse Among Teens Doesn't Discriminate**

"Every day, 2,500 kids age 12 to 17 abuse a prescription painkiller\_for the first time, and more people are getting addicted to prescription drugs," according to the federal Substance Abuse and Mental Health Administration(SAMHSA). SAMHSA shares the following research from juvenile prescription and over-the-counter drug abuse studies:

- Second only to Marijuana, teens are using prescription drugs like OxyContin and Vicodin to get high.
- They believe these drugs are safer than street drugs.
- They get the drugs from friends, relatives or their parent's medicine cabinets easily and for free.
- Among teens, girls are more likely to abuse prescription drugs than boys.

# **It's Not Just Teens**

In October 2003, Rush Limbaugh announced that he was addicted to prescription pain medication, namely OxyContin. This indicates that someone with a lot to lose and someone with many resources to fight an addiction could still find themselves unable to stop using these drugs. If Rush could fall into this trap, imagine how hard it might be for your son or daughter to kick a prescription drug addiction. At the time of Rush's announcement, CNN reported that Dr. Drew Pinsky, an addiction specialist in Pasadena, California, said, "We're really talking about opiate addiction. The withdrawal is miserable and painful and it takes a long time to recover." The list of actors, or performers, who have been addicted and even died since Rush Limbaugh's testimony, has grown. Since 2003 at least 3 known prescription drug related deaths have occurred in Hollywood. Keith Ledger, Anna Nicole Smith and Michael Jackson all suffered with prescription drug addiction and died.

A great source and personal account of how prescription drug addiction can affect an individual and their family is "Prescription Drug Addiction: The Hidden Epidemic" by Rod Colvin. Rod's brother Randy died on his 35th birthday from the effects of mixing drugs and alcohol. He had battled a dependency on prescription drugs including Valium and Percocet since he was 20. His family noticed that he was often "drunk on pills" but Randy would become angry and deny his problem when confronted. In writing this book, Rod talked with people with many different occupations and activities, and excerpts from his interviews make up a good part of the book. Abusers discuss their methods and sources and disclose that many of them felt that since they had prescriptions, they weren't *really* 

drug abusers. In a review, Pharmacist Jean Sheffield said, "This book fills a long-standing void--that of the need for education about the rampant abuse of prescription medication."

## Has Our Society Changed Since the 19th Century?

As previously stated, teenagers perceive taking pills less of a stigma because they see them as medicine. Isn't it odd that the therapeutically benevolent association of cocaine and opium laced wines in the 19<sup>th</sup> century is very similar to today's youth and adult perception. One would hope that we have learned our lesson from addiction research—but we don't. There is very little difference between teens who surreptiously take their parents painkillers from the medicine cabinet and youth who took laudanum in the 19th century except for the modality of treatment and unlawfulness. Prescription drugs are just as easy to obtain as laudanum was in the 19th century. Addiction is addiction, no matter what century we consider or the modality of their legal and illegal distribution. Fortunately, we are more aware of the detrimental effects of prescription misuse. Families and communities take an environmental public health approach in juvenile substance abuse prevention. Schools, mental health providers, law enforcement and health care systems, to name a few, not only address the physical and mental effects of prescription and over-thecounter drug abuse, but attempt to work as a community prevention system. The psychosocial elements that safe guard our youth and promote healthy life choices. however, go far beyond this article.

First Steps to Family Prevention of Juvenile Prescription and Over-the-Counter Drug Abuse

While laws are changing to track and limit prescriptions for controlled substances, parents can protect their children by keeping their prescriptions out of reach from their children and disposing them when they are no longer needed. The 2005 Partnership survey found that many teens experiment with the prescriptions from their very own parents' medicine cabinets. Adults often forget about the pills once they have recovered from whatever ailment for which they were prescribed. One way to combat the "drug pusher medicine cabinet" is Operation Medicine Cabinet. This take back program not only helps communities rid their counties of unused prescription drugs, but it helps raise awareness of juvenile prescription drug prevention efforts, as well. Community coalitions, dedicated to juvenile substance abuse prevention, throughout Florida have made the prevention prescription drug abuse a priority. One viable way to reduce and prevent juvenile prescription drug abuse is to unite and work with local law enforcement agencies to collect controlled substances, as well as the "over abused" over-the-counter drugs. Drug Free Collier's collection protocol has been reviewed and accepted by the DEA and is most willing to share the protocol with all coalitions across the country. The following presentation has been developed over numerous years and through the efforts of "champions" who strive to create a drug free and safe environment for our most precious asset—our youth.

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