

TO WHOM IT MAY CONCERN

WHAT IS MARIJUANA?

Marijuana is a dried plant material from the Indian hemp plant ("Cannabis sativa"). The plant grows wild in many parts of the world, including the United States, and is frequently cultivated for its commercial value in the production of fiber for rope, bird seed, and other purposes. In its drug use it is known by such names as "pot," "grass," "weed," "Mary Jane," and many others.

For use as a drug, the leaves and flowering tops of the plant are dried and crushed or broken into small fragments which are then typically rolled into thin homemade cigarettes, often called "joints." It may also be smoked in small pipes and is occasionally incorporated into food and eaten. The smoke smells like burning rope or alfalfa. Because of its distinctive odor, users sometimes burn incense to mask the smell.

Marijuana varies greatly in strength, depending upon where it is grown, whether it is wild or specifically cultivated for smoking or eating, and which portions of the plant actually go into the drug mixture. Marijuana is also sometimes adulterated with other materials such as the seeds and stems, tea, catnip, or oregano, still further reducing the strength of the resulting mixture.

Hashish ("Hash") is the potent dark brown resin which is collected from the tops of high quality cannabis. Because of the high concentration of resin, it is often five or six times stronger than the usual marijuana, although the active drug ingredients are the same. Basically it is a much more concentrated form of the drug.

Tetrahydrocannabinol, or THC (technically THC), is considered to be the basic active ingredient in marijuana and hashish. The amount of this chemical present determines the strength of the drug. Although various substances called THC have been sold illegally, the high cost and the difficulty of producing the material make it very unlikely that it is actually available illicitly. No samples of THC purchased on the black market have been found to be THC on chemical analysis to this date.

WHAT IS ITS USE?

Marijuana has been in widespread use for several thousand years, both for its intoxicating effects and for its presumed value as a medicine. As a medicine it has been used for such varied complaints as pain, cough, rheumatism, asthma, and migraine headaches. Other drugs have taken its place in modern medicine and at present it is no longer prescribed in the United States. Despite the fact that the drug is illegal in almost all countries, it has continued to be used for its intoxicating effects by many millions, especially in Asia and Africa.

HOW WIDELY IS IT USED IN THE UNITED STATES?

While estimates based on various surveys differ, it is generally conceded that the use of marijuana has undergone a sharp increase in the last several years, particularly among young people. On some college campuses where use is extensive, a majority of the students have tried the drug at least once. Use which was originally restricted to a small number of groups has now expanded to include individuals from many widely different social backgrounds.

While the exact extent of marijuana use in the United States is not known, health authorities believe that as many as 8 to 12 million Americans have used the drug at least once in their lives. Other estimates have ranged as high as 20 million. Perhaps as many as one million are "notheads." They have made marijuana a way of life, and are the equivalent of the chronic alcoholic who also uses a chemical to deal with problems of living. Research studies are under way to examine trends in use and to determine more precisely patterns of use.

HOW DOES THE DRUG WORK?

When smoked, marijuana quickly enters the blood stream and within minutes begins to affect the user's mood and thinking. The exact mechanisms of action and the alterations of cerebral metabolism are not well understood. Extensive research is currently under way to provide this basic information. Because it can cause hallucinations if used in very high doses, marijuana is technically classified as a mild hallucinogen. Despite several thousand years of use, less is presently known about the mode of action of this drug than is known about most other drugs in widespread use. It is only in the last few years that the synthesis of THC and the development of methods to assay THC in marijuana have made precision experiments possible.

WHAT ARE ITS PHYSICAL EFFECTS?

The long-term physical effects of marijuana are not yet known. To answer this question, extensive scientific research is currently under way. It is based on both laboratory findings and research in countries.

The immediate physical effects of the user while smoking include reddening of the whites of the eyes, increased heart beat, and coughing due to the irritating effect of the smoke on the lungs. Users also report dryness of the mouth and throat. Reports of increased hunger and sleepiness are also common.

WHAT ARE ITS PSYCHOLOGICAL EFFECTS?

The drug's effects on the emotions and senses vary widely, depending on such factors as the user's expectations, the circumstances of use and, of course, the strength and quantity of the drug used. Typically time is distorted and seems much extended—5 minutes may seem like an hour. Space may seem enlarged or otherwise distorted. Sounds and colors sometimes seem intensified. Thought frequently becomes dream-like. The notion that one is thinking better is not unusual. Illusions-misinterpretation of sensations are often reported. Hallucinations experiencing non-existent sensations and delusions-false beliefs-are rare. Frequently the user undergoes a kind of passive withdrawal accompanied by some degree of "high." The individual tends to withdraw into himself. Occasionally, uncontrollable laughter or crying may occur. While some users find the effects pleasant, others find them frightening or very unpleasant. Unfounded suspiciousness may occur and this may be accompanied by marked fear or anxiety. Occasionally, such reactions may be sufficiently severe as to cause a susceptible individual to develop symptoms of panic, a paranoid state or a temporary break with reality. Such effects may be more likely to occur in the youthful user whose personality is still in the process of rapid change.

Recent evidence has documented a loss of - immediate recall, and difficulty in thinking and - speech due to disorganization of recent memory. These have been found in experiments with single doses. The implications for the chronic marijuana user must await additional investigation.

HOW DOES MARIJUANA AFFECT JUDGEMENT?

A person under the influence of marijuana may find it much harder to make decisions requiring logical thinking. At the same time he may erroneously believe that his judgment is unimpaired, or even that his mental functioning has been enhanced by the action of the drug. Performing any complex task requiring good reflexes and clear thinking may be impaired, making such task as driving particularly dangerous. Research is currently under way to more accurately determine the effects of varying quantities of marijuana on driving and other skilled activities.

IS MARIJUANA LESS HARMFUL THAN ALCOHOL?

The results of intoxication by both drugs can be harmful. We know that alcohol is a dangerous drug - physically, psychologically, or socially for millions of people whose drinking is out of control. There is no firm evidence that marijuana would be less harmful if used consistently. American experience to date has largely been limited to marijuana of low potency, infrequently used over a relatively short period of time. In countries where the use of marijuana and related drugs has been widespread, "skid rows" based on marijuana use exist. At present the research evidence is insufficient to answer this question with certainty. It should, however, be remembered that it frequently requires extensive use over a long period of time by large numbers of people before the public health implications of a drug are clearly understood.

WHAT ARE THE LATEST FINDINGS ABOUT THE DRUG?

With increasingly widespread use have come - numerous reports of adverse reactions to the drug. While not typical, instances of acute panic, depression, and occasionally more serious mental illness have followed the use of marijuana in susceptible individuals. There is reason to believe that such reactions may be more likely to occur in the youthful user.

Working with man-made tetrahydrocannabinol, a leading scientist recently found that high dosages of the drug brought on severe reactions in every person tested.

The scientist observed that a dose equal to one cigarette of the weak United States type can make the smoker feel excited, gay, or silly. After larger amounts, the user experiences changes in perception. Colors seem brighter, his sense of hearing seems keener. After a dose equal to 10 cigarettes, he experiences visual hallucinations, illusions, or delusions. His mood may swing from great joy to extreme horror. He may become deeply depressed, or have feelings of uneasiness, unreality, or suspiciousness.

IS MARIJUANA ADDICTING?

Authorities now think in terms of drug "dependence" rather than "addiction." Marijuana, which is not a narcotic, does not cause physical dependence as do heroin and other narcotics. This means that the body does not become dependent on continuing use of the drug. The body probably does not develop a tolerance to the drug, either, which would make larger and larger doses necessary to get the same effects. Withdrawal from marijuana used in ordinary amounts does not produce physical sickness.

A number of scientists think the drug can cause psychological dependence if taken regularly. All researchers agree that more knowledge of the long-term physical, personal, and social consequences of marijuana use is needed before national decisions about its legal status can be made.

DOES IT LEAD TO USE OF NARCOTICS?

A 1967 study of narcotic addicts from city areas showed that more than 80 per cent had previously used marijuana. Of the much larger number of persons who use marijuana, scientists agree that few go on to use morphine and heroin. No direct cause-and-effect link between the use of marijuana and narcotic has been found. Researchers point out, however, that a person predisposed to abuse a drug may be likely to abuse other, stronger drugs. We are currently observing multiple drug use among young people, involving marijuana, stimulants, sedatives, hallucinogens and, increasingly, opium and heroin.

WHAT ARE THE LAWS DEALING WITH MARIJUANA?

The Federal laws relating to marijuana have been revised. Under the Comprehensive Drug Abuse Prevention and Control Act of 1970, possessing or giving away marijuana is a misdemeanor instead of a felony, and a minimum mandatory penalties for such offenses are abolished. However, the penalties remain heavy. Possessing or giving away a small amount of marijuana with no charge may bring up to 1 year's imprisonment and-or a \$5,000 maximum fine. Punishment becomes more severe for a second and subsequent offenses, which are punishable by imprisonment up to 3 years and-or a maximum fine of \$10,000. Heavy punishment confronts a person, at least 18 years of age, who distributes or sells marijuana, even for a trivial sum, to one who is under 21 years of age. For a first offense, the penalty is imprisonment for up to 10 years and-or a \$30,000 fine which goes up to 15 years imprisonment and a \$45,000 fine for second or subsequent offenses. If a person is under 21 on a first offense, he may be placed on probation in lieu of sentencing and the official record of his arrest, trial and conviction may be erased after satisfactory completion of probation. Persons involved in a continuing criminal enterprise face penalties of 10 years to life for the first offense, plus a \$100,000 fine and forfeiture of profits resulting from the enterprise. A second offense will bring 20 years to life, and a \$200,000 fine.

Many State laws are more severe than the Federal law, dealing with marijuana as if it were a narcotic.

WHAT ARE THE SPECIAL RISKS FOR YOUNG USERS?

Breaking the laws dealing with marijuana can have serious effects on the lives of young people. They may find their education interrupted and their future shadowed or altered by having a police record. An arrest or conviction can complicate their life and plans at many turns. For example, in many states, a person with a police record must meet special conditions to obtain or renew a driver's license. Conviction can prevent a person from entering such professions as medicine, law, or teaching. It can make it difficult for him to get a responsible position in business or industry. Special hearings are necessary before he can hold a government job. Before a student tries marijuana he should be aware of the social and legal realities about getting involved with the drug.

Other risks are pointed out by experts on human growth and development. They say that a more subtle result of any drug abuse on the young person is its effect on his personality and development. For young people to experiment with drugs at a time when they are going through a period of many changes in their transition to adulthood is a seriously questionable practice.

"It can be especially disturbing to a young person who is already having enough of a task getting adjusted to life and establishing his values," says an NIMH scientist engaged in studies of young marijuana users.

Another reason for caution: statements being reported by students that the use of marijuana is "medically safe," are not supported by scientific evidence. It is hoped that research now underway may add to the little currently known about the effects of the use of marijuana.

WHAT RESEARCH IS BEING DONE?

The National Institute of Mental Health is carrying on an extensive program of research to learn more about marijuana and to present this knowledge to the public.

The program of the NIMH Center for Studies of Narcotic and Drug Abuse includes surveys of the use of marijuana and other drugs of abuse to learn more about how widely they are being used and what effects different amounts and periods of use have upon people, physically and psychologically. In countries where marijuana use has been widespread over long periods, studies are being conducted to determine the long-range effects of the drug. With NIMH support, scientists are now studying all aspects of the effects of marijuana—how it interferes with normal mental processes, and its effect upon the centers controlling emotion, alertness, sensation, and behavior. The disparity between subjective estimate of performance is being scrutinized. The possible harmful effects of the smoke and its effect upon the unborn are under study. Possible uses for THC are being researched. Most important, the answers to the question of the long-term effects upon body and mind are being sought.