Cannabis Use in Adolescence: Self-Medication for Anxiety

By Tom O'Connell, MD

Data from the author's practice show that many Californians use cannabis to treat emotional conditions. Government studies obscure this reality and some reformers seem reluctant to acknowledge it.

In response to TV news footage of able-bodied young men buying cannabis in Oakland, city officials voted in 2004 to limit the number of dispensaries. The politicans were exploiting (and re-enforcing) a misconception that California's medical marijuana law applies only to those with serious physical illnesses.

Many of my own patients are seemingly able-bodied young men. Their histories reveal problems that are indeed serious (impaired functionality at school and/or work, use of addictive drugs) and that are treated effectively with cannabis.

I began screening Californians seeking a physician's approval to use cannabis in November 2001. Although the reference in Proposition 215 to a doctor's "recommendation" of cannabis implied that some applicants would be seeking to use it medicinally for the first time, the applicants I encountered, almost invariably, had been using it in non-addictive, stable patterns.

Use of cannabis typically preceded —often by years— the onset of whatever physical symptoms they were citing to justify their use.

These patients were among those identified as criminals and deviants for decades by government propaganda. The idea that they were criminals who belonged in jail or addicts requiring "treatment" simply didn't make sense.

Never in history has such a large collection of admitted illegal drug users been so willing to present themselves for unbiased examination.

Developing Research Tools

Although basic demographic data could be obtained by questionnaire, I developed a detailed interview to examine pertinent areas of personal history. Systematic exploration of prior drug use revealed that nearly all had tried alcohol and tobacco aggressively about the same time they tried pot. Many had then tried a variety of other drugs.

My patients' drug-initiation patterns suggested they had been addressing similar needs. Herein, I realized, might be a key to defining the "medical" use of cannabis and perhaps to better understand its appeal as a "recreational" agent. I adapted my interview accordingly, as I learned more.

The discovery that most were using cannabis to treat insomnia suggested self-medication of anxiety or depression —so I expanded that portion of the interview dealing with psychotropic symptoms. Upon learning that many of the younger males had already been labeled with ADD, I sharpened my focus on school and family histories.

The finding that a large percentage had been raised by single mothers and that many biological fathers of intact families were either heavy drinkers or preoccupied with work suggested a common etiology for the symptoms exhibited in adolescence.

By June 2002 I had a standardized list of questions on a form that doubled as a cue sheet and a place to record answers efficiently and inobtrusively.

Study Population

A total of 3,815 patient encounters between mid-November 2001 and December 1, 2004 have been recorded. Of those, 2,799 were evaluated with the structured interview. An earlier group of 1,016 had been screened with a more traditional history and physical. Approximately two thirds (1,850) of the 2,799 structured interviews were first-timers; the rest were 'renewals' of patients seen at least once previously.

The applicants were seen at several different venues in the Bay Area and many had traveled from other parts of the state— sometimes hundreds of miles Virtually all of my original patients had been made aware of my availability through word of mouth spread through the loose network of buyers' clubs, which had —over the first five years of Prop 215— become concentrated in the few Bay Area counties where they were tolerated by local governments. Presumably they knew that I was pro-cannabis, but not that I looked favorably on its use as a treatment for depression and anxiety.

This article relies on detailed data from 790 patients and demographic data from an additional 364 patients.

Age

Only 3.6% (34/937) were older than 60 when first seen.

5.5% were born before 1946.
16.4% born 1946 - 1955
15.4% born 1956 - 1965
28.0% born 1966 - 1975
35.6% born 1976 - 1985

Those who initiated cannabis use in the 1960s are now in their fifties and sixties. Most have been using cannabis on a regular basis for decades, others have resumed after periods of abstinence. The sharp cut-off in the upper age limit of this population is evidence that an illegal mass market for "marijuana" really didn't begin until large numbers of vulnerable adolescents were exposed to it.

Gender

Of 1118 applicants, 236, or 21.1% were female, a 4:1 ratio which has obtained throughout the three years of the study. The same 4:1 ratio of males to females seems to apply to all racial groups.

Race/Ethnicity

Applicants were assigned to four rather arbitrary categories on the basis of race. When there was doubt about which category was most appropriate, they were asked their preference. The only observed areas of significant racial differences were in drug initiation rates. Although the rates at which Black cannabis smokers try illegal drugs other than cannabis are considerably higher than those reported in annual national surveys, they are considerably lower than among White pot smokers— especially for psychedelics, methamphetamine and heroin (see table at top left, next page).

Patients by race

White	70%
Black	15.6%
Hispanic	7.3%
Asian	3.4%
Other	2.0%

Patterns of Use

Patients report that in terms of potency (although not variety), the cannabis found "on the street" in Northern California is comparable to that available in clubs.

Although the vast majority were experienced, chronic users, their knowledge of cannabis lore varied widely and seemed mostly to reflect individual differences in curiosity. Some were very knowledgeable about strains and delivery systems, others extremely naive. Very few were using edibles on a regular basis— many had either experienced or heard about the extended cognitive effects that can follow ingestion of innocuous appearing baked goods, and —although not clear on the reasons— preferred to avoid them.

Overwhelmingly, the mode of ingestion favored by applicants was smoking. Knowledge of vaporizers is beginning to spread, thanks to the cannabis clubs that sell them. Younger patients seem more inclined to use them on a regular basis. Some older users express resistance —the best vaporizers are expensive and old habits hard to change. Several complained that taste and aroma were lacking.

Late afternoon and evening are the favored times to use cannabis. Early morning use is favored by those with ADD type symptoms and is discussed more fully under that heading. Almost all patients have fairly consistent schedules for their use of cannabis; it is generally solitary and private unless trusted friends are around. Most people did not tempt fate by smoking at or near work.

Consumption, measured in ounces per week, varied from as little as 1/16 to well over an ounce, with 70% reporting they use between 1/8 and1/4 ounce. People smoking 1/2 ounce or more were more apt to either grow it themselvesor have access to a friend who did.

My impression is that the extreme variations in amounts consumed are more a reflection of different sensitivities to cannabis than to any greater desire to get "stoned." In fact, the impression one gets from discussing cognitive effects in general is that almost all find excessive effects undesirable and try hard to avoid them (which is the main reason inhalation is favored over oral ingestion).

Alcohol & Tobacco Use

The most obvious relationship between alcohol, tobacco, and cannabis is that nearly all those who try cannabis have either tried the others or will soon do so. That linkage —first noted in the mid-1970s[1]— was amply confirmed by the present study: 100% of applicants had tried cannabis by attempting to get "high," usually as adolescents (about 30% either failed on their first attempt or weren't sure). 99.3% had also tried alcohol by getting drunk (many were also monumentally sick) and 93.7% had tried tobacco by inhaling at least one cigarette.

Few are teetotalers, but nearly all who still drink do so moderately.

Repeat use of both alcohol and tobacco tended to be aggressive. More than half had binged in high school or as young adults; 35% had experienced alcohol black-outs; and 12.5% had received DUI citations. Yet essentially all who have continued to use cannabis on a regular basis subsequently moderated their alcohol consumption. Few are teetotalers, but nearly all who still drink do so moderately. Most have reduced alcohol consumption to 20% of their peak levels or less.

Cannabis also has enabled patients to reduce tobacco use. Although 68.1% of cannabis applicants became daily cigarette smokers for a while, over half (53%) of the smokers have since been able to quit and almost all the rest are trying. Even inveterate tobacco smokers (those unable to remain abstinent) uniformly relate their cigarette consumption to both stress and access to cannabis: when the former is high and the latter is low, they tend to smoke a lot more tobacco.

I can recall only two applicants who said they enjoyed smoking cigarettes and had no intention of quitting.

Initiation of Other Drugs

An individual's first use of a drug is important for the obvious reason that drugs never tried never become problems. However, mere trial of an agent does not signal that repeat use will follow or what its pattern might be if it does. How chronic use of one agent might ultimately affect use of others is largely ignored by conventional research.

While children as young as nine occasionally initiate drugs, the greatest incidence is from 12 on.[2] Since most people have tried all the drugs they will ever use by age 25, adolescence and young adulthood are clearly important areas for any drug policy to focus on. At first glance, the high initiation rates for other drugs observed in this population (table at top of next page) would seem to support the hypothesis that cannabis is a "gateway" to use of other drugs.

A more detailed evaluation discloses that relatively few episodes of problem use or "addiction" ensued. Those whose use became problematic were generally able to solve their problems without professional help. Discussing those issues with applicants left a strong impression that continued use of cannabis had played a significant role in helping them control not only alcohol and tobacco, but illegal drugs as well.

Their aggressive trials of psyche-delics can be seen as a manifestation of the same curiosity exhibited for other agents and presumably impelled by the same symp-

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Self-Medication for Anxiety *from previous page*

Agent (used by all)		Whites	Blacks	Men
Psilocybin	76.3%	87.1%	36.3%	78.4%
LSD	61.2%	71.7%	28.9%	63.4%
Peyote/mesc	34.6%	42.3%	22.3%	40.3%
Cocaine	67.5%	75.4%	51.2%	67.8%
Meth	42.0%	37.7%	17.3%	43.0%
Ecstasy	38.6%	39.8%	23.1%	43.0%
Heroin	17.3%	20.3%	13.2%	17.9%

Drugs other than cannabis that patients had tried are discussed as part of the "structured interview" conducted by Tom O'Connell, MD, in Oakland.

toms which had led them to try alcohol, tobacco and cannabis in the first place. The response of many to being questioned about peyote and mescaline was that they would have tried them had they been able to find them.

The fact that white cannabis users tried psychedelics at more than double the rate of blacks is startling and remains unexplained. Availability in their respective communities is probably a factor.

Paternal Influences

In attempting to determine the origin of the symptoms motivating this population's aggressive adolescent drug sampling, the most obvious place to start was family background.

The role played by insecurity and low self-esteem during applicants' school careers became increasingly transparent.

A common element was the absence of their biological fathers from their early lives —either physically, through early death or divorce, or emotionally, through a variety of other mechanisms listed below.

Paternal Factors Associated With Adolescent Use of Cannabis

1. Early death (before age six)
2. Early Divorce
3. Alcoholic father
4. Workaholic father
5. Elderly father
   (over 40 when patient born)
6. Invalid father

The role played by insecurity and low self-esteem during applicants' school careers became increasingly transparent. One or more of the above situations obtained in nearly all patients.

School Careers

Pre-school day care, kindergarten and primary school are the first opportunities for most children to socialize outside the family. Being different for any reason — too short, too tall, unfashionable attire, unusual name, etc.— can quickly become something one is teased about. Intrinsic shyness and sensitivity to teasing can make the school setting difficult to bear.

Applicants are now asked to rate their experiences in primary, junior high and high school as "happy," "unhappy." or "mixed." After emotional tone is registered, they are asked if they were ever "class clowns" or considered disruptive by their teachers. They are also asked if descriptions of "Attention Deficit Hyperactivity Disorder" apply to them.

ADHD and ADD are diagnostic labels increasingly applied to school children exhibiting behaviors that irritate and frustrate their teachers. The concept that the condition frequently persists throughout life ("Adult ADD") has been endorsed by the medical establishment, and increasing numbers of patients are being treated with Adderall and other long-acting amphetamines.[3]

Although the behaviors had long been noted among educators and pediatricians, a unifying diagnosis seems to have originated in the late '60s with Paul Wender, a child psychiatrist at the University of Utah.[4, 5] Treatment of affected children with stimulants, primarily methylphenidate (Ritalin), began in the 1970s and has become both increasingly common. The ADD/ADHD diagnoses are now codified in the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders.

ADD has been associated from the beginning with dyslexia and several other so-called "learning disorders." Among my male patients, the diagnosis of ADD was either made or suggested for some 10-15% while they were in school. Nearly as many were diagnosed as adults, or the diagnosis was applied informally by family members or close friends.

The ADD diagnosis is associated in conventional literature with both "substance abuse" during adolescence and low self-esteem. The ratio of boys to girls diagnosed with ADD has remained at about 4:1. As the diagnosis is made more frequently in adults, it has been noted that fathers with ADD are more apt to have sons with the condition (and vice-versa). This is a pattern one might expect in a highly competitive, male dominated society.

The idea that "self-esteem" is both important to a child's early success and strongly influenced by the biologic father is certainly not new. Single mothers, low self-esteem, and a proclivity to try multiple drugs in adolescence have all been reported as common in children diagnosed with ADD.

There is universal agreement among applicants who have been diagnosed with and/or treated for ADD that cannabis helps them achieve and retain focus.

The term "attention deficit disorder" is clearly a misnomer. These individuals are not inattentive; rather, their problem seems to be that they are so aware of other stimuli around them that they have trouble remaining focused on the chore/problem at hand. There is universal agreement among applicants who have been diagnosed with and/or treated for ADD that cannabis helps them achieve and retain focus. They also are the ones most likely to use cannabis early in the day.

Cannabis as Palliative

ADD and other psychiatric conditions are defined by the DSM without reference to the objective external standards which Anatomic and Clinical Pathology readily provide for 'somatic' (physical) diseases.[6]

Upon closer analysis, modern "mood" and "behavioral" disorders represent various combinations of symptoms either observed in— or reported by— those said to be afflicted. The symptoms include chronic insomnia, dysphoria, depression, anxiety, excessive anger, difficulty in focusing, agoraphobia, and morning appetite inhibition.

These symptoms abound in the chronic cannabis users I have interviewed. They had usually been present since adolescence and predated whatever somatic symptoms the patient could cite —with varying degrees of credibility— as their reason for seeking an application.

Prop 215, the state initiative that legalized the medical use of marijuana, refers to "seriously ill patients." Why would applicants prefer to cite somatic symptoms instead of emotional ones? Several explanations can be offered:

• Many male adolescents feel that a macho image allows for physical injury and pain, but not for emotional impairment.

• Medical marijuana advocates, in seeking to maximize public support for their cause, often invoke the dying and the severely disabled.

• Law-enforcement opponents of medical marijuana, starting with former state attorney general Dan Lungren, have sought to trivialize mood disorders and assert that they are not properly treated by cannabis. Former Drug Czar Barry McCaffrey, in his first public response to California's new law, ridiculed the inclusion of chronic insomnia on a list of conditions treatable by cannabis .

There is general agreement by all but the most doctrinaire opponents of medical use of cannabis that it effectively palliates a wide variety of symptoms produced by an even wider variety of named diseases. The most common symptoms are chronic pain both of neuritic and musculo-skeletal origin.

The effectiveness of cannabis in treating two "functional" disorders, migraine and asthma — which are classically exacerbated by but not thought to be caused by emotions— was well established before the Marijuana Tax Act of 1937. Cannabis also helps control chronic diarrhea produced by Crohn's Disease, Ulcerative Colitis, or Irritable Bowel Syndrome. Its effectiveness in controlling the tenesmus and cramping of the latter condition also suggests a spasmolytic mechanism is involved.

In a context where most of the somatic conditions were clearly additive in that the applicants had aleady been using cannabis to manage emotional symptoms, the expenditure of scarce assets to "confirm" what amounted to a somatic excuse for their pot use did not seem reasonable; particularly when the underlying psychotropic reasons for its use were deemed adequate and a detailed history had shown they fit the "profile."

There is also a relatively small subset in whom more sporadic and casual use of pot had become far more regular after the patient developed a new somatic condtion.

The Gateway Hypothesis

Drugs are initiated in sequence. Prior to the late 1960s, alcohol and tobacco were primary agents tried by adolescents. When researchers began studying the phenomenon of youthful cannabis initiation they reported that nearly all their subjects had already tried both alcohol and tobacco— and that many had subsequently tried several other agents. Their assumption that cannabis was a "gateway" from legal to illegal drugs became the prevailing explanation.[7]

The presumption that all drug use is both hedonistic and harmful added conviction to that interpretation. Data showing that most heroin addicts had used cannabis before heroin bolstered the gateway theory, and it seems to have gone unchallenged for 30 years even though it never met a basic theoretical test of "causality."

Evidence that cannabis is capable of benignly and effectively palliating the psychotropic symptom complexes so often encountered in juveniles and young adults was clearly beyond the scope of any research funded— or even permitted— by NIDA. That such symptoms tend to persist into mid-life for many who suffer from them is now endorsed in psychiatric literature and has spurred development of a host of pharmaceuticals intended to treat them. Yet most of applicants for whom these pharmaceuticals were prescribed report that cannabis provides more effective and durable relief.

A little-noticed 2002 paper by Morral *et al* demonstrated that a theoretical "common factor" could provide a better explanation than "gateway" for the initiation patterns observed.[8] My data suggest that the common factor is adolescent angst.

The previously unrecognized role of cannabis as effective self-medication for symptoms experienced by adolescents also explains why so many adults have continued to use it despite potential social and legal penalties.

Summary

Proposition 215 encouraged many individuals who had been considered "recreational" users of cannabis to apply for "medical" status. Interviews placing their cannabis use in broader context showed that it is frequently an alternative to the use of alcohol, tobacco, and "harder" drugs.

The federal government, by imposing a Prohibition based on biased, inadequate studies, is depriving the American people of a safe and effective medicine.

Beyond that concern, the increasing enthusiasm for drug testing and punishing those who test positive for cannabis wth either criminal or social sanctions is destructive to the large —but at this writing unknown —number of Americans treating emotional symptoms with what may be, for them, the best agent available.

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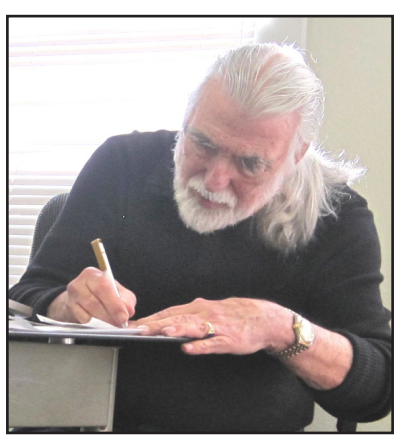

Thomas Jefferson O'Connell, MD

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