



What is a systectic drug?

ynthetic drugs are created using man-made chemicals rather than natural ingredients.

A number of synthetic drugs on the market, including Ecstasy, LSD and methamphetamine, are described in other booklets in *The Truth About Drugs* series. This booklet gives the facts about "synthetic marijuana" (Spice or K2), "synthetic stimulants" (Bath Salts) and a drug known as "N-bomb." These are among the synthetic drugs known as "designer drugs."

DESIGNER DRUGS A RISKY EXPERIMENT

To understand what synthetic marijuana and Bath Salts are, and how they came to exist, you have to know what a "designer drug" is. A designer drug is a synthetic (chemically made) version of an illegal drug that was slightly altered to avoid having it classified as illegal. It is essentially an experiment by a chemist done to create a new drug that can be sold legally (on the Internet or in stores), allowing dealers to make money without breaking the law. As law enforcement catches up with new chemicals that are so created and makes them illegal, manufacturers devise altered versions to steer clear of the law. So the cycle repeats.

Some of these drugs are sold over the Internet or in







SYNTHETIC MARIJUANA NOTA NATURAL EIGH

ynthetic marijuana, most commonly known as Spice or K2, is a mixture of herbs and spices that are sprayed with a chemical with similarities to THC, the mind-altering ingredient found in marijuana.

Synthetic drugs such as Spice and K2 are often falsely advertised as "safe," "natural" and "legal" highs. The truth is that they are technically not legal and are *definitely* not natural or safe.

Chemical analyses have shown that, in all cases, the active ingredients in these drugs are synthetic chemicals with dangerous toxic effects. Beyond that, because the chemical composition of products sold as Spice or K2 is unknown, users have no idea what chemicals

they are putting into their bodies or what the effects will be. And, as herbs and spices can be sprayed unevenly, the potency can vary wildly.

Synthetic marijuana has the appearance of dried leaves and is often sold in small, silvery plastic bags as "herbal incense" or "potpourri." It is also advertised in liquid form for use in vaporizers.

It is often smoked in rolled joints, pipes or e-cigarettes, and some users make it into a tea or use it in brownie recipes. It has also been taken in vaporized form through the nose or in liquid form.









- Calls to poison control centers related to synthetic marijuana use increased in the United States by almost 80 percent between 2010 and 2012.³
- A 2013 U.S. government report found the number of emergency department visits in 2011 involving toxic reactions to synthetic marijuana had increased 2.5 times, to 28,531.1
- In 2014, "K2" from a Texas dealer was linked to 120 overdoses in Austin and Dallas in one week alone.

There have been numerous fatal car accidents documented involving people under the influence of synthetic marijuana:

- While jogging, a 62-year-old man was struck by a 20-year-old man who tested positive for synthetic marijuana.
- Another 20-year-old man smashed into a tree and died after smoking synthetic marijuana.
- A brother and sister were killed when a garbage truck drove 500 feet across a highway divider at 55 mph and sliced off the roof of their vehicle. The driver of the truck admitted to using synthetic marijuana.







SYNTHETIC MARIJUANA LONG-TERM BOTTES

he long-term effects on humans are not fully known, but poison center experts report that effects of synthetic marijuana can be life-threatening.

It can be addictive and lead to withdrawal symptoms which include craving, nightmares, heavy sweating, nausea, tremors, headaches, extreme tiredness, insomnia, diarrhea, vomiting, problems thinking clearly and neglect of other interests or duties.

After repeated and long-term use of the drug, users can experience forgetfulness and confusion. Some users have reported experiencing paralysis.

The Wyoming Department of Health found 16 cases of kidney injury following use of the drug in six U.S. states.⁴





PARALYZED AFTER SMOKING SPICE

"After using Spice for several weeks, I woke up early one night, fell to the floor, couldn't move my legs and couldn't move my hips. All I could do was drag myself by my forearms and that wasn't making it anyway so I laid on the floor for 13 hours, screaming, pounding the floor asking for help. Doctors say another two hours and I would have been dead. I'm going to be in the hospital for a long time to come." —L.D.

THIS IS WHAT HELL IS

"I want to share my experience with K2. It ruined my life. When I tried smoking K2 for the first time, it was like everything dissolved into what seemed like the fuzz on the TV screen. I remember thinking 'This is what hell is.' All I could feel was awful fear. I heard

voices of family members, flashbacks to when I was younger, the worst experience I've ever had. I was shaking horribly, and I felt terrified and sick. Ever since that day, I have had awful anxiety on a daily basis. I had to quit school because my anxiety was so bad."—I.W.

10





IAM JUST NOT ALL THERE ANYMORE

"I overdosed on Spice and I haven't been the same since. I was just sitting there smoking until it all hit me. I couldn't see right or walk and then I threw up about 6 or 7 times. I woke up my mom and she laid me down on the couch and called the ambulance. About 10 minutes before the ambulance showed up, I started to have seizures. I woke up in a hospital bed on life support. I had gone into cardiac arrest* for a few hours and they thought I wasn't going to wake up, but I survived it and I have not been the same. I stutter a lot now and I can't concentrate on anything. I'll be telling a story and just go blank and not know what happened. I always see these dots and I am just not all there anymore."—D.Y.

* cardiac arrest: a sudden, sometimes temporary, stopping of the heart

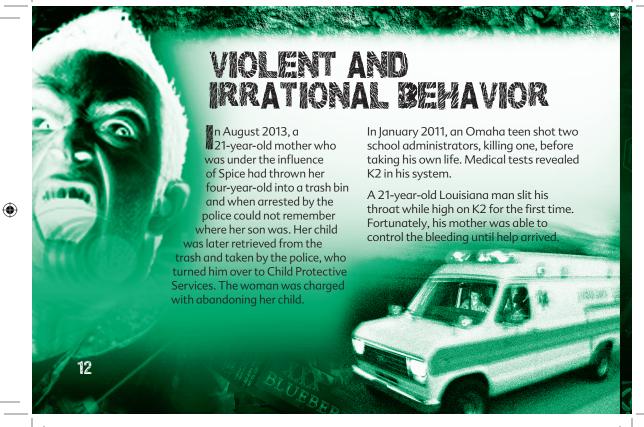
A FORMER ADDICT

"I am a former addict of synthetic marijuana. I became hooked while on probation. I used it to get high and still beat drug tests. I went from a gram or less a day to over 3 or 4 a day. As my addiction progressed, my ability to control basic behaviors and motor skills** deteriorated. I grew more aggressive when I became upset, which became more frequent the more and longer I used. One morning I had a psychotic break during which I blacked out and almost killed my wife. I was arrested and my probation was revoked. Since being released, I share my experience with others to encourage them not to use this drug."—S.W.



^{**} motor skills: intentional movement of muscles to perform specific acts









K9 Summite Me i dim

Synthetic marijuana, sold as "Spice," first appeared in Europe in 2004 and in the U.S. in 2008. Chemicals used to make synthetic marijuana, however, were created for experimental purposes decades ago. These include:

- CP 47,497, named after Charles Pfizer of Pfizer Pharmaceuticals, developed in the 1980s for scientific research.
- HU-210, named after Hebrew University of Jerusalem where it was first developed in 1988. It is 100 to 800 times more potent than natural THC (the mind-altering ingredient in marijuana).⁵
- JWH-018 and others in the JWH series, named after Prof. John W. Huffman of Clemson University in South Carolina, created in 1995.

In 2010, the U.S. Drug Enforcement Administration used emergency powers to control these chemicals, and in 2012 a law was passed banning the substances found in synthetic marijuana.

Underground chemists then developed new experimental drugs, UR-144 and XLR11, that mimic the effects of marijuana, to replace those that had been banned. In 2013, UR-144 and XLR11 were made illegal, but by that time a new generation of synthetic marijuana had surfaced. The point is not whether these drugs are illegal. Studies show they are toxic and unsafe.

There are more than a hundred different varieties of synthetic "marijuana" that have been created so far. Because the chemical content is constantly changing, buyers never know what effects the drugs will have on the body.⁶



WEAT ARE BATE SALTS?

hemicals sold as "Bath Salts" are not bath salts used in a tub, but toxic drugs whose effects are unpredictable.

Many of the substances in these drugs were banned in the U.S. because of their harmful effects, and dealers use Bath Salts and other names to get around the law. They are also falsely advertised as "plant food," "jewelry cleaner," "phone screen cleaner," and labeled "not for human consumption" to escape arrest by law enforcement.

Bath Salts don't refer to any single drug, but rather a group of similar substances, chemically-made versions of a type

of drug found in the Khat plant, an evergreen shrub from East Africa and southern Arabia. In the same way that Spice and K2 are referred to as synthetic marijuana, Bath Salts are referred to as synthetic stimulants. They can also cause hallucinations like that of LSD.

Bath Salts often contain a varied mix of chemicals, so even if the packaging looks the same, one never knows what the product actually contains. It is usually sold in powdered form in small plastic or foil packages. It can be white, off-white, yellow or brown and may also be sold in capsules or tablets, or in small jars in liquid form.

Users have reported snorting or injecting it, or mixing it with food or drink. This can include "bombing" it (swallowing it wrapped in cigarette paper), taking it rectally, inhaling it using a vaporizer or smoking it.





SATE SALTS STREET SAFE

Bath Salts manufacturers create many names for their products to attract as many customers as possible. Some of these names include:

- Arctic Blast
- Aura
- Avalance or Avalanche
- Bliss

- Blizzard
- Bloom
- Blue Silk
- Bolivian Bath
- Cloud 9
- Cotton Cloud
- Drone

- Dynamite or DynamitePlus
- Euphoria
- Glow StickHurricane
- Hurricane Charlie
- Ivory Snow
- Ivory Wave or Ivory Wave Ultra
- Lunar Wave

- Mexxv
- Mind Charge or Mino Charge
- Monkey Dust
- MysticNatural
- Energy Powder
- Ocean Snow
- Purple Wave
- Quick Silver

- Recharge
- Red Dawn
- Red Dove
- Rock OnRocky
- Rocky Mountain High
- Route 69
- Sandman Party Powder
- Scarface
- Sextasy

- Shock Wave
- Snow Day
- Snow
- Leopard
 Speed Freak
 Miracle
- Stardust
- Super Coke
- TranquilityUP Energizing or UP
 - Supercharged

- Vanilla Sky
- White Burn
- White ChinaWhite Dove
- White
- Lightning
- White Rush
- White Sands
- Wicked X or XX
- Zoom















BATH SALTS SHORT-TERM EFFECTS

There have been many instances of users experiencing violent, psychotic and life-threatening episodes after using "Bath Salts."

- Effects on the Mind:
- Uncontrollable craving for the drug
- Insomnia
- False euphoria rapidly evolving into paranoia
- Nightmares
- Depression
- Severe agitation
- Hallucinations and delusions
- Self-harm
- Suicidal thoughts or suicide
- Psychosis
- Violent behavior

- · Effects on the Body:
- Skin rash
- Mephedrone stink, (the person smells like mephedrone, a drug used in Bath Salts)
- Skin-crawling sensation
- Excessive sweating
- High fever
- Loss of appetite
- Sexual dysfunction
- Nosebleed and "nose burns"
- Pain at the back of the mouth
- Ringing or buzzing in the ears
- Excessive grinding of teeth

- Muscular cramping or tension
- Numbness/tingling
- Dizziness
- Blurred vision
- Rapid involuntary movement of the eyes
- Nausea and vomiting
- Chest pains and heart attacks
- Headaches
- Seizures
- Brainstem herniation (increase of pressure inside the skull that can cause death)







BATH SALTS LONG-THREE HIFF HICTS

The harm caused by Bath Salts can be long-term and permanent, including:

- Increased blood pressure and heart rate
- Kidney damage and failure
- Liver damage
- Breakdown of skeletal muscle tissue (muscles that bring about the movement of the bones of the skeleton)
- Brain swelling and brain death
- Death

A 2013 study found that one of the main substances used in Bath Salts, known as MDPV (3,4-methylenedioxypyrovalerone), was highly addictive—possibly more so even than meth (methamphetamine), one of the most addictive drugs around.⁷

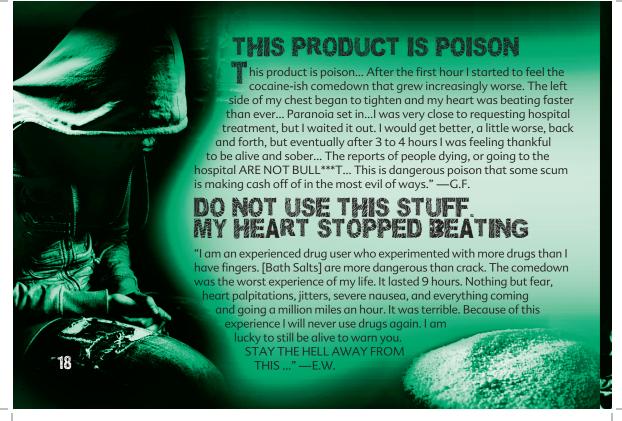
Bath Salts were linked to nearly 23,000 emergency department visits in the United States in 2011.⁸ Another study in the Midwestern United States found that more than 16 percent of patients sent to hospital emergency rooms

of patients sent to hospital emergency rooms due to Bath Salt abuse were in critical condition or died.⁹

The adverse effects of MDPV can last as many as six to eight hours after use; it has been reported to cause prolonged panic attacks, psychosis and deaths.









•

BATE SALTS: A SECRI EISTORY

The drugs now known as Bath Salts were first synthesized (artificially created) in France in 1928 and 1929. Some were originally researched for potential medical use, but most of the drugs created were unsuccessful due to severe side effects, including dependency. Abuse of these drugs started in the former Soviet Union in the 1930s and 40s, where they were used as antidepressants. Also known as "Cat" and "Jeff," they gained popularity in the United States in the 1990s.

Between 2004 and 2008, these drugs were used in Israel until the key ingredient was made illegal. By 2007, they had gained

broader popularity among drug abusers when they began to appear on Internet drug forums.

"Ecstasy" pills analyzed in the Netherlands in 2009 found that over half the pills did not contain the primary drug that Ecstasy is associated with, but rather drugs found in Bath Salts.¹⁰

In 2012, two of the key drugs used in Bath Salts were made illegal in the U.S.¹¹ However, underground chemists then created new variations with slightly different chemical formulas—and promoted them openly as Bath Salts, or repackaged them as "Glass Cleaner" or other names.





WHAT IS N-BOMB?

-BOMe, commonly referred to as "N-bomb" or "Smiles," is a powerful synthetic hallucinogen sold as an alternative to LSD or mescaline (a hallucinogenic drug made from a cactus plant). There are several variations of this drug, but 25I-NBOMe, often shortened to "25I," is its most abused and potent form. Effects of only a tiny amount of the drug can last for up to 12 hours or longer.

N-bomb creates a hallucinogenic effect similar to LSD at extremely small dosages. Users report the negative effects and after-effects of the drug are worse than that of LSD. It also mimics the effects of methamphetamine.¹²

A dose of 750 micrograms, considered an average to high dose, is about the size of six small grains of regular table salt.

N-bomb is sold in liquid or powdered form or on soaked blotter paper. It has a strong bitter metallic taste, and some dealers add mint or fruit flavoring to the liquid and blotter varieties.

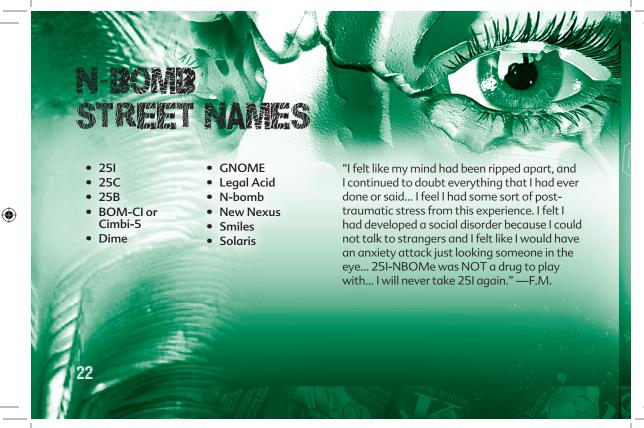
As N-bomb creates no effect if swallowed, users place it under their tongue, where it gets absorbed. Some users inject it, smoke the powdered form, breathe it through the nose, vaporize and inhale it, or insert it rectally. Any of these uses are dangerous as only a few grains produce an effect, and it is extremely easy to overdose—with sometimes fatal consequences.













N-BOMB SMORT-TERM EFFECTS

Effects on the Mind:

- Visual and auditory (relating to hearing) hallucinations
- Confusion and disorientation
- Scrambled communication
- Aggression
- Paranoia and panic
- Agitation
- Insomnia

Effects on the Body:

- Shaking
- Nausea/vomiting
- Fainting and loss of consciousness
- Muscle spasms
- Difficulty breathing
- High white cell count
- Rapid heart rate

- High acid level in the body (potentially leading to coma and death)
- Extremely high blood pressure
- · Extremely high fever
- Seizures/involuntary flailing and thrashing
- Kidney failure
- Heart attack
 - Respiratory failure
- Bleeding in the brain

"We managed to put my friend in the car... During the trip my friend unbuckled the seat belt and tried to open his door and jump out while the car was moving at about 60 mph.

I tried to get my friend to explain to me everything that happened that day, in order to check his mental state. He was unable to remember ANYTHING that had happened..."





N-BOMB LONG-TERM EFFECTS

In some users, N-bomb causes persistent and severe anxiety and depression that may last for months or years. It shows up as visual hallucinations in the form of trailing colors, widely distorted visual images, and color flashes.

Use of N-bomb can also result in kidney failure or death.

One 18-year-old male user was hospitalized with seizures after his first-time use. Doctors were unable to stop the seizures, and he spent four days in a drug-induced coma.

An 18-year-old man in Minnesota bought a drug without knowing that he was actually purchasing 25I-NBOMe. He sold some to his "friends," they took the drug together and one of the friends began "shaking, growling,

foaming at the mouth" and smashing his head against the ground, according to witnesses. He ultimately passed out and died. The young buyer/dealer was charged with murder.

A 21-year-old man in St. Louis, Missouri, had a similar experience. After taking the drug, his limbs suddenly began to flail around and he started ripping accessories from the car he was riding in. He died shortly thereafter.







"I woke up in the hospital, handcuffed to the bed with a police officer sitting beside me and I had no idea what had happened. Apparently I was lying on the floor and not responding to anything... I had high blood pressure and a racing pulse and was told they were surprised I didn't have a heart attack/stroke or die. At one point while a nurse was trying to take blood, I punched him and had to be restrained. I punched a police officer as well. I was in the hospital for 3 days and was told by several doctors it was a miracle I didn't die that night." —N.B.

"I had no sense of who I was. All I knew was that I was in trouble. This went on for hours... heart rate above 140 beats per minute and my temperature fluctuated wildly. I had no control over my emotions or thoughts, all I knew was that I was terrified. I don't think you understand hell until you come this close to death. Just because I survived this doesn't mean that you will. I truly believe that even 1 milligram more would have killed me. I could have easily died from a heart attack or overheating and am lucky to be alive. This drug isn't worth the risk." —G.M.



A SPORT OF MSTORY OF MSTORY

N-bomb was discovered in 2003 by chemist Ralf Heim at the Free University of Berlin, Germany. It was derived from a group of drugs called the 2C family of phenethylamines (PEA).



The 2C PEA, originally made in labs in the 1970s where scientists were studying brain activity on rats, produces hallucinations and mind-altering experiences similar to LSD.

Nine of the PEA drugs were made illegal in the U.S. in 2012, including the substance used to make N-bomb. 13

Drug dealers produce various versions of N-bomb in secret laboratories or import them in bulk from China, India and other countries. Manufacturers vary the formula in attempts to get around the government bans, and users never know what they are taking or how potent it will be.

An estimated 19 deaths in two years have been linked to the drug in the U.S. alone.¹⁴



•

WHAT DEALERS ON THE INTERNET WILL TELL YOU

Some of the biggest selling points used by dealers in their online false advertising are that their products are "natural" and "legal" and therefore "safe."

Dealers have described Spice or K2 as the "trip of a lifetime," "a fantastic high" and claimed the drug will "turn an ordinary evening into a blissful, exotic encounter."

Websites promoting Bath Salts use marketing slogans such as:

"Get ready to feel like a newborn child."

"Bath Salts will provide you with the energy you need for a long night of fun."

N-bomb is also marketed on websites that

make it appear safe and legal. Some sites try to pass as legitimate pharmacies or chemical distributors, claiming to get their drugs from "reputable laboratories" based in China, India and other countries.

Dealers or promoters will tell you "It's absolutely amazing!"

"You'll feel absolutely wonderful" and "It puts you into another realm."

While this is slick marketing, it does not match the reality of the effects and consequences these drugs actually have.

Get the facts about synthetic drugs. Make your own decisions.



The Truth About Drugs

The number of drugs available continues to grow. Because there are no official controls over the manufacturing of street drugs, it is very hard to know what they contain, how toxic they are, and what effects they can have on the body.

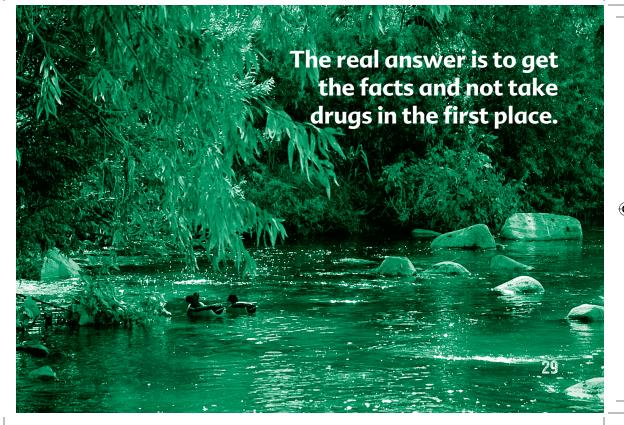
Drugs are essentially poisons. In addition to their physical effects, many drugs have another liability: they directly affect the mind. They can distort the user's perception of what is happening around him or her. As a result, the person's actions may be odd, irrational, inappropriate and even destructive.

Drugs block off all sensations, the desirable ones with the unwanted. So, while providing short-term help in the relief of pain, they also wipe out ability and alertness and muddy a person's thinking.

Medicines are drugs that are intended to change something about the way your body is working to try to make it work better.

Sometimes they are necessary, but they are still drugs: they act as stimulants or sedatives and too much can kill you. So if you do not use medicines as they are supposed to be used, they can be as dangerous as illegal drugs.











WHY DO PEOPLE TAKE DRUGS?

People take drugs because they want to change something in their lives.

Here are some of the reasons young people have given for taking drugs:

- To fit in
- To escape or relax
- To relieve boredom
- To seem grown up
- To rebel
- To experiment

They think drugs are a solution. But eventually, the drugs become the problem.

Difficult as it may be to face one's problems, the consequences of drug use are always worse than the problem one is trying to solve with them. The real answer is to get the facts and not to take drugs in the first place.







REFERENCES

- 1. "DEA News: Huge Synthetic Drug Takedown," Drug Enforcement Administration news release, May 7, 2014.
- 2. Study by Recreational Drug European Network, 2013.
- 3. "Global Synthetic Drugs Assessment," UN Office on Drugs and Crime, 2014.
- 4. "Acute Kidney Injury Associated with Synthetic Cannabinoid Use — Multiple States, 2012," Centers for Disease Control and Prevention (CDC).
- 5. "Lab Results Confirm CBP in Ohio Discover Synthetic Narcotics in Incense Packets," U.S. Customs and Border Protection, January 14, 2009.
- 6. "Comprehensive Drug Information on Synthetic Cannabinoids – 'Spice' and 'K2'," Hunterdown Drug Awareness Program, June 29, 2012.
- 7. Study by The Scripps Research Institute, 2013.
- 8. The DAWN Report, U.S. Substance Abuse and Mental

- Health Services Administration, September 17, 2013.
- 9. "These Aren't Your Grandma's Bath Salts," American College of Emergency Physicians, March 28. 2013.
- 10. "The Toxicology of Bath Salts: A Review of Synthetic Cathinones," Jane M. Prosser, Lewis S. Nelson, Journal of Medical Toxicology, March 2012.
- 11. Synthetic Drug Abuse Prevention Act of 2012.
- 12. "'N-bomb' drug stirs fears among police, doctors," *USA Today*, May 4, 2013.
- 13. "The Synthetic Drug Craze: What Chiefs Need to Know," Emily K. Dye, *The Police Chief*, September 2013.
- 14. "Teen Seizures and Deaths Linked to Dangerous Designer Drug 'N-Bomb' — Part 1," Addiction Treatment Magazine, April 18, 2014.

Other sources: U.S. National Institute on Drug Abuse and U.S. Office of National Drug Control Policy. Millions of copies of booklets such as this have been distributed to people around the world in 21 languages. As new drugs appear on the streets and more information about their effects becomes known, existing booklets are updated and new ones created.

The booklets are published by the Foundation for a Drug-Free World, a nonprofit public benefit organization headquartered in Los Angeles, California.

The Foundation provides educational materials, advice and coordination for its international drug prevention network. It works with youth, parents, educators, volunteer organizations and government agencies—anyone with an interest in helping people lead lives free from drug abuse.





FACTS YOU NEED TO KNOW

This booklet is one in a series of publications that cover the facts about marijuana, alcohol, synthetic drugs, Ecstasy, cocaine, crack cocaine, crystal meth and methamphetamine, LSD, inhalants, heroin, prescription drug abuse, painkillers and Ritalin abuse. Armed with the facts, you can make informed decisions about drugs.



For more information or to obtain more copies of this or other booklets in this series, contact:

Foundation for a Drug-Free World 1626 N. Wilcox Ave., No. 1297 Los Angeles, CA 90028 USA

drugfreeworld.org • info@drugfreeworld.org 1(888) 668-6378 or 1(818) 952-5260

© 2015 Foundation for a Drug-Free World. All Rights Reserved. The Foundation logo is a trademark owned by the Foundation for a Drug-Free World. Item C7141/20841RB-English

