

MAINE STATE LEGISLATURE

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Maine

STATE ARCHIVE
AUGUSTA, MAINE

77

MARIJUANA IN MAINE – THE SOCIAL, LEGAL AND MEDICAL ISSUES

- marijuana use in the U.S.; 1971-1976
- the deterrent effect of criminal penalties
- decriminalization and increased use
- decriminalization and cost savings
- judicial, prosecutorial and police disapproval of decriminalization
- the health hazards of marijuana use
- marijuana arrests; 1965-1976

prepared for the 108th Maine Legislature

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GENERAL BACKGROUND from the National Governor's Conference Marijuana Study released March, 1977.

" Marijuana usage is not a recent phenomenon, but rather is embeded in our social and cultural history. The marijuana plant has been grown in this country since the 17th century when colonists derived fiber (hemp) from it for use in rope and cloth. This use continued through the 19th century, although hemp was slowly replaced by cotton and wool as a fiber souce. Marijuana was also used in the 18th and 19th centuries as a medicinal herb.

While it is not clear when marijuana use as an intoxicant began in the United States, it was only in the 20th century that it became a widely discussed public issue. Initially, marijuana was associated with criminal activity and the harder drugs such as heroin. States began passing marijuana prohibition statutes in 1914 and the Federal Government passed its first marijuana prohibition legislation in 1937. In the decades that followed, both state and federal law underwent several increases in the severity of the penalty structure. It is only recently that a combination of medical/scientific information and increased usage has fostered movements to reconsider the existing generally severe penalty structure.

This movement appears to have as its roots the relatively recent (mid-1960's) spread of use to larger segments of the middle class, the schools and universities, and the work force. Government enforcement and medical efforts were no longer affecting only small segments of the population generally not part of the economic and political mainstream, but began to include substantial elements of the general population..."

FRAMING THE ISSUES from the Federal Strategy for Drug Abuse Prevention prepared by the Strategy Council on Drug Abuse, November, 1976.

"In light of the widespread recreational use of marijuana and the relatively low social cost associated with this type of use, an increasing number of people have begun to question the appropriateness of applying a criminal sanction against marijuana users. Without doubt, the threat of a criminal sanction will discourage some potential users. On the other hand, society pays a relatively high price for this form of deterrence: high in terms of stigmatizing casual users with criminal records; high in terms of diverting limited criminal justice resources from other, more serious matters; and high in terms of contributing to an atmosphere which nurtures disrespect for the law.

A number of States and foreign governments have begun to experiment with a variety of alternative approaches to discouraging marijuana use. We believe the Federal Government should carefully assess the experience of these States and foreign governments with a view toward building an empirical data base that would enable policymakers at all levels to weigh the costs versus the benefits of the various alternatives. We should know, for example, how "decriminalization" of possession of marijuana has affected the number of users, the frequency of use and public attitudes in jurisdictions which have decriminalized, and how it has impacted on the criminal justice system within those jurisdictions. Additionally, the Federal Government should give particular attention to identifying the likely international implications of a shift in U.S. policy, in that a number of Latin American governments have expressed

concern about this prospect, interpreting it as a signal of generally lowered concern about drug abuse.

The recommendation for this kind of analysis should not be construed as a call for decriminalization of marijuana or of any other drug. It is not. But we must attempt to identify and quantify the costs and benefits of alternative approaches to discouraging drug use to ensure that we are pursuing our policies in the most effective manner..."

1. USE OF MARIJUANA IN THE UNITED STATES.

- A. Source: Non medical Use of Psychoactive Substances, released by the National Institute on Drug Abuse, U.S. Department of Health, Education and Welfare, September, 1976. [Tables 1, 2 and 3 are the results of a 1976 national survey of 2,590 adults and 986 juveniles]

Conclusion:TABLE 1 MARIJUANA EXPERIENCE

	<u>Adults (18+)</u>				<u>Juveniles (12-17)</u>			
	<u>1971</u>	<u>1972</u>	<u>1974</u>	<u>1976</u>	<u>1971</u>	<u>1972</u>	<u>1974</u>	<u>1976</u>
Ever Used								
Marijuana	15%	16%	19%	21.3%	14%	14%	23%	22.4%
Current User								
(Within Month)	5%	8%	7%	8.0%	6%	7%	12%	12.3%
Began Smoking								
Within								
Last Year*	*	*	2%	2.8%	*	*	9%	8.2%

*Not included in 1971 and 1972 Surveys.

TABLE 2 MARIJUANA EXPERIENCE AMONG PARTICULAR SUBGROUPS

	<u>Have Ever Used</u>		<u>Current Users</u>	
	<u>1974</u>	<u>1976</u>	<u>1974</u>	<u>1976</u>
Age (Adults)				
18-25	53%	53%	25%	25%
26-34	29%	36%	8%	11%
35-49	7%	6%	1%	1%
50+	2%	--	--	--
Age (Youth)				
12-13	6%	6%	2%	3%
14-15	22%	21%	12%	13%
16-17	39%	40%	20%	21%
Sex (Adults)				
Male	24%	29%	9%	11%
Female	14%	14%	5%	5%
Sex (Youth)				
Male	24%	26%	12%	14%
Female	21%	19%	11%	11%

1. USE OF MARIJUANA IN THE UNITED STATES (continued)

<u>Adults</u>	<u>Possession</u>		<u>Sale</u>	
	<u>1974</u>	<u>1976</u>	<u>1974</u>	<u>1976</u>
No penalty	16%	17.8%	7%	7.0%
A fine only	15%	16.3%	15%	15.4%
Probation	21%	20.9%	10%	8.2%
Require treatment	34%	31.3%	1%	1.7%
Up to 1 year in jail	6%	5.2%	27%	31.3%
More than 1 year in jail	4%	4.7%	36%	32.6%
No opinion	4%	3.8%	4%	3.8%

B. Source: Drugs and Youth, YanKelovich, Skelly and White for the Drug Abuse Council, Inc., July, 1976. [Tables 4 and 5 are the results of a 1976 national survey of 1,987 high school and college students]

Conclusion:

	<u>Total High School Students</u>	<u>Total College Students</u>
Have ever used (including experimenters)	48%	64%
Current marijuana users*	25	38
Once or twice a year	--	1
Three to six times a year	2	1
Every month or so	3	4
Several times a month	6	14
Two or three times a week	7	9
Almost every day	6	8
Used in past, but not using now	11	16

*Does not include experimenters.

"Daily use of other drugs such as amphetamines or barbiturates is seldom found among the students."

1. B. USE OF MARIJUANA IN THE UNITED STATES (continued)

TABLE 5EXPOSURE TO DRUGS

	<u>Total High School Students</u>	<u>Total College Students</u>
Marijuana is easy to get	72%	86%
I have been offered drugs by my friends	69%	80%
Marijuana is often at parties I attend	59%	71%

2. DO CRIMINAL PENALTIES SERVE AS A STRONG DETERRENT TO THE PERSONAL USE OF MARIJUANA?

- A. Source: Drug Abuse and the Maine Criminal Justice System - An Attitude and Opinion Survey of Police Chiefs, County Sheriffs, County Attorneys and District Court Judges. Maine Commission on Drug Abuse. 1972

Conclusion: "The great majority of police chiefs and county attorneys interviewed did not feel that the present criminal marijuana laws deter either experimental use, regular use or small sales or gifts*. . . thirty-nine of fifty (78%) police chiefs interviewed and fourteen (100%) of the sheriffs felt that the law was not a deterrent to casual or experimental use. . . 74% of the chiefs and 78% of the sheriffs stated that the law did not deter regular use. . .

Among the legal fraternity, fifteen (94%) of the prosecutors interviewed and ten (83% of the judges interviewed believed that the present law does not deter casual use. . ."

*Note: In 1972 possession of marijuana was punishable by 11 months imprisonment and/or a \$1,000 fine.

- B. Source: Marijuana Survey - State of Oregon, 1974, 1975, 1976, Drug Abuse Council, Inc., Washington, D.C.

Conclusion: "People who have never used marijuana or who have stopped using the drug were asked their reasons. Their responses are found in Table 6.

Sixty-four percent, or nearly two-thirds of those who responded to this question in 1976 said they were "not interested" in using the drug. When the same question was asked in 1974, only 53 percent said they had no interest in using marijuana.

In 1974, 23 percent of the people who responded to this question cited "possible health hazards" as their reason. In the 1976 survey, only 7 percent answered the question this way. The fear of prosecution and the unavailability of the drug did not rank high as reasons for not using marijuana in either 1974 or 1976."

2. DO CRIMINAL PENALTIES SERVE AS A STRONG DETERRENT TO THE PERSONAL USE OF MARIJUANA? (Continued)

TABLE 6

REASONS FOR NOT CURRENTLY USING MARIJUANA

<u>Reason</u>	<u>% Current Non-Users</u>	
	<u>1974</u>	<u>1976</u>
Not Interested	53%	64%
Possible Health Dangers	23%	7%
Possibility of Legal Prosecution	4%	4%
Drug Not Available	2%	4%
Other Reasons	9%	17%
Undecided	4%	9%

C. Source: A First Report on the Impact of California's New Marijuana Law.
California Health and Welfare Agency, January, 1977.

Conclusion:

TABLE 7

REASON FOR NOT CURRENTLY USING MARIJUANA

	<u>February 1975*</u>	<u>November 1976</u>
Possibility of legal prosecution	8%	2%
Not available/Not exposed	4%	2%
Not interested/Don't need it	50%	73%
It might be dangerous to my health	38%	14%
Other reasons	16%	7%

*Adds to over 100 percent since some respondents gave more than one reason.

Note: Decriminalization of marijuana went into effect on January 1, 1976.

2. THE DETERRENT EFFECT OF CRIMINAL PENALTIES (continued)

D. Source: Drugs and Youth. Drug Abuse Council, Inc., Washington, D.C.
July, 1976.

Conclusion: "It seems clear that severe criminal sanctions for possession of marijuana have not deterred millions of young Americans from using that drug... The "fear of getting caught" is not a large factor in a student's decision to use or not to use drugs. The deterrence factor of these laws does not appear to be important. Moreover, if young drug users, the majority of whom apparently exercise discretion, judgement, and self-control in their drug-taking behavior, perceive drug use as a cultural phenomenon..., then the felony penalties for simple possession and use of such drugs, and the criminal records that ensue, can only exacerbate whatever tensions currently exist among generations and encourage a feeling that society, in waging its much publicized "war on drugs", is actually waging a war in its own children..."

3. DOES THE DECRIMINALIZATION OF MARIJUANA RESULT IN AN INCREASE IN MARIJUANA USE?

A. Source: Marijuana Survey - State of Oregon Drug Abuse Council, 1974, 1975, 1976.

Conclusion: "In spite of early predictions, usage of marijuana has not surged. Usage in the three years since decriminalization has increased by no more than five percent in the over 18 age group, and much of this is due to the increase in population in the age group that smokes marijuana, rather than an increase in new smokers."

TABLE 8

Changes in Marijuana Usage

	% Current Users	
	<u>1974</u>	<u>1976</u>
Decreased Usage	40%	39%
Increased Usage	5%	9%
No Change	52%	50%
Undecided	3%	2%

B. Source: A First Report on the Impact of California's New Marijuana Law, 1977

Conclusion: "The reduction in penalties for possession of marijuana for personal use does not appear to have been a major factor in people's decision to use or not to use the drug. Less than three percent of the people surveyed had first tried marijuana within the past year, since the new law became effective, but only one in eight of these new experimenters or users indicated more willingness to try marijuana because legal penalties have been reduced."

3. DOES DECRIMINALIZATION CAUSE AN INCREASE IN USE (continued)

C. Source: National Governors Conference Marijuana Study prepared by Peat, Marwick and Mitchell, Washington, D.C., March, 1977.

Conclusion: "Numerous studies indicate that more than one in every five individuals older than 12 has used marijuana at least once (i.e., over 37 million people). Currently, regular users are fewer but the numbers are still substantial: 8 percent of adults and 12 percent of the nation's youth. In total, marijuana is the third most frequent nonmedically used drug (after cigarettes and alcohol), and the overall trend toward increased use in the last decade is clearly evident, although recent data indicate that the pattern of use may be leveling off (tables summarizing usage data are included in Volume 3).

Penalty reduction policies have a potential impact on usage patterns in terms of use incidence, intensity, and nature (e.g., public versus private use). Opponents of decriminalization contend that the withdrawal of criminal sanctions will increase consumption; on the other hand, some proponents contend that existing sanctions are being widely ignored, and usage patterns would not change.

Of the states included in our survey, only California has recently conducted a survey of usage patterns both prior to and subsequent to the effective date of the law. Consequently, the consumption impact assessment for this study primarily used the subjective judgment of key knowledgeable public officials. Although most interviewees suggested that there was considerable concern that usage would increase dramatically, and that those first states to implement decriminalization approaches would encounter an influx of users from nondecriminalized states, neither of these patterns has occurred or is occurring, according to those public officials interviewed except for those interviewed in Los Angeles, California."

4. DOES THE DECRIMINALIZATION OF MARIJUANA RESULT IN CRIMINAL JUSTICE COST SAVINGS AND A MORE APPROPRIATE UTILIZATION OF CRIMINAL JUSTICE RESOURCES?

Source: A First Report of the Impact of California's New Marijuana Law, January, 1977.

Conclusion: "A major objective of the legislation was to reduce the estimated \$100 million in costs to the Criminal Justice System for handling marijuana offenders...Estimated costs were compared between the first half of 1976 and the same period in 1975, and although the data are incomplete, and probably conservative, there has been a reduction of approximately 75% in law enforcement and judicial system costs."

Source: National Governors Conference Marijuana Study performed by Peat, Morwick and Mitchell, Washington, D.C., March, 1977.

Conclusion: "Until 1975, marijuana-related arrests increased significantly faster than use (perhaps reflecting either intensified law enforcement activity or greater display and use of the drug in public). In 1975, marijuana use arrests exceeded 400,000, which represents almost 70 percent of all drug-related offenses. The related enforcement costs for this level of activity are clearly substantial, both in total dollar cost and as a percentage of various drug enforcement budgets. At issue is the potential cost impact of reduced marijuana penalties on the criminal justice system. The available evidence, although incomplete, strongly suggests that savings of personnel resources and public costs are substantial with respect to law enforcement and the courts.

The data from decriminalized states indicates a decrease in arrests subsequent to the implementation of their laws, thereby decreasing the associated costs. In addition, the magnitude of savings depends upon a number of factors that relate to the nature and specifications of the law. For example, those states with a mandatory citation procedure are likely to save more than those states in which complete arrest and booking procedures are used. It is important to note that these savings accrue from the procedural specification of the law rather than from decriminalization per se.

4. DOES THE DECRIMINALIZATION OF MARIJUANA RESULT IN CRIMINAL JUSTICE COST SAVINGS AND A MORE APPROPRIATE UTILIZATION OF CRIMINAL JUSTICE RESOURCES
(continued)

Savings that will accrue at other points in the criminal justice system include:

- . evidentiary hearings and trial costs;
- . incarceration costs; and
- . probation and parole costs.

Although these savings and/or costs have not been quantified generally, preliminary California studies as well as local data and subjective estimates from other states suggest that substantial dollar savings can be obtained."

5. DOES THE MAINE CRIMINAL JUSTICE SYSTEM APPROVE OR DISAPPROVE OF THE
DECRIMINALIZATION OF MARIJUANA?

Source: An Evaluation of the Maine Experience, conducted by Prof. John Kramer
of the Pennsylvania State University (an LEAA funded project) in
January of 1977.

Conclusion: Responses to the Decriminalization of Marijuana for:

DISTRICT, SUPERIOR AND SUPREME COURT JUDGES

Approve	43.4%
Undecided	23.3%
Disapprove	33.4%

PROSECUTORS

Approve	55%
Undecided	15%
Disapprove	30%

OTHERS: INCLUDING CORRECTIONAL OFFICIALS AND POLICE

Approve	50.0%
Undecided	16.7%
Disapprove	33.3%

6. DOES THE USE OF MARIJUANA REPRESENT A PUBLIC HEALTH PROBLEM?

Source: Marijuana: A Signal of Misunderstanding. National Commission on Marijuana and Drug Abuse (1972) Washington, D.C.

Conclusion: "No conclusive evidence exists of any physical damage, disturbances of bodily processes or proven human fatalities attributable solely to even very high doses of marijuana...From what is now known about the effect of marijuana, its use at the present level does not constitute a major threat to public health..."

Source: Marijuana and Health - The 5th Annual Report to the U.S. Congress, from the Secretary of Health, Education and Welfare (1975)

Marijuana and Health - The 6th Annual Report to the U.S. Congress, from the Secretary of Health Education and Welfare (March, 1977)

"This report, like its five predecessors, summarizes our growing, though still limited, knowledge of the health consequences of marijuana use... Like its predecessors, this report attempts to provide an objective answer to the question "what are the health implications of marijuana use for Americans?"

...from the introduction to the 6th Report

Conclusions:

Driving Ability:

"Evidence that marijuana use at typical social levels definitely impairs driving ability and related skills continues to accumulate. There are now data indicating impairment from laboratory assessment of driving related skills, driver simulator studies, test course performance, actual street driver performance and, most recently, a study conducted for the National Highway Traffic Safety Administration of drivers involved in fatal accidents."

"There are, therefore, several converging lines of evidence that driving performance is impaired by marijuana intoxication, viz.: users' subjective assessments of their driving skills while high, measures of driving related perceptual skills, driver simulator and actual driving performance and, finally, a limited study of actual highway fatalities..."

There is, thus, an obvious need to develop standards in this area for what constitutes driving under the influence of cannabis so as to encourage more responsible use. At present it is clearly desirable to strongly discourage driving while marijuana intoxicated."

...from the 6th Report to Congress

PUBLIC HEALTH (continued)

Chromosome Damage:

"At this time, there is no conclusive evidence that the consumption of marijuana causes chromosome damage. Indeed the two prospective studies carried out as part of large biobehavioral investigations on the effects of marijuana did not show increased break frequencies when baseline and post-exposure values were compared."

...from the 5th Report

"There is little new evidence to report in this area. While there have been reports of increases in chromosomal breaks and abnormalities in human cell cultures, the results to date are inconclusive..."

Overall, there is no convincing evidence at this time that marijuana use causes clinically significant chromosome damage. However, it should be emphasized that the limitations of the research conducted thus far preclude definitive conclusions..."

...from the 6th Report

Disease Resistance and Immunity Response:

"The question of a cannabis induced impairment of the body's immune response remains important because of its potentially far reaching clinical implications. While a number of investigators have published findings that suggest that marijuana may interfere with cell mediated immunity, other investigators have not found such evidence. Some of these differences may reflect procedural variations; nevertheless, the clinical significance of the positive findings remains in considerable doubt..."

...from the 5th Report

"Two years ago a report indicated that a marked reduction in the immune response as measured in white blood cell cultures was found in marijuana smokers compared to non-smokers. This reduction was reported to be comparable to that of patients with known "T-cell" immunity impairment -- uremia, cancer and transplant patients. Attempts to replicate this finding and to explore its implications by testing for immune response depression by other means have resulted in contradictory reports. To further complicate interpretation, it was found that marijuana smokers off the street (i.e., not specifically part of an on-going study) showed a reduction in the type of immune response involving T-cell or thymus dependent lymphocytes (a type of white blood cell involved in preventing disease). This reduction sometimes found in smokers did not, however, persist in users

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smoking quality controlled marijuana in a closed ward research setting..."

"Thus, the issue of possible impaired immune response remains unresolved. There is, as yet, no evidence that users of marijuana are more susceptible to such diseases as viral infections and cancer, which are known to be associated with lowered production of T-cells."

...from the 6th Report

Alterations in Cell Metabolism - "RNA" and "DNA" Interference:

"The implications of laboratory findings of inhibition of DNA, RNA and protein synthesis, all basically related to cellular reproduction and metabolism, are at present unknown. Similarly, no conclusive evidence exists regarding damage to human genetic functioning (i.e. chromosomal damage produced by marijuana)..."

...from the 5th Report

"The implications of laboratory findings on the inhibition of DNA, RNA and protein synthesis (all of which are basically related to cellular reproduction and metabolism) are still unknown. In addition to work previously reported, research last year has found that adding Δ -9-THC to various types of human and animal cell cultures inhibits DNA, RNA and protein synthesis. This study detected no effect on DNA repair synthesis or in the uptake of the chemical precursors into the cell although the amount of these precursors within the cells was reduced by half.

The possibility that cannabis, or one or more of its chemical ingredients, differentially affects the cell metabolism and reproduction of cancer cells in animals was raised by research of the last two years. One aspect of the mechanism by which this may occur is an inhibition of DNA metabolism in abnormal cells but not in normal cells...

There is also the possibility, again related to cell metabolism, that if animal findings of a depressed cell mediated immunity response are substantiated in humans, cannabis might assist with transplant surgery..."

...from the 6th Report

Endocrine Functioning:

"The Fourth and Fifth Marijuana and Health Reports discussed a reported reduction in blood levels of testosterone in smokers and the contradictory findings."

"The question of the biological significance of the previously reported alterations in testosterone and growth hormone levels remains in doubt. It may well be that these findings will ulti-

PUBLIC HEALTH (continued)

mately prove more significant for individuals with already impaired fertility or other evidence of marginal endocrine functioning than for normal individuals.

Recent reports of reduced testosterone levels of heavy alcohol consumers may make the clinical separation of marijuana and alcohol effects more difficult since both drugs are frequently used by the same individuals..."

...from the 6th Report

Brain Damage:

"The Jamaican study found few physiologic and psychological differences between the matched smoker non-smoker populations..." In the Greek study of Greek men who were long term heavy hashish users "a variety of neurological, psychological and physical measures found few changes attributable to cannabis use. Heavy emphasis was placed on possible brain damage as measured by electroencephalographic, echo-encephalographic and psychological test procedures. None of these measures showed evidence of brain damage."

In the most recent Costa Rican study... "emphasis was placed on extensive medical examinations with special attention to pulmonary and neuropsychological functioning... No evidence for a greater incidence of disease of psychological deterioration has been found in the cannabis using group."

"None of the three studies found evidence of increased psychopathology or of an amotivational syndrome stemming from the use of cannabis..."

...from the 5th Report

"A British research report, originally appearing in 1971, attributed brain atrophy to cannabis use in a group of young male users. This report is repeatedly cited in popular articles on marijuana use... The authors concluded that their findings suggested that regular use of cannabis may produce brain atrophy. This research was faulted on several grounds: all of the patients had used other drugs, making the casual connection with marijuana use questionable; and the appropriateness of the comparison group and diagnostic technique were questionable. The potential seriousness of the original observations did, however, lead to several subsequent studies..."

In a study of chronic Greek users (1976) a different technique (echoencephalography) was employed to determine whether brain atrophy might be present in heavy users... The findings from the Greek study were negative; that is, users were not found to differ from non-users in incidence of gross brain pathology.

PUBLIC HEALTH (continued)

Most recently two studies have been conducted in Missouri (1976) and Massachusetts (1976), respectively, of two samples of young men with histories of heavy cannabis smoking using computerized transaxial tomography (CTT), a brain scanning technique for visualizing the anatomy of the brain. In this technique the head is scanned by a narrow beam of X-rays in a series of "slices". Computer processing of the data obtained from a large number of measurements makes it possible to reconstruct the anatomy of the brain in a more detailed manner and with greater precision than pneumoencephalography (the technique used in the original British study of 1971) permits.

In both studies, the resulting brain scans were read blindly by experienced neuroradiologists. In neither study was there any evidence of cerebral atrophy. Despite these negative findings, several additional points should be emphasized. Neither study rules out the possibility that more subtle and lasting changes of brain function may occur as a result of heavy and continued marijuana smoking. It is entirely possible to have impairment of brain function from toxic or other causes that is not apparent on gross examination of the brain in the living organism. Nevertheless, virtually all studies completed to date (late 1976) show no evidence of impaired neuropsychologic test performance in humans at dose levels studied so far..."

...from the 6th Report

Psychopathology:

Acute
anxiety
reaction..

"Previous editions of the Marijuana and Health Report have discussed at some length the question of possible psychiatric aspects of cannabis use. Probably the most common adverse psychological reaction to marijuana use among American users is the acute panic anxiety reaction. It represents an exaggeration of the more usual marijuana response in which the individual loses perspective (i.e., the realization that what she or he is experiencing is a transient drug induced distortion of reality) and becomes acutely anxious. This reaction appears to be more common in relatively inexperienced users although unexpectedly higher doses of the drug can cause such a response in the more experienced as well. Generally the symptoms respond to authoritative assurance and diminish in a few hours as the immediate effects of acute intoxication recede.

Transient
paranoia..

Transient mild paranoid feelings are common in users and it has been suggested that those who are characterized by more paranoid defense mechanisms are less likely to experience other acute adverse reactions." "Preliminary work has found that, in a college population, those who are more hypochondriacal, and who feel less in control of their own lives and more at the mercy of external events are more likely to have adverse reactions to marijuana and other psychoactive drugs."

PUBLIC HEALTH (continued)

- Acute brain syndrone.. "An acute brain syndrome associated with cannabis intoxication including such features as clouding of mental processes, disorientation, confusion and marked memory impairment has been reported. It is thought to be dose-related (much more likely at unusually high doses) and to be determined more by the size of the dose than by pre-existing personality. This set of acute symptoms appears to be rare in the United States, possibly because very strong cannabis materials are less readily available here than in some overseas locations. Acute brain syndrome also diminishes as the toxic effects of the drug wear off.
- Cannabis Psychosis.. Descriptions of a specific cannabis psychosis are to be found principally in the Eastern literature from cultures where use is typically more frequent and at higher doses than those generally consumed in the United States. It has been difficult to interpret such reports because diagnosis of mental illness is partly dependent upon socio-cultural factors. In addition, the diagnostic picture is frequently complicated by the use of other drugs and earlier evidence of psychopathology not necessarily associated with drug use..."
- "One recent clinical study in India contrasted the features of a paranoid psychosis arising in the course of long term cannabis use with that of paranoid schizophrenia..."
- "In this and other clinical studies, it is difficult to distinguish the role of cannabis from that of pre-existing psychological problems or other environmental precipitants in marijuana-related psychological difficulties. Frequently, heavy marijuana users are also those who have had emotional problems prior to use."
- Marijuana flashbacks.. "Marijuana flashbacks -- spontaneous recurrences of feelings and perceptions like those produced by the drug itself -- have been reported..." "Such experiences may range from the quite vivid recreation of a drug related experience to a mild evocation of a previous experience. The origin of such experiences is uncertain but those who have experienced them appear to have required little or no treatment.
- Emergency room admissions.. "One source of information about possible adverse reactions to drugs, including marijuana, is the Federally sponsored Drug Abuse Warning Network (DAWN). This is a nationwide reporting system which provides information about the frequency with which various drugs in common use are implicated in patient or client contacts with such facilities as hospital emergency rooms and crisis centers. (A crisis center is a facility established to provide "walk in" or "phone in" assistance to those experiencing personal crises, including adverse drug reactions.) Of 118,000 emergency room episodes involving some form of drug abuse between May, 1975 and April, 1976, marijuana ranked 16th among the drugs mentioned. But in crisis center contacts, marijuana ranked second only to heroin as the drug involved. While the interpretation of such figures is made more difficult by ignorance of how the number seeking assistance

PUBLIC HEALTH (continued)

compares to the total number using a drug during the reference period, it does indicate that marijuana is not an uncommon factor in individuals seeking help..."

...from the 6th Report

Jamaican, Greek and Costa Rican Studies of Long Term Heavy Users:

"The Jamaican study found few physiological or psychological differences between the matched smoker non-smoker populations."

In the Greek study a "variety of neurological, psychological and physical measures found few changes attributable to cannabis use."

The Costa Rican study discovered "no evidence for a greater incidence of disease or of psychological deterioration has been found in the cannabis-using group..."

...from the 5th Report

Research on long term, chronic users of cannabis overseas where such use has been characteristic of large numbers for many years continues to be discussed in many contexts without adequate consideration of its many limitations... Three studies conducted under Federal aegis in Jamaica (1976), Greece (1976) and Costa Rica (1976) have received considerable publicity.

In each of the three, considerable effort was made to match chronic users with non-users whose characteristics apart from drug use were quite similar... The elaborate testing procedures limited the total number studied. This is an important limitation since it is possible that the limited sample size may have precluded the detection of rarer consequences of cannabis use...

A wide range of measures were employed in these studies to detect physical or psychosocial consequences of use. In general, few differences were found that could be directly attributed to cannabis use. In the Greek study, heavy hashish users examined were significantly higher in psychopathology, particularly antisocial personality disorder, but it was not possible to know whether this predisposed them to heavy hashish use or whether use played a role in producing their pathology.

It should again be emphasized that while the results of these studies are somewhat reassuring with regard to grossly adverse consequences of marijuana use, they by no means demonstrate that cannabis use is free of potentially adverse consequences. The

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small numbers studied, the possibility that cultural differences may have masked drug related performance differences and the differences in the demands of these less industrialized societies from those of our own, all make direct translation of the results to American conditions hazardous.

...from the 6th Report

Therapeutic Use of Marijuana:

"Cannabis is one of the most ancient of healing drugs. It was and is an important folk medicine in many cultures... The therapeutic use of cannabis predates recorded history. The earliest written reference is to be found in the fifteenth century B. C. Chinese Pharmacopis. From the Chinese plateau its use as a folk medicine, ritual potion fabric and intoxicating agent spread to India, the Middle East and far beyond."

"Cannabis has been found to have some therapeutic potential in a number of diverse areas...intraocular pressure reduction, bronchidilator, anticonvulsant tumor growth retardation...sedative hypnotic, analgesic, antidepressant and tranquilizer, pre-anesthetic antinauseant and antiemetic..."

...from the 5th Report

"While there have been no new therapeutic applications of cannabis or of its synthesized constituents recently, there has been some additional research on earlier cited applications. One of the more promising medicinal uses is based on the observation that in both normals and in patients suffering from glaucoma, marijuana serves to reduce intraocular pressure. Δ -9-THC shows definite promise of becoming an effective agent for the management of glaucoma. An eye drop preparation has been developed and is currently undergoing testing in animals preliminary to human trials. Such a preparation has been successfully employed with rabbits.

A second area that continues to show promise is the use of Δ -9-THC as a means of reducing or eliminating the nausea, vomiting and loss of appetite in cancer patients following chemotherapy. Since present anti-emetics are often unsuccessful in controlling such symptoms in these patients, an improved treatment for this purpose would be desirable.

A third area in which marijuana research has shown promise of developing improved treatment methods is in the management of asthmatics. Synthetic Δ -9-THC produces a desirable temporary increase in the size of the air conducting passages, facilitating breathing in these patients. While the natural material has a similar effect,

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it is undesirable because it also has a direct irritant effect on lung tissue. There are some indications that persistent smoking of marijuana itself, like cigarette smoking, may lead to lung pathology (cf., Human Effects)."

"Despite the promise that marijuana and/or its synthesized constituents have shown as potential therapeutic agents, it should once again be emphasized that much additional work is necessary before such agents become generally approved as standard medications.

Marijuana and its constituents continue to have adverse side effects. The increase in heart rate produced is obviously undesirable with the elderly or the cardiac impaired. The psychological effects recreationally sought by many are often disturbing and disruptive to patients..."

...from the 6th Report

Tolerance and Dependence:

Tolerance.. "Tolerance to cannabis -- diminished response to a given repeated drug dose -- has been substantiated by research evidence cited in the Fifth Report. Tolerance development was originally suspected because experienced overseas users were able to use large quantities of the drug that would have been toxic to U.S. users accustomed to smaller amounts of the drug. Carefully conducted studies with known doses of marijuana or THC leave little question that tolerance develops with prolonged use.

Dependence.. As was pointed out last year, the meaning assigned to cannabis dependence is often vague. If it is defined as a manifestation of physical symptoms following discontinuance of the drug, there is experimental evidence that it can occur at least under conditions of extremely heavy research ward administration that would be atypical of U.S. use patterns. The changes noted following drug withdrawal under these experimental conditions include: irritability, restlessness, decreased appetite, sleep disturbance, sweating, tremor, nausea, vomiting and diarrhea. Some of these symptoms were experienced in a similar research study by users who selected their own smoked marijuana doses. Such a "withdrawal syndrome" is uncommon and has rarely been reported clinically. Only one research report, from Germany, has noted it..."

...from the 6th Report

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Source: National Governors Conference Marijuana Study, performed by Peat, Morwick and Mitchell, Washington, D.C. - March, 1977.

"Analysis of literature in the medical/health field indicates that the preponderance of evidence shows that marijuana is not physically addictive, and in infrequent or moderate use probably does not pose an immediate substantial health hazard to the individual. Many researchers suggest that the adverse consequences of such use appear to be no worse than those for tobacco and alcohol, although disagreement still exists. The effects of long term heavy use by youthful individuals are unknown and are the subject of ongoing research...

Also of concern is whether health care system costs will increase or decrease as a result of decriminalization. Some opponents of decriminalization argue that health care costs will increase because of increased use and consequent increases in adverse effects. Supporters argue that health care costs will decrease because (1) adverse psychological reactions are a result of the prohibitive environment, and (2) the bulk of such costs result from diversion of arrested individuals from the courts to the health care system. Because nationally only about 5 percent of those in federal drug treatment programs identify marijuana as their primary drug problem, the potential impact of new enforcement patterns may not be substantial on an overall basis. However, states that have used extensive diversion programs to remove individuals arrested for the possession of marijuana from the criminal justice system can realize substantial savings. Preliminary California diversion program statistics, for example, show a sharp decrease in referral of marijuana cases since its decriminalization law took effect. No evidence was encountered during the study which indicated that any significant increase in the use of treatment facilities occurred as a result of decriminalization laws."

7. MARIJUANA ARRESTS: 1965-1976*

<u>Year</u>	<u>Total Arrests in U.S.</u>	<u>Total Arrests in Maine</u>	<u>Marijuana Arrests As a % of the Total Drug Arrests in Maine</u>
1965	18,815	Not Available	--
1970	188,682	NA	--
1971	225,828	NA	--
1972	292,179	NA	--
1973	420,700	1,802	89%
1974	445,600	921 (6 months only)	90%
1975	416,100	1,650	86%
1976		962 (up to May 1)	82%

*These figures include arrests for both sale and possession, but 88-94% of the marijuana arrests made each year in Maine are for possession offenses.