

Marijuana Use by Adolescents: An Orgonomic Perspective

W.B. Apple, Ph.D.

The use of Marijuana by developing adolescents is a phenomenon of serious concern on an individual, community, and societal level. It is the most widely used illicit drug in the United States⁽¹⁾. The incidence of regular marijuana use during the period of adolescence rose steadily throughout the 1970's and 1980's, and despite a slight drop in reported use in the late 80's, has now continued its steady increase in the terms of number of adolescents reporting its use⁽²⁾. Over the past twenty-five years, the proportion of pupils age fourteen to fifteen who knew someone using marijuana more than quadrupled from 15% to 65%, and the proportion who had been offered drugs increased nine fold from 5% to 45% by 1994. Both of these proportions more than doubled over the past five years⁽³⁾. Alarming, age of initial use has consistently decreased over time to younger students⁽⁴⁾. In one sample of adolescents in treatment for substance abuse, the average age of onset of marijuana use was 12.75 years for outpatients and 11.75 years for inpatients⁽⁵⁾. Current estimates suggest that among high school students, 12% of all twelve to seventeen year olds are regular users of marijuana. This increases to 22% for eighteen to twenty-five year olds⁽⁶⁾. These estimates are applicable to all strata of society: in a recent survey at a private preparatory school, over 20% of the students characterized themselves as either moderate or heavy users of marijuana. Eleven percent preferred marijuana over alcohol, the most predominant drug among teenagers⁽⁷⁾. These facts all probably underestimate actual levels of use because of well-documented inaccuracies in such epidemiological data due to under-reporting or complete denial⁽⁸⁾. *It appears that use of marijuana has become so much a part of everyday adolescent culture that adolescents and even their parents have desensitized to its presence and are accepting of its use as a normal part of "adolescent experimentation."*

Particularly confusing/vexing has been the commonly observed discrepancy between the students' perception of the effects of smoking marijuana on their functioning and the observations of others. It has been clearly demonstrated that regular use of marijuana seriously affects the individual, his health, family, school, and society in terms of problem behavior and other indications of psychopathology and social dysfunction. Many students, otherwise bright and capable, appear unaware or unconcerned about these data, or dismiss them contemptuously as "biased propaganda from the establishment."

A review of this literature follows. We will then see from an orgonomic perspective that these and other important phenomena and even an adolescent's lack of concern for the drug's adverse effects, can be better understood by identifying their function within the living organism as a whole.

Review of Data on Health Consequences/Physiological Effects of Marijuana

Unlike alcohol, a water-soluble molecule that is metabolized and passes out of the body fairly quickly, the psychoactive ingredient of marijuana (tetrahydrocannabinol-THC) is a fat-soluble molecule whose metabolites may remain in the body for as long as a month after a single exposure. THC metabolites are stored in the brain, testes, ovaries, and other fatty tissues. Thus, with even so-called "mild use" of marijuana smoking once or twice a week, THC will be continually present in the body and slowly released, affecting overall functioning to some degree. This is true whether or not the individual experiences being "high." It is noteworthy that, despite statements to the contrary, marijuana users, especially with more frequent use, do develop physiological tolerance to the drug⁽⁹⁾, which necessitates higher "doses" to achieve the same subjective experience of intoxication. Thus, over time, without necessarily a

concurrent increase in intensity or frequency of the sensation of intoxication, increasing levels of psychoactive substance will be stored in the body.

It is clear that marijuana smoke has long-term adverse effects on the lungs and throat. Marijuana smokers have a higher prevalence of abnormal airways than non-smokers, even when they do not also smoke tobacco⁽¹⁰⁾. Daily Smoking of even small amounts of marijuana without tobacco has been associated with chronic respiratory symptoms and tracheobronchial epithelial histopathology of frequency and extent similar to that noted in daily smokers of more than twenty tobacco cigarettes without marijuana. Marijuana has twice as much "tar" as cigarette smoke. The respiratory retention of particulates (a burden on respiration) inhaled from marijuana smoke is actually 40% greater than from the smoke of tobacco⁽¹¹⁾. Marijuana smoking with and without cigarette smoking significantly reduces gas (Including carbon properties), and has been linked to increased risk of lung cancer, bronchitis, and emphysema^(12, 13, 14). Marijuana use also increases heart rate by up to 50% during acute intoxication, presenting a risk for anyone with heart disease.

THC readily crosses the blood-brain barrier directly affecting the biochemistry and neurophysiology of the brain and central nervous system. An impressive array of central biochemical process (neurotransmitters, enzymes, receptors, etc.) have been shown to be altered by the natural cannabinoids as well as by their synthetic analogs^(15, 16). For example, Tripathi et al.⁽¹⁷⁾ demonstrated that the most consistent effect of cannabinoids, both psychotomimetic (capable of producing symptoms of psychosis) and non-psychotomimetic, was to increase acetylcholine levels and to decrease acetylcholine turnover in the hippocampal regions of the brain, a part of the limbic system that has been identified as one site of interaction between the perceptual and memory systems⁽¹⁸⁾. Other researchers have reported twelve fold increase in the levels of dopamine without any alterations in dopamine metabolite levels⁽¹⁹⁾. Strong evidence from animal studies suggests that perturbations of central dopamine mechanisms significantly influence the development of hyperactive motor behavior and cognitive difficulties⁽²⁰⁾. While the precise process which produces these changes is not yet understood, it is clear that THC is a potent agent and produces profound alterations in the delicate balance of natural brain chemistry.

Marijuana has also been demonstrated to alter natural "bio-electric" processes of the brain. Upon electroencephalographic (EEG) analysis, daily marijuana smokers demonstrated altered brain wave activity when contrasted with subjects who did not use marijuana⁽²¹⁾. Users of marijuana could be discriminated from non-users with 95% accuracy. Other studies have demonstrated that in long-term marijuana users, in an *unintoxicated* state, the cognitive abilities to focus and direct attention and filter out irrelevant information were progressively impaired with the number of years of use but unrelated to frequency of use⁽²²⁾. Data also suggests that heavy use of marijuana seems to suppress the immune system, which may make it more difficult to fight off colds, flu, viruses, and other illnesses^(8, 23).

Frequent use of marijuana has also been linked to a decreased sperm count and sperm motility in men, and irregular ovulation in the menstrual cycles of women⁽⁸⁾. Exposure of human lung explants to marijuana smoke has been demonstrated to result in alterations in DNA and chromosome complement⁽²⁴⁾. Higher doses of marijuana have been found to be sevenfold more mutagenic than either tobacco or low-dose marijuana (both of which were also, but more weakly, mutagenic)⁽²⁵⁾. As THC readily crosses the blood-brain barrier, it also crosses the placenta and enters the fetus. Research with rhesus monkeys administered THC early in pregnancy found higher rates of spontaneous abortion, still birth, and lowered birth weight⁽²⁶⁾. THC and its metabolites have been found in the breast milk of nursing mothers who

smoke marijuana daily. They have also been found in the body fluids of their infants⁽²⁷⁾, indicating that THC is concentrated in human milk and can be transferred through nursing. Significant negative effects of prenatal marijuana exposure in the first and second trimesters of pregnancy have been demonstrated in the performance of three-year old children on the Stanford-Binet Intelligence Scale⁽²⁸⁾.

Behavioral Effects

There is no doubt that marijuana interferes with complex mental functioning, with emotional processes, and with behavior. Striking differences have been demonstrated between marijuana users and non-users across various variables, with the degree of difference usually directly correlated with increased involvement with marijuana. Marijuana users have been characterized as displaying greater use of other illicit substances, more frequent association with other marijuana users, and lower participation and greater instability in conventional roles of adulthood⁽²⁹⁾. Cessation of use has been positively associated with, compared to continuing users, higher rates of establishment of adult social roles with a partner/spouse and/or having children, and with long-term employment⁽³⁰⁾. The reported use of stimulants, hallucinogens, narcotics (heroin), and sedatives is almost restricted to those adolescents who reported using marijuana⁽³¹⁾. Research has demonstrated that heavy users are more likely to experience psychopathological consequences, including personal problems of identify diffusion, low self-esteem, an "amotivational syndrome," interpersonal problems with peers and parents, and difficulty with the law. Over tie, these problems were likely to be severe, chronic, and progressive⁽³²⁾. Adolescents who continue smoking into adulthood are more likely to have adolescent children who also use marijuana, due to greater tolerance of deviance (poor limit setting, licentiousness misperceived as freedom), poor behavioral control, greater regard for the perceived coping function of the abused substance, more negative life events, and more affiliation with peer users⁽³³⁾.

Several studies provide more direct data on the effects of marijuana use on the adolescent's cognition. "Heavy" marijuana use (defined as use seven or more times weekly) was associated with deficits in mathematical skills and verbal expression on the Iowa Test of Educational Development and with selective impairments in memory retrieval processes in Bushke's Test⁽³⁴⁾. Drug abusers achieved lower numbers correct ad made more errors on Benton's Revised Visual retention Test, which assesses visuographic functions⁽³⁵⁾. Marijuana use was proportionally higher for students who have learning disabilities^{(1) (36)}. Not surprisingly. Marijuana users displayed overall poorer school performance, spent less time on homework, and had more school absenteeism than non-users⁽³¹⁾.

Research has also demonstrated that among young or new users of marijuana, performance was mildly impaired on some but not all neuropsychological tests⁽³⁷⁾. The authors hypothesized that some tests were unaffected or mildly affected because⁽¹⁾ lifetime use was as yet limited, and⁽²⁾ in adolescents the toxic effects of drug abuse might also be manifested as a decrease in the *rate* of cognitive development rather than a simply general cognitive decline. On the other hand, most recent data have demonstrated a "drug residue" effect on attention, psychomotor tasks, and short-term memory during the twelve to twenty-four hour period immediately after cannabis use⁽³⁸⁾ (recall that THC metabolites are stored in the body for up to a month). Traditional research evidence is as yet insufficient to support or refute as fact either a more prolonged "drug residue" effect, or a toxic effect on the central nervous system that persists even after drug residues have left the body.

Regarding more specific effects on emotional functioning, positive correlations have been found for drug use with anxiety and depression⁽³⁹⁾. Use of multiple drugs at age fifteen has been associated with concurrent conduct problems and depressive symptoms at age fifteen were found to be associated with concurrent "self-medication" among females⁽⁴⁰⁾. On the other hand, among adolescents incarcerated significantly with the occurrence of substance abuse, and the number of symptoms for conduct disorder, anxiety, and depression increased with substance abuse⁽⁴¹⁾. This discrepancy between perceived attempts at "self-medication" and the actual effects on functioning will be considered below from an ergonomic perspective.

Interestingly, while consistent cannabis use among high school students has been found to be significantly associated with self-rated poor academic performance and self-reported poor mental health, perceived harmfulness did not appear to serve as a sufficient deterrent against further substance abuse in the student population⁽⁴²⁾.

There are several studies investigating the relationship between use of marijuana and schizophrenia. Comparing cannabis-abusing patients to non-users, significantly earlier and more frequent psychotic relapses occurred in the abusing group⁽⁴³⁾. This association became even stronger when mild and heavy cannabis users were distinguished. In all but one patient, cannabis abuse preceded the onset of the first psychotic symptoms by at least one year. The authors concluded that cannabis abuse, and particularly heavy abuse, can be considered a stressor eliciting relapse in patients with schizophrenia and even possibly a premonitory precipitant. Continuing cannabis consumption and previous cannabis intake have shown to be associated with relapses in the treatment of schizophrenic patients⁽⁴⁴⁾. Comparing cannabis-abusing patients diagnosed with schizophrenia to non-abusing schizophrenic patients, the cannabis abusers had higher scores (except on the delusion subscale) for positive symptoms of schizophrenia⁽⁴⁵⁾. Interestingly, non-abusing schizophrenic patients scored higher on a scale for negative symptoms of schizophrenia, again suggesting some sort of "self-medication" function in the users. It appears clear that cannabis use is associated with the precipitation and the exacerbation of psychosis in vulnerable individuals⁽⁴⁶⁾. The relationship between use of marijuana and schizophrenia is especially important because schizophrenia usually manifests a first psychotic episode during late adolescence or young adulthood.

As informative as the above facts are, we are nonetheless left with an impressive collection of rather fragmented observations that can not answer many important questions. There is no comprehensive or functional pulling together of observations. We know from our observations that marijuana has, at least in the short run, a pleasurable or integrative effect - otherwise it would not be used. In the long run, however, it has a disruptive or destructive effect on the individual's emotional and physical functioning. Traditional research has no explanation as yet for why this happens. There are also other important phenomena, such as changes in consciousness, self perception, and energy level, which are not adequately addressed if they are observed at all.

We need to be able to understand an adolescent's experience, without moralism or judgment, that while smoking marijuana he feels "great," expansive, creative and sensual. Facts about sperm count or brain chemistry, in isolation, have no impact on such an adolescent, who can easily point out that his friend, who smokes marijuana regularly and who made the Dean's List last semester, recently got his girlfriend pregnant. Clearly, all factual knowledge of derived mechanistically, the effects of the drug "acting on the brain," has had little impact on

adolescents' perceptions of these dangers.

An Orgonomic Perspective

Although this is an initial attempt at comprehending a complex interaction, the effects of marijuana can be better understood by an orgonomic approach which identifies their function within the living organism as a whole. Every characteristic of the living is based directly or indirectly on the pulsation of orgone energy, its spontaneous expansion and contraction. This is true on the level of cells, organs and organ systems, and on the individual's biosystem as a whole ⁽⁴⁷⁾. It is the unitary pulsation of orgone energy that is the basis of health. Reich observed that natural pulsation could be temporarily or chronically blocked or immobilized. In humans he discovered the cause to be muscular rigidity or armoring. When armoring has become chronic there is, to varying degrees, a loss of natural energetic functioning (depending on the severity and location of the armor) with corresponding somatic and emotional disturbances.

Reich also stated that "self Perception and consciousness are directly related to certain bioenergetic states of the organism, in kind degree." ⁽⁴⁸⁾ At least from birth, sensation (from both internal and environmental source), and perceptions of these innumerable sensation, gradually became discriminated from one another and integrate into one total unified perception of the self (self awareness). This brings about the development of consciousness. Whatever serves to compromise consciousness will also compromise self-perception and with it the corresponding function of reasoning, association, memory, concentration, etc. Clinical observations, traditional research, and our knowledge of functional orgonomic principles support the following hypotheses regarding the effects of marijuana usage. Once taken into the body, marijuana appears to produce initial and temporary excitatory or expansive reaction to the brain A reactive contraction in the brain then apparently follows. Further use to reverse the contraction, in order to re-experience the pleasurable expansion, continues this process. With continued use the contraction increases, and becomes chronic, particularly in the ocular segment. As this occurs, there is a concomitant decrease in the individual's overall energy level or charge. Integration of biophysical functioning both somatic and emotional realms is adversely affected. Let us now consider these hypotheses and some orgonomic observations in more detail.

Smoking marijuana induces *brief unnatural energetic excitation or expansion in the ocular segment* with corresponding somatic and psychics manifestations. Users generally describe experiencing perceptions of increased "openness," a greater sense of contact (at least with oneself), heightened consciousness or awareness, increased creativity and imagination with unusual visual imagery and/or auditory perceptions, and complex "deep" thoughts. The behavior of others and the neurotic conditions of society can sometimes be seen more clearly or realistically; at least temporarily. These phenomena apparently result, in large part, from unnatural expansion in the ocular segment. One which the individual is unprepared for and unaccustomed to experiencing. Whether the expansion is due simply to drug-induced excitation and/or breakdown of existing armoring in the brain is not known.

A more severe contraction follows the unnatural expansion. One observes the ocular armoring is acutely intensifies, respiratory rate and depth are decreased, and *excitation lowered*. This reaction produces the "mellow" or "laid back" phase of the drug experience. Users appear to be more aware of specific internal sensations and less attuned to the environment. They "go internal," withdraw into themselves, and focus upon their somatic sensations. Spontaneous bioenergetic movement decreases below the level required for

sensation to be fully perceived. *The result is contactlessness.* The individual experiences flatness, dulling of sensation, and often a sense of boredom. As noted, this in turn predisposes to further use of the drug.

The drug induces armoring, specifically in the ocular segment which includes the brain. It is for this reason that its effects continue long after the acute intoxication phase has passed, even after drug residues have left the body. These effects vary and depend upon one's particular character type, individual structure,⁽²⁾ as well as frequency of use and other factors. On observation one sees a lack of natural spontaneity or "sparkle," a dulling of the eyes, and a flattening and deadness of the musculature of the ocular segment. This includes forehead, scalp, and the area around and beneath the eyes. Because diffusion of the energy field lowers bioenergetic charge, the user appears to fade into the background: he is not fully "there," and is often accurately described as being "out of it." Emotional contactlessness with attendant perceptual distortion is always present and illusions and misperceptions with regard to positive personal changes and abilities are the rule. The user often falls "in love" with the drug, as one who is involved in a destructive personal relationship. He is blinded to its adverse effects, will lie to parents, friends, and teachers to continue its use. He usually will convince himself and try to convince others that the drug is good. One cannot argue or reason with the marijuana user. They literally cannot see the effect of the drug and will minimize and rationalize what it is doing to them and to their functioning. *This rigidity of perception is a function of armor*⁽⁴⁹⁾. Where there is armoring, sensation, perception, and thought are distorted. This is especially so with the increased energetic push of adolescence that combines with the unnatural, marijuana-induced effect on the ocular segment. Perceptions of sensation are reduced or increased but always distorted. They are split from a unitary sense of the self⁽⁵⁰⁾. Self-awareness and with it consciousness are impaired. The more heavily armored the individual, the more he is unaware of how unaware he is.

Without accurate perceptions and with increased contactlessness, the adolescent's emotional development becomes adversely affected. Important ongoing developmental tasks such as learning how to tolerate and master the anxiety of heterosexual relationships, relate socially in a contactful manner, and function with true independence are compromised. This is especially significant because drug use is starting at increasingly younger ages, when adolescent development is just beginning. The drug's effect at so young an age is, psychosocially, all the more destructive.

The tendency of marijuana users to associate with other users increases their dysfunction. While increasing preference for the time spent with peers is a normal adolescent phenomenon, the close association of marijuana smokers is quite another matter. It is characteristic that they become more withdrawn from peers who do not use marijuana. Having decreased and lowered their energetic charge, they seek out others with similar energetic functioning and involve themselves in ritualistic⁽³⁾ drug use and drug associated activities. Attitudes which correspond to the somatic and psychic effects of regular marijuana use (i.e., "tune in, dropout" being "cool and laid back," "nothing matters or gets you," "whatever," "no struggle, no fear") become part of the subculture which both reflects and supports this functioning. Koopman, describing the effects of psychedelic drugs on human bioenergetic functioning, refers to a researcher's statement that marijuana "gives the illusion of feeling good."⁽⁵¹⁾ The experience of excitation with pleasurable feelings and the reduction of anxiety are not illusions. The user of marijuana does indeed feel pleasure and a decrease in social and sexual anxiety. He is attempting, with more or less success, to self-medicate.

Unfortunately, he can only temporarily succeed in his efforts to feel better. In addition to the direct harmful physiologic effects resulting from its use, marijuana has profound bioenergetic consequences: it disrupts and interferes with natural bioenergetic pulsation, produce chronic bran armoring, and diffuses and reduces the overall change of the biosystem. The price paid for the relief is quite high The adolescent use of marijuana finds himself further and further away from the sweetness of health. Less able to love in deep and responsible manner, to work and learn with pleasure, and to develop his natural potential. It is hoped that this understanding will help adolescents, and all those who strive to make the difficult lives of adolescents better.

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1. ¹ John J. Ratey M.D., co-author of *Driven to Distraction: Recognizing and Coping With Attention Deficit Disorder from Childhood through Adulthood*, recently stated that smoking marijuana is probably the worst possible thing someone diagnosed with ADD can do for their symptoms (personal communication).

2.

² The adolescent who experiments with marijuana or smokes it regularly is bioenergetically like any other individual, wither relatively healthy (with little armoring), already severely armored (chronically contracted), or somewhere between these two extremes. It is their specific structure that explains why some individuals experience increased anxiety, panic, dysphoria, or psychosis with marijuana use, instead of pleasure

3.

³ The word "ritualistic" refers to the fact that the drug and its effects - "the drug experience" - are central and essential to the individual and the group.