

The "C-Change" Initiative:

1. Change behaviors.
2. Challenge ourselves to re-think how we work.
3. Certify the results on a daily basis.



Toolbox Talk

Week of March 15st 2010

Drug and Alcohol Awareness

March is being recognized as Drug and Alcohol Awareness Month at JJ White. Following the same philosophy as we did in February, with Home Safety Month, we will take the next few weeks to educate our workforce on the common issues and consequences that are a result of Drug and Alcohol Abuse. This is great information to take home and share with your families.

Prescription medications such as pain relievers, central nervous system (CNS) depressants (tranquilizers and sedatives), and stimulants are highly beneficial treatments for a variety of health conditions. Pain relievers enable individuals with chronic pain to lead productive lives; tranquilizers can reduce anxiety and help patients with sleep disorders; and stimulants help people with attention-deficit hyperactivity disorder (ADHD) focus their attention. Most people who take prescription medications use them responsibly. But when abused—that is, taken by someone other than the patient for whom the medication was prescribed, or taken in a manner or dosage other than what was prescribed—prescription medications can produce serious adverse health effects, including addiction.

Patients, health care professionals, and pharmacists all have roles in preventing the abuse of and addiction to prescription medications. For example, patients should follow the directions for use carefully; learn what effects and side effects the medication could have; and inform their doctor/pharmacist whether they are taking other medications [including over-the-counter (OTC) medications or health supplements], since these could potentially interact with the prescribed medication. The patient should read all information provided by the pharmacist. Physicians and other health care providers should screen for past or current substance abuse in the patient during routine examination, including asking questions about what other medications the patient is taking and why. Providers should note any rapid increases in the amount of a medication needed or frequent requests for refills before the quantity prescribed should have been finished, as these may be indicators of abuse.

Similarly, some OTC medications, such as cough and cold medicines containing dextromethorphan, have beneficial effects when taken as recommended; but they can also be abused and lead to serious adverse health consequences. Parents should be aware of the potential for abuse of these medications, especially when consumed in large quantities, which should signal concern and the possible need for intervention.

Commonly Abused Prescription Medications

Although many prescription medications can be abused, the following three classes are most commonly abused:

Opioids— Opioids are analgesic, or pain-relieving, medications. Studies have shown that properly managed medical use (taken exactly as prescribed) of opioid analgesics is safe, can manage pain effectively, and rarely causes addiction.

Opioids can be taken orally, or the pills may be crushed and the powder snorted or injected. A number of overdose deaths have resulted from the latter routes of administration, particularly with the drug OxyContin, which was designed to be a slow-release formulation. Snorting or injecting opioids results in the rapid release of the drug into the bloodstream, exposing the person to high doses and causing many of the reported overdose reactions.

CNS depressants— . CNS depressants (e.g., tranquilizers, sedatives) are medications that slow normal brain function. In higher doses, some CNS depressants can be used as general anesthetics or preanesthetics.

CNS depressants can be divided into three groups, based on their chemistry and pharmacology:

Barbiturates, such as mephobarbital (Mebaral) and sodium pentobarbital (Nembutal), are used as preanesthetics, promoting sleep.

Benzodiazepines, such as diazepam (Valium), alprazolam (Xanax), and estazolam (ProSom), can be prescribed to treat anxiety, acute stress reactions, panic attacks, convulsions, and sleep disorders. For the latter, benzodiazepines are usually prescribed only for short-term relief of sleep problems because of the development of tolerance and risk of addiction.

Newer sleep medications, such as zolpidem (Ambien), zaleplon (Sonata), and eszopiclone (Lunesta), are now more commonly prescribed to treat sleep disorders. These medications are nonbenzodiazepines that act at a subset of the benzodiazepine receptors and appear to have a lower risk for abuse and addiction.

Despite their beneficial effects for people suffering from anxiety or sleep disorders, barbiturates and benzodiazepines can be addictive and should be used only as prescribed.

CNS depressants should not be combined with any medication or substance that causes drowsiness, including prescription pain medicines, certain OTC cold and allergy medications, and alcohol. If combined, they can slow both heart rate and respiration, which can be fatal.

Stimulants—Stimulants (amphetamines [Adderall, Dexedrine] and methylphenidate [Concerta, Ritalin]) increase alertness, attention, and energy. They also increase blood pressure and heart rate, constrict blood vessels, increase blood glucose, and open up the pathways of the respiratory system. Historically, stimulants were prescribed to treat asthma and other respiratory problems, obesity, neurological disorders, and a variety of other ailments. As their potential for abuse and addiction became apparent, the prescribing of stimulants by physicians began to wane. Now, stimulants are prescribed for treating only a few health conditions, most notably ADHD, narcolepsy, and, in some instances, depression that has not responded to other treatments.

Stimulants may be taken orally, but some abusers crush the tablets, dissolve them in water, and then inject the mixture; complications can arise from this because insoluble fillers in the tablets can block small blood vessels. Stimulants have been abused for both “performance enhancement” and recreational purposes (i.e., to get high).

Stimulants have chemical structures that are similar to key brain neurotransmitters called monoamines, including dopamine and norepinephrine. Their therapeutic effect is achieved by slow and steady increases of dopamine that are similar to the natural production of this chemical by the brain. The doses prescribed by physicians start low and increase gradually until a therapeutic effect is reached. However, when taken in doses and routes other than those prescribed, stimulants can increase the brain's dopamine levels in a rapid and highly amplified manner—as do most other drugs of abuse—disrupting normal communication between brain cells, producing euphoria, and increasing the risk of addiction.

DXM-DXM is the active ingredient found in OTC cough and cold medications. When taken in recommended doses, these medications are safe and effective.

DXM is taken orally. In order to experience the mind-altering effects of DXM, excessive amounts of liquid or gelcaps must be consumed. The availability and accessibility of these products make them a serious concern, particularly for youth, who tend to be their primary abusers.

In very large quantities, DXM can cause effects similar to those of ketamine and PCP because these drugs affect similar sites in the brain. These effects can include impaired motor function, numbness, nausea/vomiting, and increased heart rate and blood pressure. On rare occasions, hypoxic brain damage—caused by severe respiratory depression and a lack of oxygen to the brain—has occurred due to the combination of DXM with decongestants often found in the medication.

The fourth and final toolbox will discuss the signs and symptoms of addiction.