

# Drug Information Parents Should Know

# Club Drugs

- Club drugs are being used by young adults at all-night dance parties such as "raves" or "trances," dance clubs, and bars.
- MDMA (Ecstasy), GHB, Rohypnol, ketamine, methamphetamine, and LSD are some of the club or party drugs gaining popularity.
- Supported research has shown that use of club drugs can cause serious health problems and, in some cases, even death. Used in combination with alcohol, these drugs can be even more dangerous.

# Club Drugs

- No club drug is benign.
- Chronic abuse of MDMA, for example, appears to produce long-term damage to serotonin-containing neurons in the brain.
- Given the important role that the neurotransmitter serotonin plays in regulating emotion, memory, sleep, pain, and higher order cognitive processes, it is likely that MDMA use can cause a variety of behavioral and cognitive consequences as well as impair memory.

# Club Drugs

- Because some club drugs are colorless, tasteless, and odorless, they can be added unobtrusively to beverages by individuals who want to intoxicate or sedate others.
- In recent years, there has been an increase in reports of club drugs used to commit sexual assaults.

# Ecstasy

- MDMA, called "Adam," "ecstasy," or "XTC" on the street, is a synthetic, psychoactive (mind-altering) drug with hallucinogenic and amphetamine-like properties.
- Its chemical structure is similar to two other synthetic drugs, MDA and methamphetamine, which are known to cause brain damage.

# Ecstasy

- Beliefs about MDMA are reminiscent of similar claims made about LSD in the 1950s and 1960s, which proved to be untrue.
- According to its proponents, MDMA can make people trust each other and can break down barriers between therapists and patients, lovers, and family members.

# Ecstasy Health Hazards

Physical and psychological symptoms.

- Many problems users encounter with MDMA are similar to those found with the use of amphetamines and cocaine.
- They are:

# Ecstasy Health Hazards

- Psychological difficulties, including confusion, depression, sleep problems, drug craving, severe anxiety, and paranoia during and sometimes weeks after taking MDMA (in some cases, psychotic episodes have been reported).
- Physical symptoms such as muscle tension, involuntary teeth clenching, nausea, blurred vision, rapid eye movement, faintness, and chills or sweating.

# Ecstasy Health Hazards

- Increases in heart rate and blood pressure, a special risk for people with circulatory or heart disease.
- Long-term effects. Recent research findings also link MDMA use to long-term damage to those parts of the brain critical to thought and memory. It is believed that the drug causes damage to the neurons that use the chemical serotonin to communicate with other neurons.

# Ecstasy Health Hazards

- MDMA is also related in structure and effects to methamphetamine, which has been shown to cause degeneration of neurons containing the neurotransmitter dopamine.
- Damage to dopamine containing neurons is the underlying cause of the motor disturbances seen in Parkinson's disease.
- Symptoms of this disease begin with lack of coordination and tremors, and can eventually result in a form of paralysis.

# GHB

- Gamma-hydroxybutyric acid or GHB, is a compound that was initially used by body builders to stimulate muscle growth.
- In recent years it has become popular as a recreational drug among club kids and party-goers.

# GHB

- This "designer" drug is often used in combination with other drugs, such as Ecstasy.
- GHB is synthesized from a chemical used to clean electrical circuit boards, and is available in clear liquid, white powder, tablet and capsule form.
- GHB is odorless and nearly tasteless.
- Users report that it induces a state of relaxation.
- The effects can be felt within 5 to 20 minutes after ingestion and the high can last up to four hours.

# GHB

- GHB users risk many negative physical effects including vomiting, liver failure, potentially fatal respiratory problems, and tremors and seizures, which can result in comas.
- GHB has reportedly been used in cases of date rape.
- Because GHB is odorless and tasteless, it can be slipped into someone's drink without detection.

# Rohypnol®

- Rohypnol® has been a concern for the last few years because of its abuse as a "date rape" drug.
- People may unknowingly be given the drug which, when mixed with alcohol, can incapacitate and prevent a victim from resisting sexual assault.
- Also, Rohypnol® may be lethal when mixed with alcohol and/or other depressants.

# Rohypnol®

- Rohypnol® produces sedative-hypnotic effects including muscle relaxation and amnesia.
- In the early 1990s it became known as "rophies," "roofies," "roach," "rope," and the "date rape" drug.

# ROHYPNOL & GHB:

## How to Avoid Date Rape Drugs

- Rohypnol® (roofies) and GHB are central nervous system depressants.
- Both drugs emerged in the early 1990's as “drug-assisted assault” drugs.
- In the news, these drugs are more commonly known as “date rape,” “drug rape” or “acquaintance rape” drugs.

# ROHYPNOL & GHB: How to Avoid Date Rape Drugs

*Why is this important for you to know as a parent?*

- Whether your teen goes to a party or on a trip with friends, it is important that he/she is aware of roofies and GHB, how these drugs are used and how your teen can protect him/herself.
- While often associated with alcoholic beverages, they can also be slipped into a non-alcoholic drink.

# ROHYPNOL & GHB: How to Avoid Date Rape Drugs

*Here is some advice you can share with your teen:*

- Don't drink anything that you did not see poured, open yourself or that someone else gave you (other than a waiter), no matter how good-looking they are.
- Always watch your drink. If you leave it unattended for ANY amount of time, dump it and get a fresh drink.

# ROHYPNOL & GHB:

## How to Avoid Date Rape Drugs

- Roofies and GHB may have a bitter taste when dissolved in a drink; be alert for a strange taste.
- When placed in a light-colored drink, the newer roofies will turn the beverage blue. Dump it immediately and be especially alert.
- Travel in groups. Three or more people is best. Friends should take care of friends and be observant of any strange behavior, such as slurred speech and lack of alertness.

# ROHYPNOL & GHB:

## How to Avoid Date Rape Drugs

- If you think you have been drugged, ask for help IMMEDIATELY (preferably not from a stranger) and get yourself to a public place if you are not currently in one.
- You may have only a few minutes of alert behavior.
- If you think a friend has been drugged, do not leave them alone.
- **Seek help immediately.**

# Ketamine

- Ketamine hydrochloride, or "Special K," is a powerful hallucinogen widely used as an animal tranquilizer by veterinarians.
- Users sometimes call the high caused by Special K, "K hole," and describe profound hallucinations that include visual distortions and a lost sense of time, sense, and identity.
- The high can last from a half-hour to 2 hours but the drug can still affect the body for up to 24 hours.

# Ketamine

- Use of Special K can result in profound physical and mental problems including delirium, amnesia, impaired motor function and potentially fatal respiratory problems.
- Special K is a powder.
- The drug is usually snorted, but is sometimes sprinkled on tobacco or marijuana and smoked.
- Special K is frequently used in combination with other drugs, such as ecstasy, heroin or cocaine.

# Ketamine

- Liquid Ketamine was developed in the early 1960s as an anesthetic for surgeries, and was used on the battlefields of Vietnam as an anesthetic.
- Powdered Ketamine emerged as a recreational drug in the 1970s, and was known as "Vitamin K" in the 1980s.
- It resurfaced in the 1990s rave scene as "Special K."

# Methamphetamine

- Methamphetamine is an addictive stimulant drug that strongly activates certain systems in the brain.
- Methamphetamine is closely related chemically to amphetamine, but the central nervous system effects of methamphetamine are greater.
- Both drugs have some medical uses, primarily in the treatment of obesity, but their therapeutic use is limited.

# Methamphetamine

- Street methamphetamine is referred to by many names, such as "speed," "meth," and "chalk."
- Methamphetamine hydrochloride, clear chunky crystals resembling ice, which can be inhaled by smoking, is referred to as "ice," "crystal," and "glass."

# Methamphetamine Health Hazards

- Neurological hazards. Methamphetamine releases high levels of the neurotransmitter dopamine, which stimulates brain cells, enhancing mood and body movement.
- It also appears to have a neurotoxic effect, damaging brain cells that contain dopamine and serotonin, another neurotransmitter.
- Over time, methamphetamine appears to cause reduced levels of dopamine, which can result in symptoms like those of Parkinson's disease, a severe movement disorder.

# Methamphetamine Addiction

- Methamphetamine is taken orally or intranasally (snorting the powder), by intravenous injection, and by smoking.
- Immediately after smoking or intravenous injection, the methamphetamine user experiences an intense sensation, called a "rush" or "flash," that lasts only a few minutes and is described as extremely pleasurable.
- Oral or intranasal use produces euphoria - a high, but not a rush.
- Users may become addicted quickly, and use it with increasing frequency and in increasing doses.

# Methamphetamine Short Term Effects

- The central nervous system (CNS) actions that result from taking even small amounts of methamphetamine include increased wakefulness, increased physical activity, decreased appetite, increased respiration, hyperthermia, and euphoria.
- Other CNS effects include irritability, insomnia, confusion, tremors, convulsions, anxiety, paranoia, and aggressiveness.
- Hyperthermia and convulsions can result in death.

# Methamphetamine Long Term Effects

- Methamphetamine causes increased heart rate and blood pressure and can cause irreversible damage to blood vessels in the brain, producing strokes.
- Other effects of methamphetamine include respiratory problems, irregular heartbeat, and extreme anorexia.
- Its use can result in cardiovascular collapse and death.

# Cocaine

- Cocaine is a powerfully addictive drug of abuse.
- Individuals who have tried cocaine have described the experience as a powerful high that gave them a feeling of supremacy.
- However, once someone starts taking cocaine, one cannot predict or control the extent to which he or she will continue to use the drug.
- The major ways of taking cocaine are sniffing or snorting, injecting, and smoking (including free-base and crack cocaine).

# Cocaine Health Risks

- Health risks exist regardless of whether cocaine is inhaled (snorted), injected, or smoked.
- However, it appears that compulsive cocaine use may develop even more rapidly if the substance is smoked rather than snorted.
- Smoking allows extremely high doses of cocaine to reach the brain very quickly and results in an intense and immediate high.
- The injecting drug user is also at risk for acquiring or transmitting HIV infection/AIDS if needles or other injection equipment are shared.

# Cocaine Health Hazards

## Physical Effects

- Physical effects of cocaine use include constricted peripheral blood vessels, dilated pupils, and increased body temperature, heart rate, and blood pressure.
- Some cocaine users report feelings of restlessness, irritability, and anxiety, both while using and between periods of use.
- An appreciable tolerance to the high may be developed, and many addicts report that they seek but fail to achieve as much pleasure as they did from their first exposure.

# Cocaine Health Hazards

## Paranoia and Aggression

- High doses of cocaine and/or prolonged use can trigger paranoia.
- Smoking crack cocaine can produce particularly aggressive paranoid behavior in users.
- When addicted individuals stop using cocaine, they may become depressed.
- This depression causes users to continue to use the drug to alleviate their depression.

# Cocaine Health Hazards

## Long Term Effects

- Prolonged cocaine snorting can result in ulceration of the mucous membrane of the nose and can damage the nasal septum enough to cause it to collapse.
- Cocaine-related deaths are often a result of cardiac arrest or seizures followed by respiratory arrest.

# Cocaine Health Hazards Added Danger

- When people mix cocaine and alcohol, they are compounding the danger each drug poses and unknowingly causing a complex chemical interaction within their bodies.
- Researchers have found that the human liver combines cocaine and alcohol to manufacture a third substance, cocaethylene, which intensifies cocaine's euphoric effects and possibly increases the risk of sudden death.

# Crack Cocaine

- Crack is a highly addictive stimulant drug that is derived from powdered cocaine.
- Crack or “freebase” cocaine is cocaine that has been dissolved and then boiled in a mixture of water and ammonia or sodium bicarbonate (baking soda) until it forms lumps or rocks.
- Crack may be liquefied and injected or heated and its vapours smoked.
- The term “crack” refers to the crackling sound the rock makes when it is heated.

# Crack Cocaine Health Risks

- Some distinct risk characteristics among certain populations of crack users.
- Physical effects of crack use include constricted blood vessels, dilated pupils, and increased temperature, heart rate and blood pressure.
- Users may also experience feelings of restlessness, irritability, and anxiety, which can lead to a period of paranoid psychosis, particularly after bingeing.

# Crack Cocaine

## Health Risks

- Other complications associated with cocaine and crack use are heart attack, respiratory failure, stroke, seizure, and gastro-intestinal problems.
- In addition, many crack users are malnourished as a result of the appetite suppression caused by the drug.
- Crack users have been shown to be at elevated risk for human immunodeficiency virus (HIV), hepatitis C virus (HCV), sexually transmitted infections (STIs) and tuberculosis (TB).

# Crack Cocaine Health Risks

- Crack users have been shown to use emergency health care services more often than non-crack users.
- Mental health disorders are generally present in drug-dependent populations.
- One study found that personality disorders (24%) were the most common symptom category in a sample of not-in-treatment crack users, followed by depression (18%) and post-traumatic stress disorder (12%).

# Crack Cocaine Health Risks

- Most crack users use makeshift devices such as pop cans, inhalers, or other metal or glass implements to smoke crack.
- Due to the high temperatures required for smoking crack, the unsafe quality of the paraphernalia used and the high frequency of repeated inhalation, users often have chronic cuts, burns and open sores or wounds in their oral cavity area (i.e., lips, gums, inner mouth lining)

# Crack Cocaine Health Risks

- Crack users have been shown to rely on sex work for income generation in the context of their drug use.
- Given its short-term high and powerful withdrawal symptoms, crack use often occurs in the form of so-called “binges”, in which both crack use and income generation (e.g., sex work) occur with high frequency.

# Crack Cocaine Health Risks

- The close association between crack use and poverty has been well documented for crack users in Canada, with many of them being homeless or in transient housing.
- Housing status has been identified as an important social determinant of health among drug users and other high-risk populations

# Crack Cocaine Health Risks

- The association between crack use and crime involvement, even when compared with other drug use, has been well documented.
- Crack users report the highest levels of drug expenditure and the most crime.
- Similarly, a study comparing heroin and crack users found that crack users reported higher levels of crime, particularly drug dealing.

# Inhalants

- Inhalants are common products found right in the home and are among the most popular and deadly substances kids abuse.
- Inhalant abuse can result in death from the very first use.
- Approximately one in six children will use inhalants by eighth grade.

# Inhalants

- Inhalants are most popular with younger teens.
- Teens use inhalants by sniffing or "snorting" fumes from containers; spraying aerosols directly into the mouth or nose; bagging, by inhaling a substance inside a paper or plastic bag; huffing from an inhalant-soaked rag; or inhaling from balloons filled with nitrous oxide.

# Inhalants

## Quick Facts

- Inhalants are volatile substances that produce chemical vapors that can be inhaled through the nose or mouth to induce a psychoactive, or mind-altering, effect.
- Although other abused substances can be inhaled, the term "inhalants" is used to describe a variety of substances whose main characteristic is that they are rarely, if ever, taken by any route other than inhalation.

# Inhalants

## Quick Facts

- Hundreds of everyday household products are being used by kids to get a quick high by sniffing directly from an open container or "huffing" from a rag soaked in the substance held to the face.
- Common inhalants used to get high include rubber cement, paint thinner, nail polish remover, gasoline, correction fluids and bleach.

# Inhalants

## Quick Facts

### Effects of inhalants

- Inhalant use can cause a number of health problems, including suffocation and even death.
- *Short-term*: heart palpitations, breathing difficulty, dizziness, headaches and possibly death.
- *Long-term*: depression, damage to the brain, nerve cells, heart, lungs, liver, kidney, and possibly death.

# Inhalants

## Quick Facts

### Severe health consequences of inhalant use:

- *Suffocation* - from inhaling fumes when head is covered in a plastic bag
- *Convulsions or seizures* - caused by abnormal electrical discharges from the brain
- *Coma* - brain shuts down almost all but most vital functions
- *Choking* - occurs after inhalation of vomit following inhalant use
- *Fatal injury* - from accidents suffered while intoxicated

# Inhalants

## Quick Facts

### Physical signs of inhalant use

- Unusual breath odor or chemical odor on clothing
- Spots and/or sores around the mouth
- Nausea and/or loss of appetite
- Slurred or disoriented speech
- Drunk, dazed or dizzy appearance
- Red or runny eyes or nose

# Inhalants

## Quick Facts

### Why do young people use inhalants instead of other drugs?

- The products are widely available, inexpensive, easy to conceal and legal.
- Most users do not realize how dangerous inhalants can be. Many young people start because they don't think these substances can hurt them.
- Once hooked, they find it a tough habit to break.

# Inhalants

## Quick Facts

### Who is at risk for using inhalants?

- Inhalants are second only to marijuana in terms of adolescent drug use, and all kids are at risk.
- Youth drug use cuts across all geographic, socio-economic, racial and ethnic boundaries.

# Inhalants

## Quick Facts

- Use of inhalants has continually increased for the past six years among 10th graders. (Monitoring the Future, 2007)
- According to the most recent Monitoring the Future Study, relatively low proportions of 8th and 10th graders think that there is a "great risk" in using inhalants.

# Inhalants

## Quick Facts

- The National Survey on Drug Use and Health indicates a correlation between early inhalant use and delinquent behaviors, substance abuse and other problems later in life.
- Research shows that inhalant use is also associated with symptoms of depression.

# Inhalants

## Signs of Inhalant Abuse

- Chemical odors on breath or clothing
- Paint or other stains on face, hands, or clothes
- Hidden empty spray paint or solvent containers and chemical-soaked rags or clothing
- Drunk or disoriented appearance
- Slurred speech
- Nausea or loss of appetite
- Inattentiveness, lack of coordination, irritability, and depression
- Missing household items

# Inhalants

- Inhalants are breathable chemical vapors that produce psychoactive (mind-altering) effects.
- Although people are exposed to volatile solvents and other inhalants in the home and in the workplace, many do not think of "inhalable" substances as drugs because most of them were never meant to be used in that way.
- Young people are likely to abuse inhalants, in part, because inhalants are readily available and inexpensive.
- Parents should see that these substances are monitored closely so that children do not abuse them.

# Inhalants

## Solvents

- Industrial or household solvents or solvent-containing products, including paint thinners or solvents, degreasers (dry-cleaning fluids), gasoline, and glues
- Art or office supply solvents, including correction fluids, felt-tip-marker fluid, and electronic contact cleaners

# Inhalants

## Gases

- Gases used in household or commercial products, including butane lighters and propane tanks, whipping cream aerosols or dispensers (whippets), and refrigerant gases
- Household aerosol propellants and associated solvents in items such as spray paints, hair or deodorant sprays, and fabric protector sprays
- Medical anesthetic gases, such as ether, chloroform, halothane, and nitrous oxide (laughing gas)

# Inhalants

## Nitrites

- Aliphatic nitrites, including cyclohexyl nitrite, which is available to the general public
- amyl nitrite, which is available only by prescription
- and butyl nitrite, which is now an illegal substance

# Inhalants

## Health Hazards

- Nearly all abused inhalants produce effects similar to anesthetics, which act to slow down the body's functions.
- When inhaled in sufficient concentrations, inhalants can cause intoxicating effects that can last only a few minutes or several hours if inhalants are taken repeatedly.
- Initially, users may feel slightly stimulated; with successive inhalations, they may feel less inhibited and less in control; finally, a user can lose consciousness.

# Inhalants

## Health Hazards

### Signs of Depression.

- Research shows that inhalant use is also associated with symptoms of depression.
- The same research showed that depressed teens were more than three times as likely to start using inhalants than teens with no symptoms of depression.
- The reverse is also true, showing that teens often started using inhalants before depression began.

# Inhalants

## Irreversible Hazards

- Inhalants are toxic.
- Chronic exposure can lead to brain damage or nerve damage similar to multiple sclerosis; damage to the heart, lungs, liver and kidneys; and prolonged abuse can affect thinking, movement, vision and hearing.
- Sniffing highly concentrated amounts of the chemicals in solvents or aerosol sprays can directly induce heart failure and death.

# Inhalants

## Irreversible Hazards

- Heart failure results from the chemicals interfering with the heart's rhythm regulating system, causing the heart to stop beating.
- This is especially common from the abuse of fluorocarbons and butane-type gases.
- High concentrations of inhalants also cause death from asphyxiation, suffocation, convulsions or seizures, coma, choking or fatal injury from accidents while intoxicated.

# Inhalants

## Irreversible Hazards

### Hearing loss

- toluene (paint sprays, glues, dewaxers) and trichloroethylene (cleaning fluids, correction fluids)

### Peripheral neuropathies or limb spasms

- hexane (glues, gasoline) and nitrous oxide (whipping cream, gas cylinders)

### Central nervous system or brain damage

- toluene (paint sprays, glues, dewaxers)

# Inhalants

## Irreversible Hazards

### Bone marrow damage

- benzene (gasoline)

### Liver and kidney damage

- toluene- containing substances and chlorinated hydrocarbons (correction fluids, dry- cleaning fluids)

### Blood oxygen depletion

- organic nitrites ("poppers," "bold," and "rush") and methylene chloride (varnish removers, paint thinners)

# Inhalants Prevention

- Parents can keep their teens away from inhalants by talking to them and letting them know the dangers of inhalants.
- Most young users don't realize how dangerous inhalants can be.
- Inhalants are widely available and inexpensive, and parents should be mindful about how and where they store common household products.

# Heroin

- Years ago, thoughts of using a needle kept many potential heroin users at bay.
- Not anymore. Today's heroin is so pure, users can smoke it or snort it, causing more kids under 18 to use it.
- Kids who snort or smoke heroin face the same high risk of overdose and death that haunts intravenous users.
- Yet according to polls, more than 40% of high school seniors do not believe that there is a great risk in trying heroin.

# Heroin

- Recent studies suggest there is a shift from injecting to snorting or smoking heroin, because of increased purity and the misconception that these forms of use will not lead to addiction.

# Heroin

- Heroin is processed from morphine, a naturally occurring substance extracted from the seed-pod of the Asian poppy plant.
- Heroin usually appears as a white or brown powder.
- Street names associated with heroin include "smack," "H," "skag," and "junk."
- Other names may refer to types of heroin produced in a specific geographical area, such as "Mexican black tar."

# Heroin

- The short-term effects of heroin abuse appear soon after a single dose and disappear in a few hours.
- After an injection of heroin, the user reports feeling a surge of euphoria ("rush") accompanied by a warm flushing of the skin, a dry mouth, and heavy extremities.
- Following this initial euphoria, the user goes "on the nod," an alternately wakeful and drowsy state.
- Mental functioning becomes clouded due to the depression of the central nervous system.



# Heroin

## Health Hazards

### Irreversible effects.

- Heroin abuse is associated with serious health conditions, including fatal overdose, spontaneous abortion, collapsed veins, and infectious diseases, including HIV/AIDS and hepatitis.

# Heroin

## Health Hazards

### Long-term effects.

- Long-term effects of heroin include collapsed veins, infection of the heart lining and valves, abscesses, cellulitis, and liver disease.
- Pulmonary complications, including various types of pneumonia, may result from the poor health condition of the abuser, as well as from heroin's depressing effects on respiration.

# Heroin

## Health Hazards

### Infection

- In addition to the effects of the drug itself, street heroin may have additives that do not readily dissolve and result in clogging the blood vessels that lead to the lungs, liver, kidneys, or brain.
- This can cause infection or even death of small patches of cells in vital organs.

# Over-the-Counter Drugs

## Abuse Where You Least Expect It

- Think that drug abuse among teens is limited to illegal substances like marijuana and club drugs such as Ecstasy?

**Think again.**

# Over-the-Counter Drugs

- If you're like most parents, you're probably not aware that a number of over-the-counter (OTC) products can potentially be abused by teens looking to get high.
- But it's important to educate yourself about the potential abuse of consumer products found right in your home.
- It is important to know the facts about OTC product and medication abuse and make a habit of closely monitoring the use of certain household substances

# Over-the-Counter Drugs

- **Talk with preteens and teens** about the proper use of all medications (including those that are available over the counter) and the health risks associated with their abuse.

# Over-the-Counter Drugs

- One category of products sometimes abused by teenagers that few parents know about is OTC cough and cold remedies.
- The OTC cough and cold medications available in your local pharmacy, supermarket or convenience store are safe and effective when used as directed.
- But some youth are drawn to an ingredient found in nearly half of these medications called dextromethorphan, or DXM.
- When taken in excessive doses, dextromethorphan can produce a high or cause psychoactive effects.

# Over-the-Counter Drugs

## What is dextromethorphan or DXM?

- Dextromethorphan is a cough-suppressing ingredient in a variety of OTC cold and cough medications.
- It is found in more than 125 OTC products and comes in various forms, most commonly in cough suppressants in caplet or liquid form.

# Over-the-Counter Drugs

## Why are teens abusing products that contain dextromethorphan?

- Dextromethorphan is a safe and effective cough suppressant when used as indicated on the product label.
- However, when taken in doses that far exceed the amount recommended, the ingredient may produce feelings of euphoria that some seek to get "high."

# Over-the-Counter Drugs

- A teenager looking to get high or experiment with drugs may turn to OTC cough and cold preparations that contain dextromethorphan because they are readily available at home or the local drug store.
- Dextromethorphan can also be purchased in a bulk powder form on the Internet.
- Some Web sites encourage teenagers to abuse dextromethorphan and actually offer "recipes" for the best way to achieve a high.

# Over-the-Counter Drugs

## What does dextromethorphan do?

- Depending on the dose, DXM's effects vary.
- Misuse of the drug creates both depressant and mild hallucinogenic effects.
- Users report a set of distinct dose-dependent "plateaus" ranging from a mild stimulant effect with distorted visual perceptions at low doses to a sense of complete dissociation from one's body.

# Over-the-Counter Drugs

- If a child consumes large doses of a product containing dextromethorphan, it may cause a number of adverse effects, including impaired judgment and mental performance, loss of coordination, dizziness, nausea, hot flashes, dissociation, and hallucinations.
- Another major concern is the risk incurred when abusers get high and engage in activities requiring reasonable judgment and quick reactions, like driving or swimming. The effects induced by overdose of DXM can make these activities deadly.

# Over-the-Counter Drugs

## How can I tell if my child is abusing dextromethorphan?

- You should be concerned if you notice that your child is taking excessive amounts of a cold and flu remedy, or if he or she continues to take medicine even after symptoms have subsided.
- Likewise, if cough and cold medications seem to disappear from the medicine cabinet or if you find packages of cough and cold preparations in the child's room or backpack, he or she may be abusing the product.

# Over-the-Counter Drugs

## What else can I do?

- Talking with teens and staying in touch with their lives are the first steps to keeping them free from abusing consumer products and medications.
- Following are a few basic preventative steps that you can take to help your child understand the importance of using OTC medications responsibly and help discourage abuse of dextromethorphan.

# Over-the-Counter Drugs

## Talk to your child.

- Speak with your children often about the importance of carefully following directions on the labels of all OTC medications.
- Help them understand the dangers of abusing OTC cough and cold medications.

# Over-the-Counter Drugs

## Be mindful of the season.

- Your child can benefit from medicinal relief of cough, cold, and flu symptoms by taking OTC cough and cold preparations according to the instructions on the manufacturer's label.
- But be aware if your child is using cough and cold medications outside of cold and flu season or if he or she continues to self-medicate after symptoms have subsided.

# Over-the-Counter Drugs

## Check your home.

- Take a quick inventory of all consumer products kept in your home.
- Be aware of the products in your medicine cabinet, and ask questions if you notice that any products are used frequently or disappear.

# Over-the-Counter Drugs

Monitor your child's Internet use.

- Unfortunately, there are Internet sources that sell dextromethorphan in a bulk powder form or encourage teens to share their experiences with abusing dextromethorphan.

# Over-the-Counter Drugs

- These individual sites are not regulated so it becomes increasingly imperative that you be aware of where your child is getting information on the Internet, what sites he/she is spending time on, or with whom he/she may be communicating.
- Ask them why they think the information that appears there is true or false.
- Do they think the source is credible?
- Ensure your child's Internet time is properly supervised.

# Over-the-Counter Drugs

## What can you do?

Think about your home.

- What prescription and over-the-counter (OTC) drugs do you have?
- Where are they kept?
- Would you know if some were missing?
- The good news is that you can take steps immediately to limit access to these drugs and help keep your teen drug-free.

# Over-the-Counter Drugs

## What can you do?

Safeguard all drugs at home.

- Monitor quantities and control access.
- Take note of how many pills are in a bottle or pill packet, and keep track of refills.
- This goes for your own medication, as well as for your teen and other members of your household.

# Over-the-Counter Drugs

## What can you do?

- If you find you have to refill medication more often than expected, there could be a real problem—someone may be taking your medication without your knowledge.
- If your teen has been prescribed a drug, be sure you control the medication, and monitor dosages and refills.

# Over-the-Counter Drugs

## What can you do?

- Set clear rules for teens about all drug use, including not sharing medicine and always following the medical provider's advice and dosages.
- Make sure your teen uses prescription drugs only as directed by a medical provider and follows instructions for OTC products carefully.

# Over-the-Counter Drugs

## What can you do?

- This includes taking the proper dosage and not using with other substances without a medical provider's approval.
- Teens should never take prescription or OTC drugs with street drugs or alcohol.
- If you have any questions about how to take a drug, call your family physician or pharmacist.

# Over-the-Counter Drugs

## What can you do?

- Be a good role model by following these same rules with your own medicines.
- Examine your own behavior to ensure you set a good example.
- If you misuse your prescription drugs, such as share them with your kids, or abuse them, your teen will take notice.
- Avoid sharing your drugs and always follow your medical provider's instructions.

# Over-the-Counter Drugs

## What can you do?

- Properly conceal and dispose of old or unused medicines in the trash.
- Unused prescription drugs should be hidden and thrown away in the trash.
- So that teens or others don't take them out of the trash, you can mix them with an undesirable substance (like used coffee grounds or kitty litter) and put the mixture in an empty can or bag.

# Over-the-Counter Drugs

## What can you do?

- Unless the directions say otherwise, do NOT flush medications down the drain or toilet because the chemicals can pollute the water supply.
- Also, remove any personal, identifiable information from prescription bottles or pill packages before you throw them away.

# Over-the-Counter Drugs

## What can you do?

- Ask friends and family to safeguard their prescription drugs as well.
- Make sure your friends and relatives, especially grandparents, know about the risks, too, and encourage them to regularly monitor their own medicine cabinets.
- If there are other households your teen has access to, talk to those families as well about the importance of safeguarding medications.

# Over-the-Counter Drugs

## What can you do?

- If you don't know the parents of your child's friends, then make an effort to get to know them, and get on the same page about rules and expectations for use of all drugs, including alcohol and illicit drugs.
- Follow up with your teen's school administration to find out what they are doing to address issues of prescription and over-the-counter drug abuse in schools.

# Over-the-Counter Drugs

## What can you do?

- Talk to your teen about the dangers of abusing prescription and over-the-counter drugs.
- These are powerful drugs that, when abused, can be just as dangerous as street drugs.
- Tell your teen the risks far outweigh any "benefits."

# Over-the-Counter Drugs

## Depressants

- Depressants, or downers, are often prescribed by doctors to treat a variety of health conditions including anxiety and panic attacks, tension, acute stress reactions, and sleep disorders.
- When given in high doses, depressants may act as anesthesia.
- Often referred to as sedatives and tranquilizers, depressants are substances that can slow normal brain function.

# Over-the-Counter Drugs

## Depressants

- While different depressants work in unique ways, they produce a drowsy or calming effect that can help those suffering from anxiety or sleep disorders.
- Because they can produce a state of intoxication, they have a high potential for abuse.

# Over-the-Counter Drugs

## Depressants

### Examples of Depressants

- Barbiturates are a type of depressant often prescribed to promote sleep.
- Benzodiazepines are a type of depressant prescribed to relieve anxiety.

# Over-the-Counter Drugs Depressants

## Are Teens Abusing Depressants?

- Depressants such as sedatives and tranquilizers have been growing in popularity among teens.
- In 2007, six percent of high school seniors reported abusing depressants including Valium and Xanax, compared to four percent in 1995.

# Over-the-Counter Drugs

## Depressants

- Physical side effects include dilated pupils and slurred speech; relaxed muscles; intoxication; loss of motor coordination; fatigue, respiratory depression; sensory alteration; and lowered blood pressure.
- Teens taking barbiturates may exhibit side effects such as slurred speech, dizziness, sedation, drowsiness, and fever.

# Over-the-Counter Drugs

## Depressants

- Psychological side effects include poor concentration or feelings of confusion; impaired judgment; and lowered inhibitions.
- Teens on barbiturates may experience depression, fatigue, confusion, and irritability.
- **If you have observed any of the symptoms or side effects listed above, contact a medical professional immediately.**

# Over-the-Counter Drugs

## Depressants

- Withdrawal symptoms include anxiety, insomnia, muscle tremors, and loss of appetite.
- Going "cold-turkey" off of some depressants can have life-threatening complications, cause convulsions, delirium, and in rare instances, death.

# Over-the-Counter Drugs

## Depressants

- Because all depressants work by slowing the brain's activity, when someone stops taking them, the brain's activity can rebound and race out of control, possibly leading to seizures and other serious consequences.
- Symptoms including shallow breathing, clammy skin, dilated pupils, weak and rapid pulse, coma, or death.

# Over-the-Counter Drugs Depressants

## Interactions with Depressants

- Depressant abuse is often combined with the use of other drugs like alcohol, other prescription drugs, over-the-counter drugs, and street drugs like marijuana.
- Combining these substances can be highly dangerous.

# Over-the-Counter Drugs Depressants

## Alcohol

- Using depressants with alcohol can slow both the heart and breathing and may lead to death.
- When combined with alcohol, the effects and risks of depressants are seriously increased.

# Over-the-Counter Drugs Depressants

## Prescription drugs.

- Some interactions with other drugs can be risky.
- Depressants should be used in combination with other medications only under a physician's close supervision.

# Over-the-Counter Drugs Depressants

## Over-the-counter drugs

- Depressants should not be combined with any other medication or substance that causes central nervous system depression, including some over-the-counter cold and allergy medications.
- Doing so may slow the heart and breathing, a serious health risk.

# Over-the-Counter Drugs

## Depressants

### Street or Slang Terms for Depressants

- Benzos,
- xanies,
- xani-bars,
- xani-bombs
- roofies

# Over-the-Counter Drugs Painkillers or Opioids

## What are painkillers or opioids?

- Opioids are drugs that contain opium or are derived from and imitate opium.
- They are prescribed for pain relief and are only available by prescription.

# Over-the-Counter Drugs Painkillers or Opioids

- Most opioid or painkilling drugs are non-refillable and, when used properly under a medical doctor's supervision, are safe and effective.
- Opioid drugs act by effectively changing the way a person experiences pain.

# Over-the-Counter Drugs

## Painkillers or Opioids

- Morphine derivatives (or "narcotics") come from opioids and are used to therapeutically treat pain, suppress coughing, alleviate diarrhea, and induce anesthesia.
- When using these narcotics, abusers experience a general sense of well-being by reduced tension, anxiety, and aggression.

# Over-the-Counter Drugs Painkillers or Opioids

## Examples of Painkillers

- Some of the most well-known painkillers are listed below with the names you might find on a prescription label.
- Note that although painkillers have different potencies and are taken in different ways, when they are abused, all pose a risk for addiction and other serious effects.

# Over-the-Counter Drugs

## Painkillers or Opioids

- Codeine: like morphine, this is found in opium, is weaker in action than morphine, and is used especially as a painkiller.
- Fentanyl (and fentanyl analogs): a man-made opioid painkiller similar to morphine that is administered as a skin patch or orally.
- Morphine: the powerful, active ingredient of opium is used as a painkiller and sedative.

# Over-the-Counter Drugs

## Painkillers or Opioids

- Opium: from the opium poppy, formerly used in medicine to soothe pain but is now often replaced by derivative alkaloids (as morphine or codeine) or man-made substitutes (opioids).
- Hydrocodone: often combined with acetaminophen for use as a painkiller. Vicodin is an example.
- Oxycodone: a narcotic painkiller, for example OxyContin, Percocet, and Percodan

# Over-the-Counter Drugs Painkillers or Opioids

## Are Teens Abusing Painkillers?

- Painkillers like OxyContin and Vicodin are the prescription drugs most commonly abused by teens.
- In fact, within the past year nearly one in 10 high school seniors has abused Vicodin and more than five percent of seniors have abused OxyContin

# Over-the-Counter Drugs

## Painkillers or Opioids

- Painkillers are also the most abused type of prescription drugs by 16- to 17-year-olds, followed by stimulants, tranquilizers, and sedatives.
- Almost two out of five teens report having friends that abuse prescription painkillers and nearly three out of 10 report having friends that abuse prescription stimulants.

# Over-the-Counter Drugs Painkillers or Opioids

## How Do Teens Take Painkillers?

- There are several ways painkillers can be taken.
- Most teens report swallowing pills, but they can also be crushed and snorted for an intensified effect.

# Over-the-Counter Drugs

## Painkillers or Opioids

### Short-term effects

- Painkillers can cause drowsiness, inability to concentrate, apathy, lack of energy, constriction of the pupils, flushing of the face and neck, constipation, nausea, vomiting, and most significantly, respiratory depression.

# Over-the-Counter Drugs Painkillers or Opioids

## Long-term effects

- If a teen abuses painkillers for a period of time, he can become addicted to the drug and experience withdrawal symptoms when he stops taking the drug.
- Associated with addiction is tolerance, which means more and more of the drug or a combination of drugs is needed to produce the same high or euphoric feeling, possibly leading to overdose.

# Over-the-Counter Drugs Painkillers or Opioids

## What Is a Painkiller Overdose?

- Physical signs of painkiller overdose include pinpoint pupils, cold and clammy skin, confusion, convulsions, severe drowsiness, and slow or troubled breathing.

# Over-the-Counter Drugs Painkillers or Opioids

## What Is Painkiller Withdrawal?

- Due to the physical dependence produced by chronic use of opioid painkillers, teens who are prescribed opioid medications need to be monitored not just when they are appropriately taking the medicine, but also when they stop using the drug to reduce or avoid withdrawal symptoms.
- Symptoms of withdrawal can include restlessness, muscle and bone pain, insomnia, diarrhea, vomiting, cold flashes, and involuntary leg movements.

# Over-the-Counter Drugs Painkillers or Opioids

## Street or Slang Terms for Painkillers

- Oxies
- OC
- oxycotton
- 80s
- percs
- vikes
- vikings

# Over-the-Counter Drugs

## Stimulants

- Stimulants are sometimes prescribed by doctors to treat conditions such as asthma, respiratory problems, obesity, attention deficit/hyperactivity disorder (ADHD), and sleep disorders like narcolepsy.
- This class of drug is often abused for its ability to produce euphoric effects or to counteract sluggish feelings induced by tranquilizers or alcohol.

# Over-the-Counter Drugs

## Stimulants

- In the hands of teens, stimulants are taken to stay awake, increase alertness and concentration, boost energy, and get high. Sometimes teens go beyond swallowing these pills.
- If they are prescribed drugs for ADHD, they can save up their pills during the week and share them with friends at weekend parties.
- They then crush and snort them, or mix with alcohol.
- Teens also report saving and selling their own ADD drugs around exam time.

# Over-the-Counter Drugs

## Stimulants

### Examples of Stimulants

- Amphetamines and dextroamphetamine are stimulant drugs whose effects are similar to cocaine.
- Methamphetamine is a highly addictive stimulant drug that is part of a larger family of amphetamines.
- Methylphenidate is a central nervous system stimulant. It has effects similar to, but stronger than, caffeine and less potent than amphetamines.

# Over-the-Counter Drugs

## Stimulants

- Physical side effects include dilated pupils; decreased appetite; loss of coordination; collapse; increased heart and respiratory rates; elevated blood pressure; dizziness; tremors; headache; flushed skin; chest pain with palpitations; excessive sweating; vomiting; and abdominal cramps.

# Over-the-Counter Drugs

## Stimulants

- Psychological side effects include feelings of restlessness, anxiety, and delusions; hostility and aggression; and panic, suicidal, or homicidal tendencies.
- Paranoia, often accompanied by auditory and visual hallucinations, may also occur.

# Over-the-Counter Drugs

## Stimulants

- If you have observed any of the symptoms or side effects listed above, be mindful of the possibility of withdrawal or overdoses, as well.
- Withdrawal symptoms associated with discontinuing stimulant use may include depression, disturbance of sleep patterns, fatigue, and apathy.

# Over-the-Counter Drugs

## Stimulants

- Overdose or death is preceded by high fever, convulsions, and heart failure. Since death in these cases is partially due to strain on the heart, physical exercise increases the risks of stimulant use.

### Interactions with Stimulants

- Stimulant abuse often goes along with the use of other substances like alcohol, other prescription drugs, over-the-counter drugs, and the use of illegal substances like marijuana.

# Over-the-Counter Drugs

## Stimulants

### Street or Slang Terms for Stimulants

- Ritz
- rippers
- dexies
- bennies

# Over-the-Counter Drugs

## Steroids

- "Steroids" refers to the class of drugs used to treat a wide variety of conditions, from supporting reproduction (e.g., estrogen) and regulation of metabolism and immune function, to increasing muscle and bone mass and treating inflammation and asthma (e.g., cortisone).

# Over-the-Counter Drugs

## Steroids

### What Are Anabolic Steroids?

- "Anabolic" steroids are the class of steroids used to increase muscle and bone mass.
- These drugs are manufactured in a laboratory to imitate the male sex hormone, testosterone.
- Despite the fact that there are various types of steroids, teens tend to abuse the "anabolic" muscle-building kind.

# Over-the-Counter Drugs

## Steroids

- While anabolic steroids are available legally by prescription, they are most often prescribed to treat conditions that occur when males produce abnormally low amounts of testosterone, which can result in delayed puberty, osteoporosis (weak bones), and impotence.
- They are also prescribed to treat body wasting in patients with AIDS and other diseases that result in loss of lean muscle mass.
- However, abuse of anabolic steroids can lead to serious health problems, some irreversible.

# Over-the-Counter Drugs Steroids

## Why Steroids Are Dangerous to Teens

- As a parent, you have the challenge of explaining to your teen why use of steroids is a serious issue.

# Over-the-Counter Drugs

## Steroids

- First, while they are sometimes prescribed to treat medical conditions like cancer, there are significant health risks in using them outside a health professional's care.
- Typically, in those situations, the benefits of steroid use under a physician's supervision outweigh the risks, and they can improve the patient's quality of life.

# Over-the-Counter Drugs

## Steroids

- Second, both men's and women's bodies produce a certain level of testosterone.
- When teens take steroids, they are adding more testosterone to their growing bodies, which throws off their hormonal balance.

# Over-the-Counter Drugs

## Steroids

- Third, since steroids are often taken by injection, there is also increased risk of HIV and/or hepatitis infection from an unsterile needle or syringe.
- While there are many reasons teens take steroids, there are natural opportunities to talk to your child about all the reasons they should stay far away from steroids.

# Over-the-Counter Drugs

## Steroids

Here are a few suggestions:

- When your teen gets more involved with competitive sports.
- If you find your teen is growing more preoccupied with body image, such as wanting to gain more muscle or appear leaner.
- If you notice your child's friends are hitting their growth spurts and "filling out."

# Over-the-Counter Drugs

## Steroids

Make sure your teen understands that the effects of steroid abuse may include:

- sterility
- damage to the cardiovascular system and liver
- increased risk of injury
- disease, such as increased levels of cholesterol, causing a thickening of arterial walls that could ultimately be life threatening

# Over-the-Counter Drugs

## Steroids

### Signs and Symptoms

- Noticeable weight gain, particularly more muscle
- Hair loss and premature balding
- Severe acne
- Mood swings, from depression to aggressiveness
- Increased injuries, specifically to tendons
- Yellow tinge to the skin (indicates abnormal liver function)
- Needle marks in large muscle groups
- Needles or syringes in your teen's belongings

# Over-the-Counter Drugs

## Steroids

- If you notice any of this, talk with your teen immediately and be very clear that no drug use is allowed - and discuss the serious health risks with him.
- It's also important that you speak with a family physician.
- Some health effects are reversible, like acne and mood swings, while others (such as baldness and stunted growth) are not.
- A doctor should also supervise and help your teen stop taking steroids safely.

# Over-the-Counter Drugs

## Steroids

### Where Do Teens Get Steroids?

- Since anabolic steroids are available only by prescription, and because they are regulated like narcotics, anabolic steroid abusers often obtain the drugs illegally.
- Some of the ways abusers can get steroids include: purchasing steroids manufactured in an illegal drug laboratory, smuggling from other countries, purchasing through Internet sales, or stealing from pharmacies.

# Over-the-Counter Drugs

## Steroids

- Forms of anabolic steroids containing androstenedione or "andro" can be purchased legally without a prescription through many commercial sources, including health food stores.
- An anabolic steroid precursor is a steroid that the body converts into an anabolic steroid.
- There is evidence that they may increase the risk of serious, long-term health problems.

# Over-the-Counter Drugs

## Steroids

Anabolic steroids can be taken in the following ways:

- Injection directly into the bloodstream
- Swallowed as tablets or capsules
- Ointments or patches (through the skin)
- Preparations that are placed between the cheek and gum of mouth
- Doses taken by abusers can be up to 100 times more than the doses used for treating medical conditions.

# Over-the-Counter Drugs

## Steroids

### Short-term effects

- Effects vary by individual, but general short-term negative effects for both sexes include hostility, aggression, and acne.
- Steroids can have a magnified effect on teens since their bodies are still growing.
- Any unnatural substances, such as anabolic steroids, that are designed to physically alter a body before adulthood, can result in stunting height, and this can be permanent.

# Over-the-Counter Drugs

## Steroids

- Males may experience shrunken testicles, difficulty or pain in urinating, become infertile or impotent, development of breasts, hair loss, and increased risk for prostate cancer.
- Girls can experience an excessive growth of body and facial hair, male-pattern baldness, decreased body fat and breast size, changes in or cessation of the menstrual cycle, and a deepened voice.

# Over-the-Counter Drugs

## Steroids

### Long-term effects

- High blood pressure
- Increased risk of blood clotting
- Increases in LDL (bad cholesterol)
- Decreases in HDL (good cholesterol)
- Jaundice (yellowish skin color, tissues, and body fluids)
- Liver cysts and cancer
- Kidney cancer
- Fluid retention

# Over-the-Counter Drugs

## Steroids

- Severe acne<sup>12</sup>
- Mental effects
- Many users report feeling good about themselves while on anabolic steroids, but researchers report that extreme mood swings also can occur, including hyperactivity or agitation, and uncontrolled aggression (known as "roid rage"), which can lead to violence.

# Over-the-Counter Drugs

## Steroids

### What Is Steroid Withdrawal?

- Many steroid abusers feel strong and "happy" when they are using.
- When they stop, they can experience feelings of depression, which can result in dependence.
- Researchers also report that users may suffer from paranoid jealousy, extreme irritability, delusions, and impaired judgment stemming from feelings of invincibility.

# Over-the-Counter Drugs

## Steroids

### Street or Slang Terms for Steroids

- Arnolds
- gym candy
- juice
- pumpers
- stackers
- weight trainers