# THE FACTS

About Drug Abuse

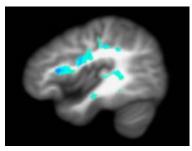
#### 2nd Quarter 2009

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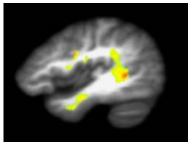
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## Marijuana Use May Damage Developing Brain In Teens



The blue areas mark the regions of most significant brain development in healthy older adolescents.



Yellow areas in the brain of a heavy marijuana smoker show brain regions with the most significant abnormalities. These areas correspond with those under development during normal adolescent years.

To All Of Our School Clients,

Adolescents and young adults who are heavy users of marijuana are more likely than non-users to have disrupted brain development, according to a new study.

Pediatric researchers found abnormalities in areas of the brain that interconnect brain regions involved in memory, attention, decision-making, language and executive functioning skills.

The findings are of particular concern because adolescence is a crucial period for brain development and maturation. "Studies of normal brain development reveal critical areas of the brain that develop during late adolescence, and our study shows that heavy cannabis use is associated with damage in those brain regions," said study leader Manzar Ashtari.

"Our work reinforces the idea that the adolescent brain may be especially vulnerable to risky behaviors such as substance abuse, because of crucial neural development that occurs during those years."

Credit: The Children's Hospital of Philadelphia Link to Study: http://stokes.chop.edu/publications/press/?ID=444

## Notes from Ray Kubacki



Raymond Kubacki, Chairman & CEO Psychemedics Corporation

#### DRUG STATISTICS

50% of teens have tried an illicit drug by the time they finish high school

Nationwide, 25.4% of students had been offered, sold or given an illegal drug by someone on school property

41% of 8th graders, 73% of 10th graders and 86% of all 12th graders consider marijuana easily accessible

Welcome to our first quarterly school edition of <u>The Facts About Drug Abuse</u>. We are very proud to have you as our client, and we think of all our clients as being our partners. We want to make sure we keep you informed on all the latest trends and developments in the substance abuse area, as well as key developments in our service. We hope this newsletter will help you in that regard.

Because you may be getting contacted by other companies claiming to do hair testing, I would like to point out that all hair testing is <u>not</u> the same; and we have not licensed our technology to any company. The key to doing an effective hair test is to be able to get the drugs out of the hair. Psychemedics has patents on the ability to get virtually 100% of the drug out of the hair. This is very basic to the process. If you can't get the drugs out of the hair, you can't measure them! Because of our patents, others attempting to do hair testing have to use a less effective method. Other companies may try to portray that all hair testing is the same, it is not. We would be happy to discuss the significant differences between our patented method versus any others.

Once again, I would like to say that we are very proud to be working with you on this very important program. You have the commitment of our entire team. Deterring drug use is indeed a very important initiative.

Best Regards, Ray Kubacki



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#### Ecstasy Is Back In A Dangerous New Form

## Did You Know ??

Most of the commonly abused drugs except for marijuana rapidly leave the fluids of the body. This leads to a very short detection window (2-3 days) using other testing methods such as urinalysis or oral fluids. Drugs are permanently incorporated in the hair as it grows, which provides a much longer detection period. Psychemedics' hair analysis can typically detect drug use over approximately several months! The White House Office of National Drug Control Policy is warning about a dangerous new drug threat coming from Canada – Ecstasy laced with Methamphetamine. This dangerous combination can have severe health consequences, especially as both drugs have toxic effects on the brain. They can interfere with the body's ability to regulate temperature, leading to sharp increases in body temperature (hyperthermia), which can result in liver, kidney, and cardiovascular system failure and death. The potential for a life-threatening or fatal overdose is also increased when meth-laced Ecstasy is combined with alcohol.

Alarmingly, more than 55% of the Ecstasy samples seized in the US last year contained Methamphetamine. Cutting their product with less expensive Methamphetamine boosts profits for Canadian Ecstasy producers, likely increases the addictive potential of their product, and effectively gives a dangerous "face lift" to a designer drug that had fallen out of fashion with young American drug users.

## **Teens Turn To Prescription Painkillers**

A number of national studies and published reports indicate that the intentional abuse of prescription drugs to get high is a growing concern – particularly among teens in the United States.

In fact, among young people ages 12-17, prescription drugs have become the second most abused illegal drug, behind marijuana.

There are troubling signs that teens view abusing prescription drugs as safer than illegal drugs and parents are unaware of the problem. Teens are abusing prescription drugs because they believe the myth that these drugs provide a medically safe high.

To view the full report visit: www.theantidrug.com/pdfs/ TEENS\_AND\_PRESCRIPTION\_D RUGS.pdf





#### **SUMMARY**

There are just as many new abusers of prescription drugs as there are for marijuana.

Pain relievers such as OxyContin and Vicodin are the most commonly abused prescription drugs by teens.

After marijuana, the most common drugs teens are using to get high are prescription medications.

The majority of teens get prescription drugs easily and free from friends or relatives.

Adolescents are more likely than adults to become dependent on prescription medication.

In the last 10 years, the number of teens going into treatment for addiction to pain relievers increased by more than 300%.

## FUN FACTS: Hair Can Support 12 Tons of Weight

Hair is incredibly strong. An average head of 120,000 hairs could withstand the strain of 12 tons, if the scalp were strong enough! This is due to the amazing way the keratin (the essential component of hair) is organized in the cortex. The cortex is also where traces of ingested drugs are deposited. Psychemedics' patented process releases the drug from the cortex upon liquefying the hair.



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"The combination of the lack of parental involvement and the accessibility of prescription and nonprescription drugs can create a gateway of abuse, especially in a poor economy" While significant coverage of the economic slowdown has focused on financial subjects such as foreclosures, bank bailouts, and business cutbacks, one segment of society which sometimes gets overlooked is youth.

Substance abuse has always been a prevalent issue with youth, but a struggling economy is pushing both youth and their parents toward more substance abuse.

The combination of the lack of parental involvement and the accessibility of prescription and nonprescription drugs can create a gateway for experimentation and abuse, especially in a poor economy, according to Robin Testerman, Director of the Children's Center of Surry.

Youth More At Risk In Struggling Economy

"The economic situation puts more stress on the family dynamics and parents become less involved because they are anxious about providing for the basic needs of their family and children. They may have to work more hours at several jobs to make ends meet therefore spending less quality time with their children."

Testerman said the lack of supervision from parents can be a contributor to the

increase of alcohol and drug use by youth.

"It is so hard as parents are struggling and their lives are busy, they're trying to make a living," she said. "Kids are exposed to more things, like text messaging and the influence of the Internet. Parents are the anti-drug, positive parental involvement deters children from drinking and substance abuse."

View the full article: http://www.mtairynews.com

## "CHEESE HEROIN" Schools & Police trying to stop the drug from spreading



CHEESE HEROIN

A cheap, highly addictive drug known as "Cheese Heroin" is a growing trend among teenagers in the Dallas area and authorities are hoping they can stop the fad before it spreads across the nation.

Drug dealers are targeting children with its low selling price (as low as \$2 a hit). By using the name "Cheese," the dealers are marketing the low-grade heroin to a younger crowd who is unaware of its potential dangers.

What It Is: Black tar heroin and crushed Tylenol PM tablets

How It's Used: Tan colored powder usually snorted through the nose with a tube, straw or ballpoint pen

**Symptoms of Use:** Excessive thirst, drowsiness, euphoria, disorientation, sleepiness and hunger, sudden change in grades and friends

**Symptoms of Withdrawal** (may begin a within a few hours of use): Mood swings, insomnia, nausea, chills, muscle spasms, anxiety

Why its so deadly: The sedative effects of the heroin and the nighttime sleep aid make for a deadly brew (2 downers at once) **Statistics:** Cheese has caused over 25 deaths in the Dallas area and the number of arrests involving Cheese increased by more than 60% from 2006-2007

"News reports indicate that young people begin using 'Cheese' because they wrongly believe the drug is not really heroin and is, therefore, not as dangerous," said U.S. Sen. John Cornyn. "A public awareness campaign is key to correcting this misconception and reversing the tide of this dangerous new drug."



Superior Detection of Drug Abuse

#### PSYCHEMEDICS CLIENT SERVICES INFO:

Client Services hours: 6:00 AM—5:30 PM PST Monday – Friday

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Phone: 800.522.7424 Fax: 800.643.2354 Education is not the filling of a bucket, but the lighting of a fire.

-- W. B. Yeats



### **About Psychemedics:**

Psychemedics was established in 1987 to provide testing for drugs of abuse using hair analysis, and has been successfully operating for over 20 years. Thousands of corporations currently rely on Psychemedics' patented hair analysis technology for their pre-employment and employee drug screening. Psychemedics is headquartered in Boston and has offices in Dallas, Chicago, Los Angeles and Las Vegas. Our Laboratory is located in Culver City, CA. Psychemedics is a publicly-held corporation listed on NASDAQ under the ticker symbol PMD.