

DRUGS ARE PART OF THE AMERICAN CULTURE

HIGHLIGHTS:

The numbers of people in America using drugs suggests drugs are part of our culture.

Drug	Number of People in America Who Used the Drug in the Past Month¹	Past Month Use Per 1000 Persons in America²
1. Heroin	200,000	1
2. Amphetamines	800,000	3
3. Cocaine/Crack	1.5 Million	6
4. Marijuana	10 Million	38
5. Alcohol	11 Million Abusers ³ / 110 Million Users	41 414
6. Nicotine	61 Million	230
7. Caffeine	130 Million	490

¹ *TIME*, May 5, 1997, "Addicted" by J. Madeleine Nash, pp. 69-72.

² Based on total U.S. population of 265,283,783 as of July 1, 1996. Figures from Population Division, U.S. Bureau of Census, Washington D.C.; numbers are rounded to the nearest whole number.

³ Abusers are defined here as taking five or more drinks on the same occasion on each of five or more days in the past 30 days by the source data - National Household Survey on Drug Abuse (SAMHSA).

—Compiled & Published

by

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I. INTRODUCTION & METHODOLOGY

Many political, community and law enforcement leaders have been teaching and/or preaching "zero tolerance" for drugs.

Such teachings seem inconsistent with the substantial use of drugs in America.

The data presented in this booklet was excerpted from the May 5, 1997 *TIME* article "Addicted" by J. Madeleine Nash; the population figures as of July 1, 1996 from the Population Estimates Program, Population Division, U.S. Bureau of the Census, Washington D.C.; the past month use per thousand persons in America was calculated by taking the number of persons using each drug in the past 30 days divided by the total population as of July 1, 1996, multiplied by 1000.

II. WHAT IS A DRUG?

Dorland's Illustrated Medical Dictionary (1985) defines a drug as "any chemical compound that may be used on or administered to humans or animals as an aid in the diagnosis, treatment, or prevention of disease or other abnormal condition, for the relief of pain and suffering, or to control or improve any physiological or pathological condition."¹

III. HIGHLIGHTS FROM THE *TIME* ARTICLE:

Q-Why do certain substances have the power to make us feel so good? Why do some people fall so easily into drug addiction, while others can literally take them or leave them?

Many scientists are convinced that what ties all these mood-altering substances together is their remarkable ability to elevate levels of a common substance in the brain called dopamine.

Dr. Nora Volkow, of the Brookhaven National Laboratory in New York, has published strong evidence that the surge of dopamine in an addict's brain is what triggers a cocaine high. This evidence is part of the mounting evidence which supports many doctors belief that dopamine is the master molecule of addiction.

Q-What is dopamine and how is it related to addiction?

Dopamine is a neurotransmitter² in our brain which has been linked with pleasure sensation. At a purely chemical level, every experience which humans find desirable--whether listening to music, embracing a lover, or savoring chocolate--amounts to little more than an explosion of dopamine in our brain.

Many scientists believe that dopamine plays a key role in drug addiction and there is increasing evidence to support their belief. Amphetamines stimulate dopamine -- producing cells to pump out more of the chemical. Cocaine keeps dopamine levels high by inhibiting the activity of a transporter molecule that would normally ferry dopamine back into the cells that

¹ As per 21 USCS §802, a controlled substance is "a drug or other substance, or immediate precursor, included in schedule I, II, III, IV, or V of part B of [21 USCS §812]."

² Neurotransmitters are chemicals which carry signals between nerve cells, or neurons, in the brain.

produce it. Nicotine, heroin and alcohol trigger a complex cascade that raises dopamine levels. A still unknown chemical in cigarette smoke, a group led by chemist Jennifer Fowler of the Brookhaven National Laboratory in New York reported last year, may extend the activity of dopamine by blocking a mopping-up enzyme, called MOA_B, that would otherwise destroy it.

These findings have been furthered by Volkow's study which suggest that dopamine is directly responsible for the exhilarating rush that reinforces the desire to take drugs, at least in cocaine addicts. Thus, the addicts do not crave heroin or cocaine or alcohol or nicotine, per se, but want the rush of dopamine that the drugs produce.

These findings help explain the irrational act of taking drugs by addicts. The brain classifies the use of drugs as "good" because of the increased dopamine levels which they produce. In the absence of these drugs, the brain experiences a dopamine deficit. So, while addicts begin by taking drugs to feel high, they end up taking them in order not to feel low.

The dopamine hypothesis provides a basic framework for understanding how a genetically encoded trait--such as a tendency to produce too little dopamine--might intersect with environmental influences to create serious behavioral disorders. According to Volkow, addiction is "a disorder of the brain no different from other forms of mental illness."

IV. COMPARISON OF EFFECTS AND USE OF SEVEN DRUGS¹:

Drug	Effects	# of People in America Who Used Each Drug in the Past Month
Heroin	Triggers release of dopamine; acts on other neurotransmitters.	200,000
Amphetamines	Stimulate excess release of dopamine.	800,000
Cocaine/Crack	Block dopamine absorption.	1.5 Million
Marijuana	Binds to areas in brain involved in mood and memory; triggers release of dopamine.	10 Million
Alcohol	Triggers dopamine release; acts on other neurotransmitters.	11 Million Abusers ² / 110 Million Users ³
Nicotine	Triggers release of dopamine.	61 Million
Caffeine	May trigger release of dopamine.	130 Million ⁴

¹ Sources: *TIME* May 5, 1997, Substance Abuse and Mental Health Association (SAMHSA) and the National Coffee Association.

² Abusers are defined here as taking five or more drinks on the same occasion on each of five or more days in the past 30 days.

³ Users are defined as those taking at least one drink in the past 30 days.

⁴ Coffee drinkers only; adding caffeinated tea, soda, other caffeinated food and beverage takers, diet pills and caffeine pill consumption would significantly increase this number.

V. CONCLUSIONS

- A. A drug to one person may not necessarily be considered a drug to another.
- B. Much of the scientific and medical community don't know about drugs, and a good many things about drugs knowledgeable people disagree on.
- C. The fact that many people are teaching and preaching a drug-free America while over 12,500,000 Americans are using illegal drugs (heroin, amphetamines, cocaine/crack and marijuana) and probably 150,000,000 are using legal ones, suggests any "drug free" or "zero drug tolerance" policy differs greatly from reality.

—SCM

Steven C. Markoff is a Santa Monica, California businessman with an interest in U.S. drug policy.
This report is one of a series that looks at various facts related to our nation's drug policy.

Other reports include:

—#5 "*Drugs are a Part of American Culture*"

—#4 "*Federal Drug Control Spending vs. the Price, Purity, Availability and Consumption of Cocaine in the U.S.*"

—#3 "*Marijuana's Contribution to Preventable Deaths in the United States in 1990*"

—#2 "*Addictiveness of Marijuana vs. Five Commonly Used Drugs*"

—#1 "*STATE-BY-STATE MARIJUANA Laws (as of December 31, 1996)*"

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