Dear Honorable Mayor Beverly and Councilmembers April 12, 2005 27

I want to again express appreciation for the Long Beach City Councilmembers who did graciously adopt a policy that allows for the kindhearted treatment of medical marijuana patients in our fair City. Those who suffer and need that type of medication will be eternally grateful.

At that time I'm sure that no one, including myself, thought about the need for dispensaries. I was more worried about keeping the sick and dying out of jail. The question you must ask yourselves is, "If you or someone near to you had some debilitating illness and was in desperate need of this type of medicine—what would you do? Where would you go?"

I sincerely welcome the creation of reasonable policies to govern these establishments. It is reasonable for us to have concerns. And, it is important to remember that medical cannabis is legal under state law, and policy makers must approach the issue from the standpoint of regulating a condoned legal activity. The goals of regulation should be: (1) to ensure that there is a safe, reliable, and sanctioned source of medication for legal patients in the community; and (2) to protect the community from nuisance activity or other harm that may result from the improper operation of these organizations.

However, I am concerned about the 6 months of delay being requested. Three months is sufficient time to study the request, solicit advice, and set reasonable guidelines. There are boiler-plate documents readily available for that very purpose—which I have furnished to several Councilmembers. And, it is imperative to involve citizens with the expertise required to establish fair and compassionate policies that will encompass the letter and spirit of the law—namely, the Compassionate Use Act and SB 420.

As one caring activist so aptly said, "I'm always concerned when I see a local government trying to limit safe access as opposed to facilitating safe access." It is time for sick people to be treated with compassion, not like criminals. I will look forward to that day when the citizens of Long Beach who are sick and dying have safe access to the primary medicine that makes their suffering more bearable.

Thank you for your time, your support, and your compassion for our most vulnerable citizens,

Diana Lejins, Advocates for Disability Rights 4-05

PENDING SUPREME COURT DECISION

Ashcroft vs Raich 4-05

As for the Supreme Court pending decision:

According to the **Amicus Brief submitted by CA Attorney General, Bill Lockyear**, in the Ashcroft vs Raich question—The Framers (of the U.S. Constitution) recognized from the very inception of the Republic that a federal government might find it hard to resist the temptation to overbear the interests of the States. They provided the means for diminishing that risk by imposing limitations on the federal government's power. The Constitution of the United States....recognizes and preserves the autonomy and independence of the States. (Addington vs Texas (1979)

In Printz vs United States (1997): "the Federal Government may neither issue directives requiring the States to address particular problems, nor command the State's officers, or those of their political subdivisions, to administer or enforce a federal regulatory program....the Constitution contemplates that a State's government will represent and remain accountable to its own citizens."

See People vs Tilehkooh (2003): Due to this constitutional division of authority between the federal government and the states, the State of California may elect to decriminalize conduct, such as medical marijuana activity, which remains illegal under federal law.

In Lockyer vs City and County of San Francisco: Even if law enforcement officers take a personal position on any conflict between state and federal law, they are bound to uphold only state law.

"In other words, even if the patients lose their case, state medical marijuana laws will still stand." -- Boston University Law Professor Randy Barnett

The decision will not alter state law.

dl 4-05

AGING
AND
MEDICAL MARIJUANA

Americans for Safe Access

A Note from Americans for Safe Access

We are committed to ensuring safe, legal availability of marijuana for medical uses. This brochure is intended to help doctors, patients and policymakers better understand how marijuana -- or "cannabis" as it is more properly called -- may be used as a treatment for people with serious medical conditions.

This booklet contains information about using cannabis as medicine. In it you'll find information on:

The federal prohibition on cannabis has limited modern clinical research. But the documented history of safe, medical use of cannabis dates to 2700 B.C. Cannabis was part of the American pharmacopoeia until 1942 and is currently available by prescription in the Netherlands, and soon in Canada.

Testimonials from doctors and patients tell something of the experience of using cannabis therapies, and supporting statements from professional health organizations and leading medical journals testify as to its legitimacy.

This brochure is intended to be a starting point for the consideration of applying cannabis therapies to specific conditions. It is not intended to replace the training and expertise of physicians or attorneys. But as patients, doctors and advocates who have been working intimately with these issues for many years, Americans for Safe Access has seen firsthand how helpful cannabis can be for a wide variety of indications. We know doctors want the freedom to practice medicine and patients the freedom to make decisions about their healthcare.

For more information about ASA and the work we do, please see our website at SAFEACCESSNOW.ORG or call 1-888-929-4367.

Is Cannabis Legal to Recommend?

In 2004, the United States Supreme Court upheld earlier federal court decisions that doctors have a fundamental Constitutional right to recommend cannabis to their patients.

The history. Within weeks of California voters legalizing medical cannabis in 1996, federal officials had threatened to revoke the prescribing privileges of any physicians who recommended cannabis to their patients for medical use.[1] In response, a group of doctors and patients led by AIDS specialist Dr. Marcus Conant filed suit against the government, contending that such a policy violates the First Amendment.[2] The federal courts agreed at first the district level,[3] then all the way through appeals to the Ninth Circuit and then the Supreme Court.

What doctors may and may not do. In *Conant v. Walters*,[4] the Ninth Circuit Court of Appeals held that the federal government could neither punish nor threaten a doctor merely for recommending the use of cannabis to a patient.[5] But it remains illegal for a doctor to "aid and abet" a patient in obtaining cannabis.[6] This means a physician may discuss the pros and cons of medical cannabis with any patient, and issue a written or oral recommendation to use cannabis without fear of legal reprisal.[7] This is true regardless of whether the physician anticipates that the patient will, in turn, use this recommendation to obtain cannabis.[8] What physicians may not do is actually prescribe or dispense cannabis to a patient[9] or tell patients how to use a written recommendation to procure it from a cannabis club or dispensary.[10] Doctors can tell patients they may be helped by cannabis. They can put that in writing. They just can't help patients obtain the cannabis itself.

Angel Raich and Dr. Frank Lucido

Patients now protected. A December 2003 decision by a federal appeals court in *Raich v. Ashcroft* established that it is legal under federal law for patients to grow, possess and consume medical cannabis, so long as they don't pay for it or cross state lines. The ruling applies directly to the states in the Ninth Circuit's jurisdiction, and the Supreme Court will decide the issue for the nation by spring, 2005.

For assistance with determining how best to write a legal recommendation for cannabis, contact Americans for Safe Access at 1-888-929-4367.

Scientific Research Supports Medical Cannabis

Between 1840 and 1900, European and American medical journals published more than 100 articles on the therapeutic use of the drug known then as Cannabis indica (or Indian hemp) and now as cannabis. Today, new studies are being published in peer-reviewed journals that demonstrate cannabis has medical value in treating patients with such serious illnesses as AIDS, glaucoma, cancer, multiple sclerosis, epilepsy, and chronic pain.

The safety of the drug has been attested to by numerous studies and reports, including the LaGuardia Report of 1944, The Schafer Commission Report of 1972, the Institutes of Medicine report of 1999, a 1997 study conducted by the British House of Lords, research sponsored by Health Canada, and numerous studies conducted in the Netherlands, where cannabis has been quasi-legal since 1976 and is currently available from pharmacies by prescription.

Recent published research on CD4 immunity in AIDS patients found no compromise to the immune systems of patients undergoing cannabis therapy in clinical trials.[11]

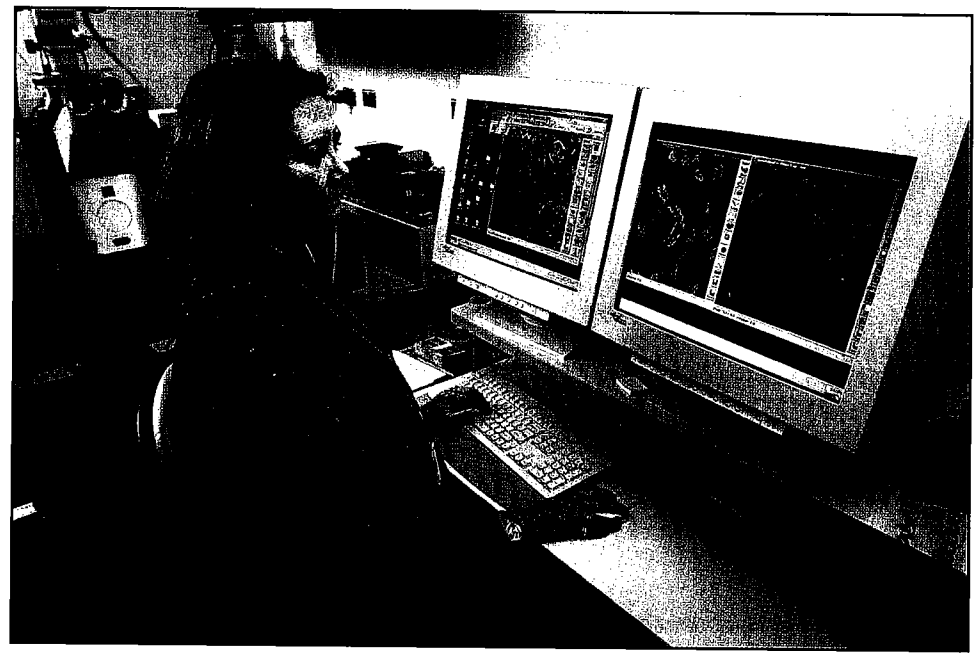
The use of medical cannabis has been endorsed by numerous professional organizations, including the American Academy of Family Physicians, the American Public Health Association, and the American Nurses Association. Its use is supported by such leading medical publications as *The New England Journal of Medicine* and *The Lancet.*

RECENT RESEARCH ADVANCES. While research has until recently been sharply limited by federal prohibition, the last few years have seen rapid change. The International Cannabinoid Research Society was formally incorporated as a scientific research society in 1991. Membership in the Society has more than tripled from about 50 members in the first year to over 230 in 2003.

The International Association for Cannabis as Medicine (IACM) was founded in March 2000. It publishes a bi-weekly newsletter and the *IACM-Bulletin.* For the last three years Haworth Press has published the peer-reviewed *Journal of Cannabis Therapeutics.*

The University of California established the Center for Medicinal Cannabis Studies in 2001. It currently has 14 studies in progress and four others awaiting state and federal approval, including studies of cancer pain, nausea control in chemotherapy, general analgesia and a proposed study on refractory cancer pain.

In the United Kingdom, GW Pharmaceuticals has been granted a clinical trial exemption certificate by the Medicines Control Agency to conduct clinical studies with cannabis-based medicines. The exemption includes investigations



in the relief of pain of neurological origin and defects of neurological function in the following indications: multiple sclerosis (MS), spinal cord injury, peripheral nerve injury, central nervous system damage, neuroinvasive cancer, dystonias, cerebral vascular accident and spina bifida, as well as for the relief of pain and inflammation in rheumatoid arthritis and also pain relief in brachial plexus injury.

GW has completed Phase II studies in patients with MS, spinal cord injury, neuropathic pain, perioperative pain, rheumatoid arthritis, peripheral neuropathy secondary to diabetes mellitus or AIDS, and patients with neurogenic symptoms. The phase II trials provided positive results and confirmed an excellent safety profile for cannabis-based medicines. In 2002, GW conducted five phase III trials of its cannabis derivatives, including a double-blind, placebo-controlled trial with a sublingual spray containing High THC in more than 100 patients with cancer pain. In total, more than 1,000 patients are currently involved in phase III trials in the UK.

GW Pharmaceuticals received an IND approval to commence phase II clinical trials in Canada in patients with chronic pain, multiple sclerosis and spinal cord injury in 2002. Following meetings with the FDA, DEA, the Office for National Drug Control Policy, and the National Institute for Drug Abuse, GW was granted an import license from the DEA and has imported its first cannabis extracts into the U.S. Pre-clinical research with these extracts in the U.S. is ongoing.

CANNABIS AND AGING

Cannabis has been found to help many patients suffering from conditions that afflict older patients, including arthritis, chronic pain, cancer, Alzheimer's disease, diabetes, and spasticity associated with such diseases as Parkinson's.

Cannabis and Arthritis

More than 31 million Americans suffer from arthritis. There are two common types of arthritis, rheumatoid arthritis and osteoarthritis, but both affect the joints, causing pain and swelling, and limiting movement.

Rheumatoid arthritis is caused by the malfunctioning of the sufferer's immune system. Instead of fighting off intruders such as bacteria or viruses, the body attacks the synovial membranes, which facilitate the movement of joints, eventually destroying cartilage and eroding bones. Rheumatoid arthritis is most common among the aged, whose immune systems are no longer as robust or efficient.

Osteoarthritis, or arthritis of the bones, is also found primarily among the elderly, whose cartilage has been worn away through use. Arthritis may also manifest as chronic inflammation of the joints as the result of injuries.

Recent research is accumulating evidence that cannabis therapies are effective for arthritis and the other rheumatic and degenerative hip, joint and connective tissue disorders. Since these are frequently extremely painful conditions, the ability of cannabis to combat chronic pain makes it useful for that aspect, both on its own and as an adjunct therapy that enhances the efficacy of opiod painkillers. The use of cannabis as a treatment for musclo-skeletal pain in western medicine dates to the 1700s.[12-13]

But cannabis has also been shown to have powerful immune-modulation and anti-inflammatory properties,[14-17] indicating it may treat chronic inflammatory diseases directly. In fact, one of the earliest records of medical use of cannabis, a Chinese text dating from ca. 2000 BC, notes that cannabis "undoes rheumatism," suggesting its anti-inflammatory effects were known even then. [18]

Modern research on cannabidiol (CBD), one of the non-psychoactive components of cannabis, has found that it suppresses the immune response in mice and rats that is responsible for a disease resembling arthritis, protecting them from severe damage to their joints and markedly improving their condition.[19-20]

Human studies have shown cannabis to be an effective treatment for rheumatoid arthritis, one of the enumerated conditions for which many states allow legal medical use. Cannabis has a demonstrated ability to improve mobility and reduce

morning stiffness and inflammation. Research has also shown that patients are able to reduce their usage of potentially harmful Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) when using cannabis as an adjunct therapy.[21-22]

Medical researchers at Hebrew University in Jerusalem found in the metabolism of Cannabidiol an acid with potent anti-inflammatory action comparable to the drug indomethacin, but without the considerable gastrointestinal side effects associated with that drug. [23]

INSTITUTES OF MEDICINE

"Nausea, appetite loss, pain and anxiety . . all can be mitigated by marijuana.... For patients, such as those with AIDS or undergoing chemotherapy, who suffer simultaneously from severe pain, nausea, and appetite loss, cannabinoid drugs might offer broad spectrum relief not found in any other single medication."

Marijuana and Medicine: Assessing the Science Base, 1999

In addition, when the body metabolizes tetra-hydra-cannibinol (THC), one of the primary components of cannabis, it produces a number of related chemicals. At least one of these metabolites has anti-inflammatory and pain-relieving effects. By modifying this metabolite, researchers at the University of Massachusetts Medical Center have produced a synthetic carboxylic acid known as CT-3 (also called DMH-11C, chemical name dimethylheptyl-THC-11 oic acid), which is more powerful than the natural metabolite and can be given in smaller doses. Animal tests found CT-3 effective against both chronic and acute inflammation; it also prevented destruction of joint tissue from chronic inflammation. The long safety record of marijuana - no one has ever died of an overdose - and the fact that a metabolite with the desired anti-inflammatory effect is produced in the body when marijuana is used, strongly suggest that safe and effective anti-inflammatory drugs in this class are possible. [24]

In addition, CT3 has demonstrated analgesic effects in animals. In some cases the dose-dependent effect of THC was equivalent to morphine, but with a much greater duration of action.[25-26]

In contrast to the NSAIDs commonly prescribed arthritis sufferers, CT3 did not cause ulcers at therapeutically relevant doses. Moreover, it does not depress respiration, exhibit dependence, induce body weight loss or cause mutations. Studies on its mechanism of action are currently underway, with cytokine synthesis one of the pathways being studied.[27]

Cannabis may also help combat rheumatoid arthritis by way of its established immune-modulation properties.[28] Rheumatoid arthritis is characterized by dys-

regulation of the immune system in response to an initial infection or trauma. Over-activity of the immune system's B-cells causes antibodies to attack and destroy the synovial tissues located in the joint.

The immuno-modulatory properties of a group of fats found in cannabis known as sterols and sterolins have been used as natural alternatives to conventional rheumatoid arthritis treatments, which employ highly toxic drugs to either suppress the entire immune response of the body or to palliate pain and the inflammatory process without correcting the underlying immune dysfunction.

Cytokines play a role in either fueling or suppressing the inflammation that causes damage in rheumatoid arthritis and some other diseases. The release of selected cytokines is impaired by cannabis, but the findings differ by cell type, experimental conditions, and especially the concentration of the cannabinoids examined.[29-32] A sterol/sterolin combination has been experimentally demonstrated to reduce the secretion of the pro-inflammatory cytokines controlled by the TH2 helper cells and to increase the number of TH helper cells that regulate the secretion of antibodies from the B cells. This selective activation and inhibition of the immune system results is an effective control of the dysfunctional auto-immune response.

Similarly, another non-psychoactive cannabinoid, ajulemic acid, has been found by UMass Medical Center researchers to reduce joint tissue damage in rats with adjuvant arthritis.[33] Tests on human tissue done in vitro showed a 50% suppression of one of the body chemicals (interleukin-1beta) central to the progression of inflammation and joint tissue injury in patients with rheumatoid arthritis.[34]

Cannabis and Chronic Pain

Many older patients suffer from persistent and disabling pain, which can have numerous and sometimes multiple causes. These include cancer; arthritis and other rheumatic and degenerative hip, joint and connective tissue disorders; diabetes; AIDS; sickle cell anemia; multiple sclerosis; defects or injuries to the back, neck and spinal cord; and severe burns. Pain is not a primary condition or injury, but is rather a severe, frequently intolerable symptom that varies in frequency, duration, and severity according to the individual. The underlying condition determines the appropriate curative approach, but does not determine the proper symptom management. It is the character, severity, location and duration of the pain that determines the range of appropriate therapies.

For patients in pain, the goal is to function as fully as possible by reducing their pain as much as possible, while minimizing the often-debilitating side effects of the pain therapies. Failure to adequately treat severe and/or chronic pain can have tragic consequences. Not infrequently, people in unrelieved pain want to die. Despair can also cause patients to discontinue potentially life-saving procedures

(e.g., chemotherapy or surgery), which themselves cause severe suffering. In such dire cases, anything that helps to alleviate the pain will prolong these patients' lives.

Cannabis can serve at least two important roles in safe, effective pain management. It can provide relief from the pain itself (either alone or in combination with other analgesics), and it can control the nausea associated with taking opiod drugs, as well as the nausea, vomiting and dizziness that often accompany severe, prolonged pain.

Opioid therapy is often an effective treatment for severe pain, but all opiates have the potential to induce nausea. The intensity and duration of this nausea can cause enormous discomfort and additional suffering and lead to malnourishment, anorexia, wasting, and a severe decline in a patient's health. Some patients find the nausea so intolerable that they are inclined to discontinue the primary pain treatment, rather than endure the nausea.

Inhaled cannabis provides almost immediate relief for this with significantly fewer adverse effects than orally ingested Marinol. Inhalation allows the active compounds in cannabis to be absorbed into the blood stream with greater speed and efficiency. It is for this reason that inhalation is an increasingly common, and often preferable, route of administration for many medications. Cannabis may also be more effective than Marinol because it contains many more cannabinoids than just the THC that is Marinol's active ingredient. The additional cannabinoids may well have additional and complementary antiemetic qualities. They have been conclusively shown to have better pain-control properties when taken in combination than THC alone.

Research on cannabis and pain management

Cannabis has historically been used as an analgesic[35-36] and patients often report significant pain relief from marijuana.[37-42] Some of the most encouraging clinical data on effects of cannabinoids on chronic pain are from studies of intractable cancer pain[43] and hard-to-treat neuropathic pain.[44]

After reviewing a series of trials in 1997, the U.S. Society for Neuroscience concluded that "substances similar to or derived from marijuana ... could benefit the more than 97 million Americans who experience some form of pain each year."[45]

A 1999 study commissioned by the White House and conducted by the Institute of Medicine recognizes the role that cannabis can play in treating chronic pain. "After nausea and vomiting, chronic pain was the condition cited most often to the IOM study team as a medicinal use for marijuana."

AMERICAN ACADEMY OF FAMILY PHYSICIANS

"The American Academy of Family Physicians [supports] the use of marijuana ... under medical supervision and control for specific medical indications."

1996-1997 AAFP Reference Manual

The study found that "basic biology indicates a role for cannabinoids in pain and control of movement, which is consistent with a possible therapeutic role in these areas. The evidence is relatively strong for the treatment of pain and intriguingly, although less well established, for movement disorder." According to the Report, a number of brain areas that have an established role in sensing and processing pain respond to the analgesic effect of cannabis, such that cannabinoids have been used successfully to treat cancer pain, which is often resistant to treatment with opiates.

The Report further notes that cannabinoids serve as an anti-inflammatory agent, and so have therapeutic potential in preventing and reducing pain caused by the swelling of body tissues.

In addition to cannabis's analgesic properties, the Report indicates that cannabis, like its synthetic cousin Marinol, can help treat the nausea often induced by opiate therapy, especially when other antiemetics prove ineffective. In short, the IOM Report recognizes the potential benefits of cannabis for certain patients, including:

- Chemotherapy patients, especially those being treated for mucositis, nausea, and anorexia.
- Postoperative pain patients (using cannabinoids as an opioid adjunct to reduce the nausea and vomiting).
- Patients with spinal cord injury, peripheral neuropathic pain, or central post-stroke pain.
- Patients with chronic pain and insomnia.
- AIDS patients with cachexia, AIDS neuropathy, or any significant pain problem.[46]

Britain's House of Lords reached similar conclusions and called for legalized cannabis by prescription.[47]

Several studies have found that cannabinoids have analgesic effects in animal models, sometimes equivalent to codeine.[48-52] Cannabinoids also seem to synergize with opiods, which often lose their effectiveness as patients build up tolerance. One study found morphine was 15 times more active in rats with the addition of a small dose of THC. Codeine was enhanced on the order of 900 fold.[53]

In 1990, researchers conducted a double-blind study comparing the antispastic and analgesic effects of THC, oral Codeine, and a placebo on a single patient suffering from a spinal cord injury.[54] Their findings confirmed the analgesic effects of THC being "equivalent to codeine." A 1997 study made similar findings related to morphine.[55]

A 1999 article reviewing the body of scientific animal research concerning the analgesic effects of marijuana concludes that "[t]here is now unequivocal evidence that cannabinoids are antinociceptive [capable of blocking the appreciation or transmission of pain] in animal models of acute pain." [56]

In 2001, British researchers reported that cannabis extract sprayed under the tongue was effective in reducing pain in 18 of 23 patients who were suffering from intractable pain.[57]

CANNABIS AND CANCER

Cannabis has been found to help cancer patients with pain and nausea, and recent research indicates it has tumor-reducing properties as well. It has proven highly effective at controlling the nausea associated with chemotherapy, and its appetite-stimulation properties help combat wasting. Cannabis can help control the pain associated with radiation and chemotherapy, as well as the disease itself. Also, cannabinoids have been shown to have tumor-reducing properties for many types of cancer.

Cannabis and chemotherapy

Using cannabis and drugs made from the cannabinoids it contains to treat the side effects of cancer chemotherapy has been more widely studied than many other potential therapeutic applications. Numerous clinical studies have reported that the use of cannabis reduces nausea and vomiting and stimulates appetite, thereby reducing the severity of cachexia, or wasting syndrome, in patients receiving chemotherapy treatment.

The 1999 Institutes of Medicine report concluded: "In patients already experiencing severe nausea or vomiting, pills are generally ineffective, because of the

difficulty in swallowing or keeping a pill down, and slow onset of the drug effect. Thus an inhalation (but, preferably not smoking) cannabinoid drug delivery system would be advantageous for treating chemotherapy-induced nausea."[58]

A 1997 inquiry by the British Medical Association found cannabis more effective than Marinol, and a 1998 review by the House of Lords Science and Technology Select Committee concluded that "Cannabinoids are undoubtedly effective as anti-emetic agents in vomiting induced by anti-cancer drugs. Some users of both find cannabis itself more effective."[59-60]

In the last three years, there have been major advances in both cannabinoid pharmacology and in understanding of the cancer disease process. In particular, research has demonstrated the presence of numerous cannabinoid receptors in the nucleus of the solitary tract, a brain center important in control of vomiting.

Although other recently developed anti-emetics are as effective or more effective than oral THC, nabilone or smoked cannabis, for certain individuals unresponsive to conventional anti-emetic drugs, the use of smoked cannabis can provide relief more effectively than oral preparations which may be difficult to swallow or be vomited before taking effect, as the IOM report notes.

The psychoactive/euphoriant effects of THC or inhaled cannabis may also provide an improvement in mood. By contrast, several conventional medications commonly prescribed for cancer patients, e.g. phenothiazines such as haloperidol (known as "major tranquillizers"), may produce unwanted side effects such as excessive sedation, flattening of mood, and/or distressing physical "extrapyramidal" symptoms such as uncontrolled or compulsive movements.

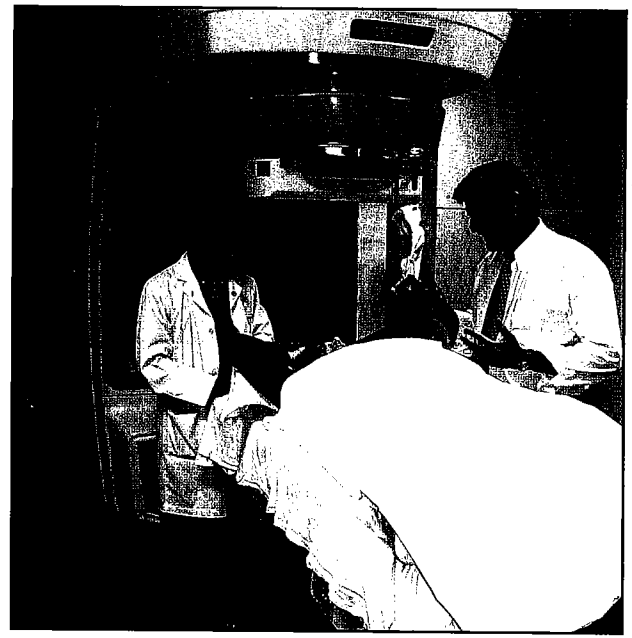
While clinical research on using cannabis medicinally has been limited by government prohibition until very recently and obstacles still exist. The accumulated data speaks strongly in favor of considering it as an option for most cancer patients, and many oncologists do. Survey data from a Harvard Medical School study in 1990, before any states had approved medical use, shows that 44% of oncologists had recommended cannabis to at least some of their patients. Nearly half said they would do so if the laws were changed.

According the American Cancer Society's 2003 data, more than 1,300,000 Americans are diagnosed with cancer each year.[61] At least 300,000 of them will undergo chemotherapy, meaning as many as 132,000 patients annually may have cannabis recommended to them to help fight the side effects of conventional treatments.

As the Institutes of Medicine report concluded, "nausea, appetite loss, pain and anxiety . . all can be mitigated by marijuana."

Research on cannabis and chemotherapy

Cannabis is used to combat pain caused by various cancers and nausea induced by chemotherapy agents. Over 30 human clinical trials examining the effects of cannabis or synthetic cannabinoids on nausea, not including several U.S. state trials that took place between 1978 and 1986.[62] In reviewing this literature, Hall et al. concluded that "... THC [delta-9-tetrahydrocannabinol] is superior to placebo, and equivalent in effectiveness to other widely-used anti-emetic drugs, in its capacity to reduce the nausea and vomiting caused by some chemotherapy regimens in some cancer patients."[63] A 2003 study found "Cannabinoids - the active components of Cannabis sativa and their derivatives - exert palliative effects in cancer patients by preventing nausea, vomiting and pain and by stimulating appetite. In addition, these compounds have been shown to inhibit the growth of tumor cells in culture and animal models by modulating key cell-signaling pathways. Cannabinoids are usually well tolerated, and do not produce the generalized toxic effects of conventional chemotherapies."[64]



Authors of the Institute of Medicine report, "Marijuana and Medicine: Assessing the Science Base," acknowledged that there are certain cancer patients for whom cannabis should be a valid medical option.[65] A random-sample anonymous survey was conducted in the spring of 1990 measuring the attitudes and experiences of oncologists concerning the antiemetic use of cannabis in cancer chemotherapy patients. Of the respondents expressing an opinion, a majority (54%) thought cannabis should be available by prescription.[66]

Cancer-fighting properties of cannabis

More than eighteen major studies published between 2001 and 2003 showed that the chemicals in cannabis known as cannabinoids have a significant effect fight-

ing cancer cells. We now know cannabinoids arrest many kinds of cancer growths (brain, breast, leukemic, melanoma, phaeochromocytoma, et al.) through promotion of apoptosis (programmed cell death) that is lost in tumors, and by arresting angiogenesis (increased blood vessel production).

Recent scientific advances in the study of cannabinoid receptors and endocannabinoids have produced exciting new leads in the search for anti-cancer treatments.

There is growing evidence of direct anti-tumor activity of cannabinoids, specifically CB1 and CB2 agonists, in a range of cancer types including brain (gliomas), skin, pituitary, prostate and bowel. The antitumor activity has led in laboratory animals and in-vitro human tissues to regression of tumors, reductions in vascularisation (blood supply) and metastases (secondary tumors), as well as direct inducement of death (apoptosis) among cancer cells. Indeed, the complex interactions of endogenous cannabinoids and receptors are leading to greater scientific understanding of the mechanisms by which cancers develop.

The findings of these studies are borne out by the reports of such patients as Steve Kubby, whose cannabis use is credited with keeping rare, terminal cancers in a state of remission for decades beyond conventional expectations.

Research on tumor reduction

Although cannabis smoke has been shown to have precancerous-causing effects in animal tissue, epidemiological studies have failed to link cannabis smoking with cancer.[67-68] If smoke inhalation is a concern, cannabis can be used with a vaporizer, orally in baked goods, and topically as a tincture or a suppository.

Cannabinoids, the active components of cannabis, have been shown to exhibit anti-tumor properties. Multiple studies published between 2001 and 2003 found that cannabinoids inhibit tumor growth in laboratory animals.[69-73] In another study, injections of synthetic THC eradicated malignant brain tumors in one-third of treated rats, and prolonged life in another third by as much as six weeks.[74] Other journals have also reported on cannabinoids' antitumoral potential.[75-81]

Italian research teams reported in 1998 and 2001 that the endocannabinoid anandamide, which binds to the same brain receptors as cannabis, "potently and selectively inhibits the proliferation of human breast cancer cells in vitro" by interfering with their DNA production cycle.[82-84] Cannabis has been shown in recent studies to inhibit the growth of thyroid, prostate and colorectal cancer cells.[85-87] THC has been found to cause the death of glioma cells.[88-89] And research on pituitary cancers shows cannabinoids are key to regulating human pituitary hormone secretion.[90-93]

CANNABIS AND MOVEMENT DISORDERS

Movement disorders and neuro-degenerative diseases, which are sometimes interlinked, are among the conditions cannabis is particularly well suited to treat.

The therapeutic use of cannabis for treating muscle problems and movement disorders has been known to western medicine for nearly two centuries. In 1839, Dr. William B. O'Shaughnessy wrote of the plant's muscle relaxant and anti-convulsant properties, that doctors had "gained an anti-convulsive remedy of the greatest value."[94] In 1890 Dr. J. Russell Reynolds, physician to Queen Victoria, noted in an article in The Lancet that for "organic disease of a gross character in the nervous centers . . . India hemp (cannabis) is the most useful agent with which I am acquainted."[95]

Muscular spasticity is a common condition, affecting millions of people in the United States. It afflicts individuals who have suffered strokes, as well as those with multiple sclerosis, cerebral palsy, paraplegia, quadriplegia, and spinal cord injuries. Conventional medical therapy offers little for spasticity problems. Phenobarbital and diazepam (Valium) are commonly prescribed, but they rarely provide complete relief, and many patients develop a tolerance, become addicted, or complain of heavy sedation. These drugs also cause weakness, drowsiness, and other side effects that patients find intolerable.

Extensive modern studies in both animals and various clinical states have shown that cannabis can treat movement disorders affecting older patients, such as tremors and spasticity, because cannabis has have antispasticity, analgesic, antitremor, and antiataxia actions.[96-107]

The American Public Health Association, in the federal court brief they filed in support of physicians' right to recommend cannabis, stated that "Marijuana is effective in treating muscle spasticity." They point out that the government's own Institutes of Medicine report on medical use of cannabis found that "current treatments for painful muscle spasms . . . have only limited effectiveness and their use is complicated by various adverse side effects." They go on to note that "a survey of British and American MS patients reports that after ingesting marijuana a significant majority experienced substantial improvements in controlling muscle spasticity and pain. An extensive neurological study found that herbal

cannabis provided relief from both muscle spasms and ataxia (loss of coordination), a multiple benefit not achieved by any currently available medications" (amicus brief in *Conant v. McCaffrey*, 2001 filing).

Cannabis also has enormous potential for protecting the brain and central nervous system from the damage that creates various movement disorders. Researchers have also found that cannabinoids fight the effects of strokes, as well as brain trauma, spinal cord injury, and multiple sclerosis. More than 100 research articles have been published on how cannabinoids act as neuroprotective agents to slow the progression of such neurodegenerative diseases as Huntington's, Alzheimer's and particularly Parkinson's, which affects more than 52% of people over the age of 85.

An understanding of the actions of cannabis was spurred by the discovery of an endogenous cannabinoid system in the human body. This system appears to be intricately involved in normal physiology, specifically in the control of movement.[108-112] Central cannabinoid receptors are densely located in the basal ganglia, the area of the brain that regulates body movement. Endogenous cannabinoids also appear to play a role in the manipulation of other transmitter systems within the basal ganglia - increasing transmission of certain chemicals, inhibiting the release of others, and affecting how still others are absorbed. Most movement disorders are caused by a dysfunction of the chemical loops in this part of the brain. Research suggests that an endogenous cannabinoid tone participates in the control of movements.[113-117]

Endocannabinoids have paradoxical effects on the mammalian nervous system: Sometimes they block neuronal excitability and other times they augment it As scientists are developing a better understanding of the physiological role of those natural cannabinoids, or endocannabinoids, it is becoming clear that these chemicals may be involved in the pathology of several neurological diseases. Researchers are identifying an array of potential therapeutic targets within the human nervous system. They have determined that various cannabinoids found in the cannabis plant interrupt the synthesis, uptake or metabolism of the endocannabinoids that drive the progression of Huntington's disease, Parkinson's disease, and tremor. [118-119]

Parkinson's disease has been linked to dysfunction in the body's dopamine system, specifically the production of too much of the neurotransmitter glutamate and oxidative damage to dopaminergic neurons. Studies have found a tight association between cannabinoids and dopamine, and recent research has produced anatomical, biochemical and pharmacological evidence supporting a role for the endogenous cannabinoid system in the modulation of dopaminergic transmission. Cannabinoid receptors switch between blocking and enhancing dopamine signaling. Cannabinoids neuroprotective action appears to result from their ability to inhibit reactive oxygen species, glutamate and tumour necrosis factor.

CANNABIS AND ALZHEIMER'S DISEASE

Clearly cannabis offers therapeutic potential for a broad spectrum of movement disorders, both in treating the pain associated with them and the physiological causes. But movement disorders are not the only neuro-degenerative problems for which cannabis may be a powerful treatment.

Alzheimer's disease is another neuro-degenerative condition for which cannabis and cannabinoid therapies show promise, both for treating the symptoms and the underlying disease.

AMERICAN NURSES ASSOCIATION

In 2003 the American Nurses Association passed a resolution that supports those health care providers who recommend medicinal use, recognizes "the right of patients to have safe access to therapeutic marijuana/cannabis," and calls for more research and education, as well as a rescheduling of marijuana for medical use.

Alzheimer's disease is widely held to be associated with oxidative stress due, in part, to the membrane action of beta-amyloid peptide aggregates. A laboratory study published in 2004 indicates that one of the cannabis plant's primary components, cannabidiol (CBD), exerts a combination of neuroprotective, anti-oxidative and anti-apoptotic effects by inhibiting the release of the toxic beta-amyloid peptide. [120]

Another cannabinoid, THC, has also has been shown to reduce the agitation common to Alzheimer's sufferers, according to findings presented in 2003 at the American Society of Consultant Pharmacists' 34th annual meeting.[121] Agitation is the most common behavioral management problem in patients with Alzheimer's and affects an estimated 75 percent of people with the disease. It may lead to a variety of symptoms ranging from physical and/or verbal abusive postures, physically non-aggressive conduct including pacing and restlessness, as well as verbally disturbed behaviors such as screaming and repetitive requests for attention.

This study and the Institutes of Medicine report also show THC to be effective in combating the anorexia or wasting syndrome common to Alzheimer's sufferers, since food refusal is a common problem in patients who suffer from Alzheimer's type dementia. The appettite-stimulation properties of cannabis are some of the most well-established in clinical research.[122]

This new research on cannabis and Alzheimer's disease, coupled with the extensive work done on other neuroprotective qualities of cannabis and its components, indicates that cannabis may become the source of the most effective treatments for battling the Central Nervous System diseases that afflict millions of elderly Americans.

ARTHRITIS MEDICATIONS

Nearly 100 medications are listed by the Arthritis Foundation website for use with arthritis or other related conditions, such as fibromyalgia, psoriasis, osteoporosis and gout. These medicines include aspirin, ibuprofen and other oral and topical analgesics that dull pain. The most commonly used analgesic, **acetaminophen** (aspirin-free Anacin, Excedrin, Panadol, Tylenol) is usually not associated with side effects, though long-term use of acetaminophen is thought to be one of the common causes of end-stage renal disease.. To effectively control arthritis, **aspirin** must be taken in large, continuous doses (1000-5400 mg daily), which can cause stomach pain or damage; it is believed to cause more than 1,000 deaths annually in the United States. For that reason, some doctors prescribe one of several chemical variations referred to as nonacetylated salicylates, such as CMT, Tricosal, and Trilisate, which can cause deafness or ringing in the ears in large doses.

Much stronger analgesics are also prescribed for arthritis, sometimes along with acetominophen. These are: **codeine** (Dolacet, Hydrocet, Lorcet, Lortab, Vicodin); **morphine** (Avinza, Oramorph); **oxycodone** (Oxycontin, Roxicodone); **propoxyphene** (Percocet, Darvon, Darvocet) and **tramadol** (Ultram, Ultracet). These medicines can cause psychological and physical dependence, as well as constipation, dizziness, lightheadedness, mood changes, nausea, sedation, shortness of breath and vomiting. Taking high doses or mixing with alcohol can slow down breathing, a potentially fatal condition.

Analgesics don't treat the inflammation that can cause severe arthritis pain. For inflammation, steroids, nonsteroidal anti-inflammatory drugs (NSAIDs) and newer COX-2 inhibitors are prescribed. Corticosteroids (Cortisone), prednisone and related medications can cause bruising, cataracts, elevated blood sugar, hypertension, increased appetite, indigestion, insomnia, mood swings, muscle weakness, nervousness or restlessness, osteoporosis, susceptibility to infection and thin skin.

Twenty **NSAIDs** are available with a doctor's prescription, with three of those also available over the counter. They are diclofenac (Arthrotec, Cataflam, Voltaren); diflunisal (Dolobid); etodolac (Lodine); fenoprofen calcium (Nalfon); flurbiprofen (Ansaid); ibuprofen (Advil, Motrin IB, Nuprin); indomethacin (Indocin); ketoprofen (Orudis); meclofenamate sodium (Meclomen); mefenamic acid (Ponstel); meloxicam (Mobic); nabumetone (Relafen); naproxen (Naprosyn, Naprelan); naproxen sodium (Anaprox, Aleve); oxaprozin (Daypro); piroxicam (Feldene); sulindac (Clinoril); and tolmetin sodium (Tolectin).

Side effects of NSAIDs include abdominal or stomach cramps, edema (swelling of the feet), pain or discomfort, diarrhea, dizziness, drowsiness or lightheadedness, headache, heartburn or indigestion, nausea or vomiting, gastric ulcers, stomach irritation, bleeding, fluid retention, and decreased kidney function. This is because NSAIDs act on arthritis by inhibiting prostaglandins, which protect the stomach lining, promote clotting of the blood, regulate salt and fluid balance, and maintain blood flow to the kidneys. The gastrointestinal complications of NSAIDS are the most commonly reported serious adverse drug reaction, though NSAIDs cause more than 7,600 annual deaths and 70,000 hospitalizations.

The newer group of arthritis drugs is known as cyclo-oxygenase-2 inhibitors (**COX-2**), which include Celebrex, Bextra and Vioxx. These medications have the same side effects as NSAIDS, except they are less likely to cause bleeding stomach ulcers and susceptibility to bruising or bleeding.

Non-selective NSAIDS have been associated with an increased risk of congestive heart failure. Less is known or has been concluded about the cardiovascular effects of COX-2 inhibitors, though a retrospective analysis of the risk of hospital admission for heart failure done by the Institute for Clinical Evaluative Sciences in Toronto, Canada suggests some may have serious side effects. The study of 130,000 older patients found that those using Vioxx had an 80% increased risk of hospital admission for congestive heart failure. Those using non-selective NSAIDS had a 40% increased risk, and those using Celebrex had the same rate of heart failure as people who had never used NSAIDS.

Antipyretic and anti-inflammatory effects of NSAIDs can mask the signs and symptoms of infection. Their use can interfere with the pharmacologic control of hypertension and cardiac failure in patients who take beta-adrenergic antagonists, angiotensin-converting enzyme inhibitors, or diuretics. Long-term use may damage chondrocyte (cartilage) function.

About 60% of patients will respond to any single NSAID. Approximately 10% of rheumatoid arthritis patients will not respond to any NSAID.

Biologic response modifiers such as **adalimumab** (Humira); **etanercept** (Enbrel); **infliximab** (Remicade), and **anakinra** (Kineret)) are prescribed to either inhibit or the supplement the immune system components called cytokines. Rare reports of lupus (with symptoms such as rash, fever and pleurisy) have been linked to treatment with adalimumab, etanercept and infliximab. Lupus symptoms resolve when the medication is stopped. Multiple sclerosis has rarely developed in patients receiving biologic response modifiers. Seizures have been reported with etanercept.

CHRONIC PAIN MEDICATIONS

According to the Institute of Medicine, "All of the currently available analgesic (pain-relieving) drugs have limited efficacy for some types of pain. Some are limited by dose-related side effects and some by the development of tolerance or dependence."

The opioid analgesics commonly used to combat pain include **codeine** (Dolacet, Hydrocet, Lorcet, Lortab); **morphine** (Avinza, Oramorph); **oxycodone** (Vicodin, Oxycontin, Roxicodone, Percocet, Roxicet); **propoxyphene** (Darvon, Darvocet) and **tramadol** (Ultram, Ultracet). These medicines can cause psychological and physical dependence, as well as constipation, dizziness, lightheadedness, mood changes, nausea, sedation, shortness of breath and vomiting. Taking high doses or mixing with alcohol can slow down breathing, a potentially fatal condition.

In addition, patients in pain are often prescribed muscle relaxants such as **Robaxin** and **Flexeril**; anti-anxiety agents like **Valium, Sinequan, Vistaril, Ativan** and **Xanax**; hypnotics such as **Halcion**, **Restoril**, **Chloralhydrate**, **Dalmane** and **Doral** and anti-emetics like **Zofran**, **Compazine**, **Phenergan**, **Tigan** and **Marinol**.

Robaxin's side effects include abnormal taste, amnesia, blurred vision, confusion, dizziness, drop in blood pressure and fainting, drowsiness, fever, flushing, headache, hives, indigestion, insomnia, itching, light-headedness, nasal congestion, nausea, pinkeye, poor coordination, rash, seizures, slowed heartbeat, uncontrolled eye movement, vertigo, vomiting and yellow eyes and skin.

Flexeril can cause abnormal heartbeats, aggressive behavior, agitation, anxiety, bloated feeling, blurred vision, confusion, constipation, convulsions, decreased appetite, depressed mood, diarrhea, difficulty falling or staying asleep, difficulty speaking, disorientation, double vision, excitement, fainting, fatigue, fluid retention, gas, hallucinations, headache, heartburn, hepatitis, hives, increased heart rate, indigestion, inflammation of the stomach, itching, lack of coordination, liver diseases, loss of sense of taste, low blood pressure, muscle twitching, nausea, nervousness, palpitations, paranoia, rash, ringing in the ears, severe allergic reaction, stomach and intestinal pain, sweating, swelling of the tongue or face,

thirst, tingling in hands or feet, tremors, unpleasant taste in the mouth, urinating more or less than usual, vague feeling of bodily discomfort, vertigo, vomiting, weakness, and yellow eyes and skin

The newer antiemetics, **Anzamet**, **Kytril** and **Zofran**, are serotonin antagonists, blocking the neurotransmitter that sends a vomiting signal to the brain. Rare side effects of these drugs include fever, fatigue, bone pain, muscle aches, constipation, loss of appetite, inflammation of the pancreas, changes in electrical activity of heart, vivid dreams, sleep problems, confusion, anxiety and facial swelling.

Reglan, a substituted benzamide, increases emptying of the stomach, thus decreasing the chance of developing nausea and vomiting due to food remaining in the stomach. When given at high doses, it blocks the messages to the part of the brain responsible for nausea and vomiting. Side effects include sleepiness, restlessness, diarrhea and dry mouth. Rarer side effects are rash, hives and decreased blood pressure

Haldol and **Inapsine** are tranquilizers that block messages to the part of the brain responsible for nausea and vomiting. Possible side effects include decreased breathing rate, increased heart rate, decrease in blood pressure when changing position and, rarely, change in electrical activity of the heart.

Compazine and **Torecan** are phenothiazines, the first major anti-nausea drugs. Both have tranquilizing effects. Common side effects include dry mouth and constipation. Less common effects are blurred vision, restlessness, involuntary muscle movements, tremors, increased appetite, weight gain, increased heart rate and changes in electrical activity of heart. Rare side effects include jaundice, rash, hives and increased sensitivity to sunlight.

Benadryl, an antihistamine, is given along with Reglan, Haldol, Inapsine, Compazine and Torecan to counter side effects of restlessness, tongue protrusion, and involuntary movements. Its side effects include sedation, drowsiness, dry mouth, dizziness, confusion, excitability and decreased blood pressure.

Benzodiazepine drugs **Ativan** and **Xanax** are prescribed to combat the anxiety associated with chronic pain. Ativan causes amnesia. Abruptly stopping the drug can cause anxiety, dizziness, nausea and vomiting, and tiredness. It can cause drowsiness, confusion, weakness, and headache when first starting the drug. Nausea, vomiting, dry mouth, changes in heart rate and blood pressure, and palpitations are possible side effects.

CANCER MEDICATIONS

The American Cancer Society lists 269 medicines currently prescribed to treat cancer and its symptoms, and to treat the side effects of other cancer drugs. Some

drugs are prescribed for pain caused by cancer, and cancer patients report pain relief with cannabis therapy. Many chemotherapy agents cause severe nausea and 13 drugs are currently prescribed to treat nausea, including Marinol, a synthetic form of delta-9-THC, one of the active ingredients in cannabis.

The newer antiemetics, **Anzamet**, **Kytril** and **Zofran**, are serotonin antagonists, blocking the neurotransmitter that sends a vomiting signal to the brain. Rare side effects of these drugs include fever, fatigue, bone pain, muscle aches, constipation, loss of appetite, inflammation of the pancreas, changes in electrical activity of heart, vivid dreams, sleep problems, confusion, anxiety and facial swelling.

Reglan, a substituted benzamide, increases emptying of the stomach, thus decreasing the chance of developing nausea and vomiting due to food remaining in the stomach. When given at high doses, it blocks the messages to the part of the brain responsible for nausea and vomiting resulting from chemotherapy. Side effects include sleepiness, restlessness, diarrhea and dry mouth. Rarer side effects are rash, hives and decreased blood pressure

Haldol and **Inapsine** are tranquilizers that block messages to the part of the brain responsible for nausea and vomiting. Possible side effects include decreased breathing rate, increased heart rate, decrease in blood pressure when changing position and, rarely, change in electrical activity of the heart.

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Benadryl, an antihistamine, is given along with Reglan, Haldol, Inapsine, Compazine and Torecan to counter side effects of restlessness, tongue protrusion, and involuntary movements. Its side effects include sedation, drowsiness, dry mouth, dizziness, confusion, excitability and decreased blood pressure.

Decadron (dexamethasone), a corticosteroid, is given with other chemotherapy drugs as an adjunct medication. Common side effects include increased appetite, irritation of stomach, euphoria, difficulty sleeping, mood changes, flushing, increased blood sugar, decreased blood potassium level. Possible side effects upon discontinuing the drug include adrenal insufficiency, weakness, aches, fever, dizziness, lowering of blood pressure when changing position, difficulty breathing, and low blood sugar.

Benzodiazepine drugs **Ativan** and **Xanax** are also prescribed to combat the effects of chemotherapy. Ativan causes amnesia. Abruptly stopping the drug can

cause anxiety, dizziness, nausea and vomiting, and tiredness. It can cause drowsiness, confusion, weakness, and headache when first starting the drug. Nausea, vomiting, dry mouth, changes in heart rate and blood pressure, and palpitations are possible side effects.

In addition, in April 2003 the FDA approved the drug **Emend** (aprepitant) to help control delayed-onset nausea. It is given along with two other anti-nausea drugs. A regimen of three pills costs $250. The most common side effects with Emend are fatigue, nausea, loss of appetite, constipation, diarrhea.

SPASTICITY AND MOVEMENT MEDICATIONS

Benzodiazepines, baclofen, dantrolene sodium, and tizanidine are the most widely used agents for reduction of spasticity. At high dosages, oral medications can cause unwanted side effects that include sedation, as well as changes in mood and cognition.

Benzodiazepines, which include Diazepam (Valium) and Clonazepam (Klonopin, Rivotril), are centrally acting agents that increase the affinity of GABA to its receptor. Diazepam is the oldest and most frequently used oral agent for managing spasticity. Benzodiazepine side effects include sedation, weakness, hypotension, GI symptoms, memory impairment, incoordination, confusion, depression, and ataxia are possible side effects of. Tolerance and dependency may occur and withdrawal on cessation. Tolerance may also lead to unacceptable dosage escalation.

Baclofen (Lioresal) has been widely used for spasticity since 1967. It is a GABA agonist.Tolerance to the medication may develop. Baclofen must be slowly weaned to prevent withdrawal effects such as seizures, hallucinations and increased spasticity. It must be used with care in patients with renal insufficiency as its clearance is primarily renal. Side effects are predominantly from central depressant properties including sedation, ataxia, weakness and fatigue. May cause depression when combined with tizanidine or benzodiazepines.

Dantrolene Sodium (Dantrium) acts peripherally at the level of the muscle fiber and works best for cerebral palsy and traumatic brain injury. Because the action of dantrolene sodium is not selective for spastic muscles, it may cause generalized weakness, including weakness of the respiratory muscles. The side effects include drowsiness, dizziness, weakness, fatigue and diarrhea. In addition, hepatotoxicity (liver damage) occurs in < 1% of patients who take dantrolene sodium.

Tizanidine (Zanaflex) facilitates short-term vibratory inhibition of the H-reflex. Tizanidine in conjunction with baclofen or benzodiazepines has potential additive effects, including sedation and the possibility of liver toxicity. Dry mouth, somnolence, asthenia and dizziness are the most common side effects. Liver

function problems and hallucinations may also occur.

CANNABIS vs. OTHER MEDICATIONS

By comparison, the side effects associated with cannabis are typically mild and are classified as "low risk." Euphoric mood changes are among the most frequent side effects. Cannabinoids can exacerbate schizophrenic psychosis in predisposed persons. Cannabinoids impede cognitive and psychomotor performance, resulting in temporary impairment. Chronic use can lead to the development of tolerance. Tachycardia and hypotension frequently are documented as adverse events in the cardiovascular system. A few cases of myocardial ischemia have been reported in young and previously healthy patients. Inhaling the smoke of cannabis cigarettes induces side effects on the respiratory system. Cannabinoids are contraindicated for patients with a history of cardiac ischemias. In summary, a low risk profile is evident from the literature available. Serious complications are very rare and were not reported after use of cannabinoids for medical indications.

Is cannabis safe to recommend?

"The smoking of cannabis, even long term, is not harmful to health. . . . " So began a 1995 editorial statement of Great Britain's leading medical journal, The Lancet. The long history of human use of cannabis also attests to its safety - nearly 5,000 years of documented use without a single death. In the same year as the Lancet editorial, Dr. Lester Grinspoon, a professor emeritus at Harvard Medical School who has published many influential books and articles on the medical use of cannabis, had this to say in an article in the *Journal of the American Medical Association* (June 1995):

> "One of marihuana's greatest advantages as a medicine is its remarkable safety. It has little effect on major physiological functions. There is no known case of a lethal overdose; on the basis of animal models, the ratio of lethal to effective dose is estimated as 40,000 to 1. By comparison, the ratio is between 3 and 50 to 1 for secobarbital and between 4 and 10 to 1 for ethanol. Marihuana is also far less addictive and far less subject to abuse than many drugs now used as muscle relaxants, hypnotics, and analgesics. The chief legitimate concern is the effect of smoking on the lungs. . . .[O}nce marihuana is an openly recognized medicine, solutions may be found; ultimately a technology for the inhalation of cannabinoid vapors could be developed."

The technology Dr. Grinspoon imagined in 1995 now exists in the form of "vaporizers," widely available through stores and mail-order, while pharmaceutical companies have been developing sublingual spray and tablet forms of the drug. Patients and doctors have found other ways to avoid the potential problems associated with smoking, though long-term studies of even the heaviest users in Jamaica, Turkey and the U.S. have not found increased incidence of lung disease or other respiratory problems. As Dr. Grinspoon goes on to say, "the greatest danger in medical use of marihuana is its illegality, which imposes much anxiety and expense on suffering people, forces them to bargain with illicit drug dealers, and exposes them to the threat of criminal prosecution." This was the same conclusion reached by the House of Lords report, which recommended rescheduling and decriminalization, both of which were enacted in Great Britain in 2004.

Angel Raich using a vaporizer in the hospital

Cannabis or Marinol?

Those committed to the prohibition on cannabis frequently cite Marinol, a Schedule III drug, as the legal means to obtain the benefits of cannabis. However, Marinol, which is a synthetic form of THC, does not deliver the same therapeutic benefits as the natural herb, which contains at least another 60 cannabinoids in addition to THC. Recent research conducted by GW Pharmaceuticals in Great Britain has shown that Marinol is simply not as effective for pain management as the whole plant; a balance of cannabinoids, specifically CBC and CBD with THC, is what helps patients most. In fact, Marinol is not labeled for pain, only appetite stimulation and nausea control. But studies have found that many severely nauseated patients experience difficulty in getting and keeping a pill down, a problem avoided by use of inhaled cannabis.

Clinical research on Marinol vs. cannabis has been limited by federal restrictions, but a New Mexico state research program conducted from 1978 to 1986 provided cannabis or Marinol to about 250 cancer patients for whom conventional medications had failed to control the nausea and vomiting associated with chemotherapy. At a DEA hearing, a physician with the program testified that cannabis was clearly superior to both Chlorpromazine and Marinol for these patients. Additionally, patients frequently have difficulty getting the right dose with Marinol, while inhaled cannabis allows for easier titration and avoids the negative side effects many report with Marinol. As the House of Lords report states, "Some users of both find cannabis itself more effective."

The Experience of Patients

DOROTHY GIBBS: Arthritis, Chronic Pain

In 1911, at the age of one, I contracted the polio virus.... The early onset of polio caused permanent damage in my legs, spine, and back, resulting in significant weakness and atrophy in my legs. As a result, I have never been able to walk without the assistance of crutches and braces or a wheelchair. Approximately 30 years ago, my condition began to deteriorate. I began to suffer from increasing levels of pain and weakness in my legs and back as well as severe osteoarthritis in my hands, arms, and joints. Over time, my deteriorating medical condition has been exacerbated by my pain, leaving me increasingly immobilized....

By May, 1996, my physician [Dr. Arnold Leff, M.D.] had tried various prescription medications to relieve my pain, including: Tylenol #3, Ultram, Daypro, Tegretol, Soma, Valium, steroid injections into the trigger point, Dilantin, Duragesic, Zofran and Comapazine for the nausea caused by the opioid pain relievers, and Doloboid and Lodine as nonsteroids. Nothing seemed to work, and the pain persisted. I was growing increasingly depressed by the inability of anything to relieve my pain....

During this period it was clear to me, my caretaker and my physician that nothing was working to combat my pain. My caretaker, Pat, had heard of the success some people experience with the medicinal use of marijuana for pain management. Sometime during the end of 1997, she obtained a sample for me. Although I had never used marijuana in my previous eighty-seven years of life, I was willing to try anything that could alleviate even part of the pain.

The relief I experienced from medical marijuana was almost immediate. I was so pleased with the result that I wrote to Dr. Leff about my use of medical marijuana and we talked about the benefits of the medicine. Dr. Leff examined me and noted that medical marijuana helped me experience less chronic pain and nausea, leading him to recommended medical marijuana as part of my daily pain care regimen....

I strongly feel that I should have the right to use anything that may relieve any or some of my pain, and my last days should not be spent suffering. . . .

Ever since trying medical marijuana, my life has drastically improved. Although chronic pain, related to my post-polio syndrome will always be a part of my life, medical marijuana had helped me manage this pain by providing fast and effective relief for my muscle spasms, acute pains, and arthritis....

Since I began using medical marijuana, my pain is no longer persistent or debilitating. When I do suffer from pain, I am usually able to "get ahead of it" by using medical marijuana and make it manageable....

JUDITH CUSHNER: Breast Cancer

In 1989, I was diagnosed with breast cancer. After a brief period of recovery from the surgeries, I was placed on an aggressive protocol of chemotherapy, which lasted for eight

months. That protocol was referred to as "CMF," because it consisted of heavy doses of Cytoxan, methotraxate, and 5 fluorouracil.

The treatment caused severe and persistent side effects which were thoroughly disabling: chronic nausea, joint pain and weakness; a debilitating lack of energy and motivation; loss of appetite and a resulting unwanted weight loss; sleep disruption; and eventually my withdrawal from social situations and interpersonal relationships. The cumulative effect of these symptoms often rendered it impossible (or painfully difficult) to take the huge number of medications essential to my treatment regimen.

Right from the start, I was given Compazine as part of my chemotherapy protocol. I took it both orally (in pill form) and intravenously, but it too caused severe adverse side effects, including neuropathy. Moreover, the Compazine provided little, if any, relief from the nausea that had persisted since my treatment began. Hoping for better results, my doctor discontinued the Compazine and prescribed Reglan. That, too, had no effect on the nausea and we decided to discontinue it after a fairly short time. By then, I had developed chronic mouth sores (also from the chemotherapy), which made it extremely painful to take pills or swallow anything. Rather than providing relief, the Reglan increased my discomfort and pain.

Yet another drug I tried was Marinol, which gave me no relief from the unrelenting nausea. If anything, taking yet another pill increased my discomfort. The pills themselves irritated the sores in my mouth. It also made me quite groggy, yet my sleep disturbance persisted, in part because my nausea and anxiety were so distracting.

During this time, a friend of mine (who happened to be a nurse) gave me a marijuana cigarette. She had seen my suffering and thought it might help. I took her advice and it worked. I took just a few puffs and within minutes, the nausea dissipated. For the first time in several months, I felt relief. I also felt hope. I smoked small amounts of marijuana for the remainder of my chemotherapy and radiation treatment. It was not a regular part of my day, nor did it become a habit. Each time I felt nausea coming on, I inhaled just two or three puffs and it subsided.

As my nausea decreased, my ability to eat and retain food increased. I saw a marked weight gain and my energy increased. As my general health improved, my sleeping habits also improved. In retrospect, one of the greatest benefits from the marijuana was that it decreased my use of other, more disabling and toxic medications, including the Compazine, Reglan and Lorazepam.

My cancer has been in remission now for just under a year. I lived to see my son's Bar Mitzvah, and I am proud to say that the risks I took to save my life, while technically illegal, have earned me the respect of both my children. They have learned the difference between therapeutic treatment and substance abuse, and (unlike many of their peers) that knowledge has helped them resist the temptations of recreational drugs.

My decision to use marijuana and save my own life has educated many, including my rabbi and my congregation.

—Sworn testimony by Judith Cushner in Conant v. McCaffrey, 2/14/1997

JO DALY: Colon Cancer

In 1980, I was appointed by Dianne Feinstein, then Mayor of San Francisco, to serve as police commissioner for the city of San Francisco, an office which I held for six years. On May 24, 1988, I was diagnosed with Phase IV cancer of the colon. By the time it was diagnosed, it had already spread to my ovaries and lymph nodes. My oncologist at the UCSF Hospital prescribed an aggressive regimen of chemotherapy, which lasted six months. I was given large doses of the chemicals, four hours a day, five days a week in the first week of each month.

FEDERATION OF AMERICAN SCIENTISTS

"Based on much evidence, from patients and doctors alike, on the superior effectiveness and safety of whole cannabis compared to other medications, ... the President should instruct the NIH and the Food and Drug Administration to make efforts to enroll seriously ill patients whose physicians believe that whole cannabis would be helpful to their conditions in clinical trials" *(November 1994)*

Each day, when I returned home from the hospital following treatment. . . . I was overcome by a sudden wave of intense nausea — like a nuclear implosion in my solar plexus — and I rushed desperately for the bathroom where I would remain for hours, clutching the toilet and retching my guts out. I had no appetite. I could not hold down what little food that I managed to swallow. And I could not sleep at night.

This intense nausea persisted for the two weeks following the treatment. By the third week after treatment, the side effects of the chemicals began to wear off, and I started to feel better. The next week, however, I had to return to the hospital where the chemicals were administered once more, beginning my hell all over again. To combat the nausea, I tried Marinol, a synthetic version of THC, one of the primary chemicals found in marijuana. However, I was often unable to swallow the Marinol capsule because of my severe nausea and retching. A friend then gave me a marijuana cigarette, suggesting that it might help quell my nausea. I took three puffs from the cigarette. One-half hour later, I was calm, my nausea had disappeared, my appetite returned, and I slept that evening.

I told my oncologist about how well marijuana quelled my nausea. My doctor was not surprised. In fact, he told me that many of his patients had made the same discovery. My doctor encouraged me to continue using marijuana if it worked. Although it occasionally produced a slight euphoria, it was not a painful sensation and I was careful never to leave the house during those rare moments.

My use of medical marijuana had a secondary, though by no means minor benefit: I was able to drastically reduce my dependence on more powerful prescription drugs that I was prescribed for pain and nausea. With the help of medical marijuana, which I ingest only occasionally and in small amounts, I no longer need the Compazine, Lorazepam, Ativan and Halcion.

— Jo Daly, former San Francisco Police Commissioner

The Experience of Doctors

HARVEY L. ROSE, M.D.

Both my research and my many years as a clinician have convinced me that marijuana can serve at least two important roles in safe and effective pain management. Ample anecdotal evidence and clinical observations, as well as significant research findings, strongly indicate that marijuana, for whatever reason, is often effective in relieving pain. This is true across a range of patient populations, including the elderly, the terminally ill seeking comfort in their final days, young adults stricken with life-threatening conditions, and cancer patients unable to tolerate the devastating effects of potentially life-saving therapies. Marijuana is also widely recognized as an antiemetic that reduces the nausea and vomiting often induced by powerful opioid analgesics prescribed for chronic, severe pain, as well as the nausea, vomiting and dizziness which often accompany severe and/or prolonged pain. I have had the benefit of consultations on this subject over many years with a range of treatment providers, including physicians, oncologists, pharmacologists, family practitioners, hospice workers, and pain specialists....

Specifically, I have found that cannabis can have an important opioid-sparing effect for pain patients. That is to say, that patients who are prescribed high doses of opioid analgesics can significantly reduce their reliance on these medications and improve their daily functioning by incorporating cannabis into their pain care regimen.

Marijuana not only has important analgesic properties but it also is an effective and important adjuvant therapy for patients suffering acute and/or chronic pain. No experienced and respected physician will deny that for such patients opioid therapy is central to palliative care. By the same token, the same experienced physicians will readily acknowledge that opioids often induce nausea and vomiting. For a number of pain patients, standard prescription antiemetics (e.g., Compazine, Zofran and Reglan) simply do not substantially reduce their nausea. For many, those medications are substantially less effective, or produce more debilitating side effects, than marijuana....

Quite simply, marijuana can serve much the same function for pain patients undergoing opiate therapy that it does for cancer patients undergoing chemotherapy: it suppresses the nausea and vomiting associated with treatment, and reduces the pain associated with prolonged nausea and retching, thereby increasing the chances that the patient will remain compliant with the primary treatment. With both chemotherapy and long-term pain management, failure to obtain and continue proper palliative and adjutant care can have dire, even fatal, consequences....

Finally, it is important to note that in my clinical experience observing patients who ingest cannabis for relief from pain and nausea and/or to stimulate appetite, I have witnessed no adverse complications. By contrast, many of the first-line pharmaceuticals used to combat cancer, HIV/AIDS, and pain associated with these and other illnesses can induce a variety of iatrogenic effects, including, in some instances, death. While patients may face serious legal implications related to their use of medical marijuana, as a physician I have yet to encounter a medical downside to their cannabinoid therapy. . . .

[A]gainst the backdrop of a growing body of scientific research, the reports of myriad pain

patients, and the burgeoning clinical experience of physicians like myself, it is my considered opinion that cannabis can constitute an acceptable and sometimes necessary medicine to alleviate the immediate suffering of certain patients.

Dr. Rose served as a medical officer in the Air Force before entering private practice. During his 40-year career, he has taught at UC Davis School of Medicine, consulted with state legislative bodies, and received many awards.

HOWARD D. MACCABEE, M.D.

In my practice, I commonly use radiation therapy to treat the whole spectrum of solid malignant tumors. Radiation therapy is often used after surgery or chemotherapy, as a second stage in treatment. Sometimes, however, radiation therapy is used concurrently with chemotherapy, or even as the first or only modality of treatment.

Because of the nature of some cancers, I must sometimes irradiate large portions of my patients' abdomens. Such patients often experience nausea, vomiting, and other side effects. Because of the severity of these side effects, some of my patients choose to discontinue treatment altogether, even when they know that ceasing treatment could lead to death.

During the 1980s, I participated in a state-sponsored study of the effects of marijuana and THC (an active ingredient in marijuana) on nausea. It was my observation during this time that some patients smoked marijuana while hospitalized, often with the tacit approval of physicians. I also observed that medical marijuana was clinically effective in treating the nausea of some patients.

During my career as a physician, I have witnessed cases where patients suffered from nausea or vomiting that could not be controlled by prescription anti-emetics. I frequently hear similar reports from colleagues treating cancer and AIDS patients. As a practical matter, some patients are unable to swallow pills because of the side effects of radiation therapy or chemotherapy, or because of the nature of the cancer (for instance, throat cancer). For these patients, medical marijuana can be an effective form of treatment.

KATE SCANNELL, M.D.

Because I was a cancer patient receiving chemotherapy at the same hospital where I worked, the elderly women with whom I shared the suite quickly surmised that I was also a doctor. The clues were obvious: the colleagues dropping by, the "doctor" salutations from co-workers and the odd coincidence that one of my suite mates was also one of my patients.

I braced myself for this woman's question, both wanting to make myself available to her but also wishing that the world could forget that I was a doctor for the moment. After receiving my cancer diagnosis, dealing with surgery and chemo-therapy and grappling with insistent reminders of my mortality, I had no desire to think about medicine or to experience myself as a physician in that oncology suite. And besides, the chemotherapy, anti-nauseants, sleep medications and prednisone were hampering my ability to think clearly.

So, after a gentle disclaimer about my clinical capabilities, I said I'd do my best to answer her question. She shoved her IV line out of the way and, with great effort and discomfort, rolled on her side to face me. Her belly was a pendulous sack bloated with ovarian cancer cells, and her eyes were vacant of any light. She became short of breath from the task of turning toward me.

"Tell me," she managed, "Do you think marijuana could help me? I feel so sick."

I winced. I knew about her wretched pain, her constant nausea and all the prescription drugs that had failed her - some of which also made her more constipated, less alert and even more nauseous. I knew about the internal derangements of chemotherapy, the terrible feeling that a toxic swill is invading your bones, destroying your gut and softening your brain. I knew this woman was dying a prolonged and miserable death.

And, from years of clinical experience, I - like many other doctors - also knew that marijuana could actually help her. From working with AIDS and cancer patients, I repeatedly saw how marijuana could ameliorate a patient's debilitating fatigue, restore appetite, diminish pain, remedy nausea, cure vomiting and curtail down-to-the-bone weight loss. I could firmly attest to its benefits and wager the likelihood that it would decrease her suffering.

Still, federal law has forbidden doctors to ... prescribe marijuana to patients [though doctors may legally recommend it.] In fact, in 1988 the Drug Enforcement Agency even rejected one of its own administrative law judge's conclusions supporting medicinal marijuana, after two full years of hearings on the issue.

Judge Francis Young recommended the change on grounds that "marijuana, in its natural form, is one of the safest therapeutically active substances known to man," and that it offered a "currently accepted medical use in treatment."

Doctors see all sorts of social injustices that are written on the human body, one person at a time. But this one - the rote denial of a palliative care drug like marijuana to people with serious illness - smacks of pure cruelty precisely because it is so easily remediable, precisely because it prioritizes service to a cold political agenda over the distressed lives and deaths of real human beings.

Washington bureaucrats - far removed from the troubled bedsides of sick and dying patients - are ignoring what patients and doctors and health care workers are telling them about real world suffering. The federal refusal to honor public referendums like California's voter-approved Medical Marijuana Initiative is bewildering. Its refusal to listen to doctors groups like the California Medical Association that support compassionate use of medical marijuana is chilling.

In a society that has witnessed extensive positive experiences with medicinal marijuana, as long as it is safe and not proven to be ineffective, why shouldn't seriously ill patients have access to it? Why should an old woman be made to die a horrible death for a hollow political symbol? (From an OpEd in *San Francisco Chronicle* 2/16/2003)

Kate Scannell, MD is a geriatric specialist and co-director of the Northern California Ethics Department of Kaiser-Permanente.

DENIS PETRO, M.D.

As a practicing neurologist, I saw many patients for whom uncontrollable spasticity was a major problem. Unfortunately, there are very few drugs specifically designed to treat spasticity. Moreover, these drugs often cause very serious side effects. ...Dantrium or dantrolene sodium carries a boxed warning in the Physician's Desk Reference because of its very high toxicity. ...The adverse effects associated with Lioresal Baclofen are somewhat less severe, but include possibly lethal consequences, even when the drug is properly prescribed and taken as directed....Unfortunately, neither Dantrium or Lioresal are very effective spasm control drugs. Their marignal medical utility, high toxicity, and potential for serious adverse effects, make these drugs difficult to use in spasticity therapy.

DEA Chief Administrative Law Judge

"Marijuana, in its natural form, is one of the safest therapeutically active substances known... It would be unreasonable, arbitrary and capricious for the DEA to continue to stand between those sufferers and the benefits of this substance"

The Honorable Francis L. Young, ruling on DEA rescheduling hearings, 1988

[Dr. Petro then related his experience with a spasticity patient who reported he was smoking marijuana for his symptoms. Dr. Petro and colleagues examined the patient and then asked him to refrain from smoking for six weeks. He continues:]

After six weeks he returned for another examination. At this time, he reported an increase in his symptoms to the point where he had leg pains, increased clonic activity, and uncontrolled leg spasms every night. More disturbing to him was urinary incontinence, which occurred on two occasions during leg spasms.

On objective examination....in layman's terms, this patient's spasticity had increased dramatically in six weeks. This spasticity made his legs extremely rigid, he was finding it increasingly difficult to walk or sleep, and he was losing bladder control.

Following our examination, and at the patient's request, he left the clinic then returned one hour later to be examined for a second time. This second examination was remarkable. The earlier findings of moderate to severe spasticity could not be elicited. Deep tendon reflexes were brisk, but without spread, ankle clonus was absent, and the plantar response was flexor on the left and equivocal on the right.

In short, this patient had undergone a stunning transformation. Moreover, this unmistakable improvement had occurred in an incredibly brief period of time—less than an hour separated the two examinations. On questioning, the patient informed us he had smoked part of one marijuana cigarette in the interval between examinations.

Denis Petro, M.D., Former FDA Review Officer and principal investigator on spasticity and cannabis studies, in testimony submitted before the DEA.

HISTORY OF CANNABIS AS MEDICINE

The history of the medical use of cannabis dates back to 2700 B.C. in the pharmacopoeia of Shen Nung, one of the fathers of Chinese medicine. In the west, it has been recognized as a valued, therapeutic herb for centuries. In 1823, Queen Victoria's physician, Sir Russell Reynolds, not only prescribed it to her for menstrual cramps but wrote in the first issue of The Lancet, "When pure and administered carefully, [it is] one of the of the most valuable medicines we possess."

The American Medical Association opposed the first federal law against cannabis with an article in its leading journal (108 J.A.M.A. 1543-44; 1937). Their representative, Dr. William C. Woodward, testified to Congress that "The American Medical Association knows of no evidence that marihuana is a dangerous drug," and that any prohibition "loses sight of the fact that future investigation may show that there are substantial medical uses for Cannabis." Cannabis remained part of the American pharmacopoeia until 1942 and is currently available by prescription in the Netherlands and soon Canada.

Federal Policy is Contradictory

Federal policy on medical cannabis is filled with contradictions. Cannabis is a Schedule I drug, classified as having no medicinal value and a high potential for abuse, yet its most psychoactive component, THC, is legally available as Marinol and is classified as Schedule III.

At the turn of the century, cannabis was widely prescribed, even in America. Cannabis is now available by prescription in the Netherlands. Canada has been growing cannabis for patients there and plans to put it in pharmacies as well. Ironically, the U.S. federal government also grows and provides cannabis for a small number of patients today.

In 1976 the federal government created the Investigational New Drug (IND) compassionate access research program to allow patients to receive medical cannabis from the government. The application process was extremely complicated, and few physicians became involved. In the first twelve years the government accepted about a half dozen patients. The federal government approved the distribution of up to nine pounds of cannabis a year to these patients, all of whom report being substantially helped by it.

In 1989 the FDA was deluged with new applications from people with AIDS, and 34 patients were approved within a year. In June 1991, the Public Health Service announced that the program would be suspended because it undercut the administration's opposition to the use of illegal drugs. The program was discontinued in March 1992 and the remaining patients had to sue the federal government on the basis of "medical necessity" to retain access to their medicine. Today, eight

surviving patients still receive medical cannabis from the federal government, grown under a doctor's supervision at the University of Mississippi and paid for by federal tax dollars. Despite this successful medical program and centuries of documented safe use, cannabis is still classified in America as a Schedule I substance. Healthcare advocates have tried to resolve this contradiction through legal and administrative channels. In 1972, a petition was submitted to reschedule cannabis so that it could be prescribed to patients.

The DEA stalled hearings for 16 years, but in 1988 their chief administrative law judge, Francis L. Young, ruled that, "Marijuana, in its natural form, is one of the safest therapeutically active substances known... It would be unreasonable, arbitrary and capricious for the DEA to continue to stand between those sufferers and the benefits of this substance...." The DEA refused to implement this ruling based on a procedural technicality and continues to classify cannabis as a substance with no medical use.

Widespread public support; state laws passed

Public opinion is clearly in favor of ending the prohibition of medical cannabis. According to a CNN/Time poll in November 2002, 80% of Americans support medical cannabis. The AARP, the national association whose 35 million members are over the age of fifty, released a national poll in December 2004 showing that nearly two-thirds of older Americans support legal access to medical marijuana. Support in the West, where most states that allow legal access are located, was strongest, at 82%, but at least 2 out of 3 everywhere agreed that "adults should be allowed to legally use marijuana for medical purposes if a physician recommends it."

The refusal of the federal government to act on this has meant that patients have had to turn to the states for action. Since 1996, voters in nine states plus the District of Columbia have passed favorable medical cannabis ballot initiatives, while the legislatures in Hawaii, Vermont and Maryland have enacted similar bills. As of November 2004, medical cannabis legislation is under consideration in several states. Medical marijuana initiatives passed in Montana and Detroit and Ann Arbor, Michigan. Currently, laws that effectively remove state-level criminal penalties for growing and/or possessing medical cannabis are in place in Alaska, Arizona, California, Colorado, Hawaii, Maine, Maryland, Montana, Nevada, Oregon, Vermont and Washington.

New federal court ruling

A December 2003 decision by a federal appeals court in *Raich v. Ashcroft* established that it is legal under federal law for patients to grow, possess and consume cannabis, so long as they don't pay for it or cross state lines. The decision is under review by the U.S. Supreme Court. A ruling is expected in 2005.

Petitions for legal prescriptions pending

The federal Department of Health and Human Services (HHS) and the FDA are currently reviewing two legal petitions with broad implications for medical marijuana. The first, brought by ASA under the Data Quality Act, says HHS must correct its statements that there is no medical use for marijuana to reflect the many studies which have found it helpful for many conditions. A separate petition, of which ASA is a co-signer, asks the Drug Enforcement Administration for a full, formal re-evaluation of marijuana's medical benefits.

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1. See "The Administration's Response to the Passage of California Proposition 215 and Arizona Proposition 200" (Dec. 30, 1996).
2. See Conant v. McCaffrey, 172 F.R.D. 681 (N.D. Cal. 1997).
3. See id.; Conant v. McCaffrey, 2000 WL 1281174 (N.D. Cal. 2000); Conant v. Walters, 309 F.3d 629 (9th Cir. 2002).
4. 309 F.3d 629 (9th Cir. 2002).
5. Id. at 634-36.
6. Criminal liability for aiding and abetting requires proof that the defendant "in some sort associate[d] himself with the venture, that he participate[d] in it as something that he wishe[d] to bring about, that he [sought] by his action to make it succeed." Conant v. McCaffrey, 172 F.R.D. 681, 700 (N.D. Cal. 1997) (quotation omitted). A conspiracy to obtain cannabis requires an agreement between two or more persons to do this, with both persons knowing this illegal objective and intending to help accomplish it. Id. at 700-01.
7. 309 F.3d at 634 & 636.
8. Conant v. McCaffrey, 2000 WL 1281174, at *16 (N.D. Cal. 2000).
9. 309 F.3d at 634.
10. See id.. at 635; Conant v. McCaffrey, 172 F.R.D. 681, 700-01 (N.D. Cal. 1997).

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NEW ENGLAND JOURNAL OF MEDICINE

"A federal policy that prohibits physicians from alleviating suffering by prescribing marijuana to seriously ill patients is misguided, heavy-handed, and inhumane.... It is also hypocritical to forbid physicians to prescribe marijuana while permitting them to prescribe morphine and meperidine to relieve extreme dyspnea and pain...there is no risk of death from smoking marijuana.... To demand evidence of therapeutic efficacy is equally hypocritical"

Jerome P. Kassirer, MD, editor
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DEA Chief Administrative Law Judge

"Marijuana, in its natural form, is one of the safest therapeutically active substances known... It would be unreasonable, arbitrary and capricious for the DEA to continue to stand between those sufferers and the benefits of this substance"

The Honorable Francis L. Young, ruling on DEA rescheduling hearings, 1988

More Resources

Americans for Safe Access maintains a website with more resources for doctors and patients. There you will find the latest information on legal and legislative developments, new medical research, and what you can do to help protect the rights of patients and doctors.

A grassroots coalition of more than 10,000 patients, doctors and advocates, Americans for Safe Access works with leading organizations around the United States to make cannabis legally available to those who need it. For assistance with how to write a legal recommendation for cannabis, contact us at 1-888-929-4367 or visit our website at SAFEACCESSNOW.ORG

Americans for Safe Access

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Americans for Safe Access

March 18, 2005

Dear City Councils and County Boards of Supervisors,

The last year has seen a significant increase in the number of medical cannabis collectives and cooperatives opening in California. Until recently, most were concentrated in the San Francisco Bay Area. We are now seeing dispensaries opening in larger numbers in Southern California, suburban cities, and rural areas.

This trend presents a respectable challenge for California City Councils and County Boards of Supervisors to create and adopt ordinances, which have both the patients and the public in mind. Regardless of the federal government's position on medical marijuana, it is up to the states, and their counties and municipalities to determine what is best for the health of its people. Appropriately, and in accordance with SB 420, state lawmakers have placed the responsibility with cities and counties to take action to regulate the provision of medical cannabis to California's estimated 150,000 qualified patients.

The goals of local regulation should be: (1) to ensure that there is a safe, reliable, and sanctioned source of medication for legal patients in the community; and (2) to protect the community from nuisance activity or other harm that may result from the improper operation of these organizations. With these goals in mind, Americans for Safe Access (ASA) is working with policy makers in cities and counties across the state to develop sensible and compassionate regulations for medical cannabis collectives and cooperatives that comply with both the letter and the spirit of the law.

It is reasonable for civic leaders to have concerns about medical cannabis programs. This is an entirely new area of activity, but there are successful precedents to follow. It is important to remember that medical cannabis is legal under state law, and that we are developing regulations for access to legitimate medicine. For this reason, policy makers must approach the issue of collectives and cooperatives from the standpoint of regulating a condoned and legal activity. As such, it is more appropriate for city councils, boards of supervisors or even departments of public health to create and propose regulations than it is for law enforcement.

Medical cannabis collectives and cooperatives can be a positive part of a community. When properly regulated and operated, they will prevent lawful patients from unnecessary and potentially harmful entanglements with illicit markets or law enforcement. They will also be a key element in ensuring that patients are legally qualified and well educated about their rights and responsibilities under the law. Most importantly, a medical cannabis collective or cooperative will be a place that community members suffering from AIDS, cancer, multiple sclerosis, and other serious illnesses can find support, safety, and healing.

We need the participation of the entire community to develop and successfully implement effective regulations for medical cannabis collectives and cooperatives. Our hope is that the voices of patients, caregivers, and advocates will be heard along side those of law enforcement and civic leaders. ASA is committed to help local governments find ways to implement the will of California voters while protecting the interests of patients and their neighbors. Thank you for taking the time to create safe and legal access for California's most vulnerable citizens. Our knowledgeable staff is available to answer any questions you may have. Please do not hesitate to call.

Regards,

Steph Sherer
Executive Director
Americans for Safe Access
(510) 251-1856
www.SafeAccessNow.org

SAMPLE ORDINANCE FOR REGULATION OF MEDICAL CANNABIS DISPENSARIES

Purposes

The purpose of this ordinance is to implement California Health and Safety Code Section 11362.5, known as the Compassionate Use Act of 1996, and the provisions of California Health and Safety Code Section 11362.7 (SB-420), a state law passed to clarify and help further implement the Compassionate Use Act. This ordinance is intended:

A. To help ensure that seriously ill _____ residents can obtain and use cannabis for medical purposes where that medical use has been deemed appropriate by a physician in accordance with California law.
B. To help ensure that the qualified patients and their primary caregivers who obtain or cultivate cannabis solely for the qualified patient's medical treatment are not subject to arrest, criminal prosecution, or sanction.
C. To protect citizens with the adverse impacts of irresponsible medical cannabis distribution, storage, and use practices.
D. To establish a new section in the municipal code pertaining to the permitted distribution of medical cannabis in _____ consistent with state law.

Definitions

The following words or phrases, whenever used in this ordinance, shall be given the following definitions:

A. "Cannabis dispensary", hereinafter dispensary, shall be construed to include any association, Medical Cannabis Association, cooperative, affiliation, or collective of persons where four or more "qualified patients" and/or "primary care givers", in possession of an identification card, or written recommendation, issued by the county of_____, or the state of California, or another agency recognized by the city pursuant to California Health and Safety Code Section 11362.7 et seq, to provide education, referral, or network services, and facilitation or assistance in the lawful production, acquisition, and distribution of medical cannabis.

B. "Primary caregiver" shall have the same definition as California Health and Safety Code Section 11362.7 et seq, and as may be amended, and which defines "Primary Caregiver" as a individual, or "medical cannabis collective" designated by a qualified patient or by a person with an identification card, or a written recommendation, who has consistently assumed responsibility for the housing, health, or safety of that patient or person, and may include any of the following:

    1. In any case in which a qualified patient or person with an identification card receives medical care or supportive services, or both, from a clinic licensed pursuant to Chapter 1 (commencing with Section 1200) of Division 2 of the California Health and Safety Code, a health care facility licensed pursuant to Chapter 2 (commencing with Section 1250) of Division 2 of the California Health and Safety Code, a residential care

2. An individual who has been designated as a primary caregiver by more than one qualified patient or person with an identification card, if every qualified patient or person with an identification card who has designated that individual as a primary caregiver resides in the same city or county as the primary caregiver.

3. An individual who has been designated as a primary caregiver by a qualified patient or person with an identification card who resides in a city or county other than that of the primary caregiver, if the individual has not been designated as a primary caregiver by any other qualified patient or person with an identification card.

C. "Qualified patient" shall have the same definition as California Health and Safety Code Section 11362.7 et seq, and as may be amended, and which states a person suffering from a serious medical condition who obtains a written recommendation from a physician licensed to practice medicine in the state of California to use marijuana for personal medical purposes.

D. "Serious medical condition" shall have the same definition as California Health and Safety Code Section 11362.7 et seq, and as may be amended, and which states all of the following medical conditions: Acquired immune deficiency syndrome (AIDS); Anorexia; Arthritis; Cachexia; Cancer; Chronic pain; Glaucoma; Migraine; Persistent muscle spasms, including, but not limited to, spasms associated with multiple sclerosis; Seizures, including, but not limited to, seizures associated with epilepsy; Severe nausea; Any other chronic or persistent medical symptom that either: a. Substantially limits the ability of the person to conduct one or more major life activities as defined in the Americans with Disabilities Act of 1990 (Public Law 101-336). Or, b. If not alleviated, may cause serious harm to the patient's safety or physical or mental health.

E. "Written recommendation" shall have the same definition as California Health and Safety Code Section 11362.7 et seq, and as may be amended, and which states a "written recommendation" is an accurate reproductions of those portions of a patient's medical records that have been created by the attending physician, that contain the information required by paragraph (2) of subdivision (a) of California Health and Safety Code Section 11362.715, and that the patient may submit to a county health department or the county's designee as part of an application for an identification card. (Ord. 12585 § 1 (part), 2004)

Location of medical cannabis dispensaries

Medical cannabis dispensaries must be at least 1000 feet from a public elementary, middle, or high school. No such dispensary shall be located within a 500-foot range of another such dispensary.

Permitting of medical cannabis dispensaries

Medical cannabis dispensaries shall be located in appropriate commercial districts within the city and subject to the same permit requirements and land use restricts as other lawful businesses in the city.

Performance Standards
Dispensaries, once permitted, shall meet the following operational and safety standards for the duration of the use:

A. Pooling of Resources Recognized. The City/County of _____ recognizes that some qualified patients may not have primary caregivers and also may not be able to undertake all the physical activities necessary to cultivate cannabis for personal medical use. Accordingly, this section recognizes that qualified patients may join together with or without their primary caregivers to form medical cannabis dispensaries for the purpose of cultivating and providing medical cannabis solely for the personal medical use of the members who are qualified patients. The City recognizes that not all members of a medical cannabis dispensary will perform the same tasks or contribute to the dispensary in an equal manner. Accordingly, medical cannabis dispensaries are free to decide how to best pool their resources and divide responsibilities in cultivating or providing medical cannabis for the personal medical use of their members who are qualified patients.

B. Restriction on Membership. Membership in a medical cannabis dispensary must be restricted to qualified patients and their primary caregivers. However, primary caregivers shall not be allowed to obtain cannabis for their own personal use. In addition, a primary caregiver cannot be a member of a medical cannabis collective, unless the primary caregiver's qualified patient is also a member.

C. Restriction on Distribution to Non-Members. Medical cannabis dispensaries and each member thereof, shall not sell, barter, give away, or otherwise distribute cannabis to non-members of the medical cannabis collective.

D. Good Conduct. It is unlawful for any person or association operating a dispensary to permit any breach of peace therein or any disturbance of public order or decorum by any tumultuous, riotous, or disorderly conduct.

E. No Alcohol Permits. Dispensary shall not hold or maintain a license from the State Department of Alcohol Beverage Control to sell alcoholic beverages.

F. Records. Dispensary shall maintain adequate records of all patients and primary caregivers served to ensure that all persons are legally qualified under California Health and Safety Code 11362.5. Membership records shall be held as strictly confidential.

G. Security. The Dispensary shall provide adequate security on the premises, including lighting and alarms, to insure the safety of persons and to help protect the premises from theft.

H. Contact Information. The Dispensary shall provide city officials and all neighbors located within 50 feet of the establishment with the name, phone number and facsimile number of an on-site community relations staff person to whom one can provide notice of there are operating problems associated with the establishment.

I. Odors. Dispensaries should have sufficient ventilation and storage facilities so that no odor is evident outside the facility.

Transportation of medical cannabis

A qualified patient or a primary caregiver of a qualified patient may transport medical cannabis within the City/County of _____ to the extent that the quantity transported and the method, timing, and distance of the transportation are reasonably related to the qualified patient's current medical need at the time of transport.

Medical cannabis paraphernalia

A qualified patient and the primary caregiver of a qualified patient may possess paraphernalia that the qualified patient needs to smoke or otherwise consume medical cannabis.

Police procedures and training

A. Within six months of the date that this chapter becomes effective, the training materials handbooks, and printed procedures of the Police Department shall be updated to reflect its provisions. These updated materials shall be made available to police officers in the regular course of their training and service.

B. Medical cannabis-related activities shall be the lowest possible priority of the Police Department.

C. Qualified patients, their primary caregivers, and medical cannabis dispensaries who come into contact with law enforcement will not be cited or arrested and dried cannabis or cannabis plants in their possession will not be seized if they are in compliance with the provisions of this chapter.

D. Qualified patients, their primary caregivers, and medical cannabis dispensaries who come into contact with law enforcement and cannot establish or demonstrate their status as a qualified patient, primary caregiver, or medical cannabis dispensary, but are otherwise in compliance with the provisions of this chapter, will not be cited or arrested and dried cannabis or cannabis plants in their possession will not be seized if (1) based on the activity and circumstances, the officer determines that there is no evidence of criminal activity; (2) the claim to be a qualified patient, primary caregiver, or medical cannabis collective is credible; and (3) proof of status as a qualified patient, primary caregiver, or medical cannabis dispensary can be provided to the Police Department within three business days of the date of contact with law enforcement.

Severability
If any provision of this Chapter, or the application thereof to any person or circumstance, is held invalid, that invalidity shall not affect any other provision or application of this Chapter that can be given effect without the invalid provision or application; and to this end, the provisions or applications of this Chapter are severable.

Why Dispensing Collectives and Cooperatives are Critical to Ensuring Safe Access to Medical Marijuana and Why They Must Be Condoned and Protected

March 14, 2005

AMERICANS FOR SAFE ACCESS

www.SafeAccessNow.org

Introduction
As municipalities and counties throughout the state of California grapple with whether or not and how to regulate the provision of medical marijuana, it is important to review the rights of patients and caregivers as well as the role of state and local government to protect such conduct.

In 1996, California voters approved Proposition 215, the Compassionate Use Act (CUA) in order to "ensure that seriously ill Californians have the right to obtain and use marijuana for medical purposes...in the treatment of cancer, anorexia, AIDS, chronic pain, spasticity, glaucoma, arthritis, migraine or any other illness for which marijuana provides relief"[1]

Not as commonly recognized, the CUA also encourages "federal and state governments to implement a plan for the safe and affordable distribution of marijuana to all patients in medical need of marijuana."[2] In 2003, the California legislature passed SB 420, helping to clarify the rights of patients and specify their legal protection. The legislation states that patients and caregivers are "not subject to criminal liability."

California voters and legislators were the first in the nation to respond to the needs of medical marijuana patients by providing them safe access to the medicine that they need to alleviate their suffering and, in some cases, keep them alive.

State and Local Government is Responsible for its Peoples' Health and Welfare
Traditionally, the states have taken the responsibility for the health and welfare of their citizens. It follows that counties and municipalities prescribe further policy with its most vulnerable citizens in mind. While the federal government does maintain control over many aspects of medicine and treatment in the U.S., over-riding autonomy exists on the part of the states to control the health and welfare of their people.

It is reasonable to expect many patients in California to either cultivate their own medical marijuana or find a caregiver who will do it for them. However, there are many patients in both urban and rural areas that cannot effectively do either. Given the estimated 75,000 patients in California,[3] there are thousands of people who rely on local dispensing cooperatives and collectives for their supply of medicine.

It is incumbent on the state, its counties and municipalities to implement fully the CUA and SB 420 with the health and welfare of its people paramount. If regulation of dispensing facilities is necessary at all, it should be developed with the leadership of local departments of health in cooperation with city and county governments. An effort spearheaded by California Department of Public Health will implement voluntary ID card programs in all counties in 2005. This will certainly help to further foster the safety and protection of patients and caregivers. However the ability exists today to develop and adopt reasonable policies around the provision of medical marijuana. Cities and Counties that have established moratoriums on the provision of medical marijuana need not wait for instruction from some other authority. Local departments of health must be involved in this aspect of the health and welfare of its citizens and the time to act is now.

Law Enforcement is Obligated to Uphold State Law in the Protection of its Citizens
Local law enforcement is prohibited by state law from enforcing federal proscriptions of conduct, which has been decriminalized by the State. Local law enforcement is charged with enforcing state

[1] Cal. Health & Safety Code Section 11362.5(b)(1).
[2] Ibid.
[3] Cal. NORML Estimates Over 75,000 Medical Marijuana Patients in California, 2004, http://www.canorml.org/

law, which allows for the use and provision of medical marijuana. Local law enforcement officials may not refuse to enforce state medical marijuana law due to a purported conflict with federal law.[4]

Under our federalist system of government, the states, rather than the federal government, are entrusted to exercise a general police power for the benefit of their citizens.[5] Due to this constitutional division of authority between the federal government and the states, the State of California may elect to decriminalize conduct, such as medical marijuana activity, which remains illegal under federal law.[6] Even if law enforcement officers take a personal position on any conflict between state and federal law, they are bound to uphold only state law.[7]

The California Supreme Court stated in *People v. Mower* (2002) that the State of California is responsible for enforcement of its own marijuana laws, and not those of the federal government.[8] Under California medical marijuana law, patients and caregivers are exempt from prosecution by the state[9] regardless of federal law.

In *People v. Tilehkooh* (2003), the California courts "long ago recognized that state courts do not enforce the federal criminal statutes."[10] The same court also stated that "the federal criminal law is cognizable as such only in the federal courts."[11] In *People v. Kelly* (1869), it was determined that "State tribunals have no power to punish crimes against the laws of the United States as such. The same act may, in some instances, be an offense against the laws of both, and it is only an offense against the State laws that it can be punished by the State, in any event."[12]

It is California's public policy to encourage state and federal governments to implement a plan to provide for the safe and affordable distribution of marijuana to all patients in medical need of marijuana.[13] Given the right of seriously ill Californians to use and obtain medical marijuana, and that

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[4] Section 3.5 of Article III of the California Constitution provides:
An administrative agency, including an administrative agency created by the Constitution or an initiative statute, has no power:
(a) To declare a statute unenforceable, or refuse to enforce a statute, on the basis of it being unconstitutional unless an appellate court has made a determination that such statute is unconstitutional;
(b) To declare a statute unconstitutional;
(c) To declare a statute unenforceable, or to refuse to enforce a statute on the basis that federal law or federal regulations prohibit the enforcement of such statute unless an appellate court has made a determination that the enforcement of such statute is prohibited by federal law or federal regulations.

[5] *See United States v. Morrison* (2000) 529 U.S. 598, 618 & n.8 ["the Founders denied the National Government [the police power] and reposed [it] in the States" "the Constitution reserves the general police power to the States"]; *United States v. Lopez* (1995) 514 U.S. 549, 566 ["The Constitution . . . withhold[s] from Congress a plenary police power"]; *Metropolitan Life Ins. Co. v. Massachusetts* (1985) 471 U.S. 724, 756 ["The States traditionally have had great latitude under their police powers to legislate as to 'the protection of the lives, limbs, health, comfort, and quiet of all persons'"] [quotation omitted]; *Whalen v. Roe* (1977) 429 U.S. 589, 603 n.30 [recognizing states' broad police power to regulate the administration of drugs by health professionals]; *Jacobson v. Massachusetts* (1905) 197 U.S. 1, 24-25 (1905) ["The authority of the State to enact [public health legislation] is . . . commonly called the police power -- a power which the State did not surrender when becoming a member of the Union under the Constitution"].

[6] *See People v. Tilehkooh* (2003) 113 Cal.App.4th 1433, 1446.

[7] *See Lockyer v. City and County of San Francisco* (2004) 33 Cal.4th 1055, 1094; see also ibid. at 1107 ["a local executive official has no authority to impose his or her personal view on others by refusing to comply with a ministerial duty imposed by statute"].

[8] *See People v. Mower* (2002) 28 Cal.App.4th at 457, 465 n.2.

[9] Cal. Health & Safety Code Sections 11362.5, 11366, 11366.5 & 11570.

[10] *See People v. Tilehkooh*, (2003) 113 Cal.App.4th at 1445 & 1447.

[11] *See People v. Tilehkooh*, (2003) 113 Cal.App.4th at 1445 n.13.

[12] *See People v. Kelly* (1869) 38 Cal. 145, 150

[13] Cal. Health & Safety Code Section 11362.5(b)(1)(c).

California law provides for public policy that encourages the provision of that medicine, dispensing collectives and cooperatives should be encouraged and protected.

The U.S. Supreme Court Decision Will Not Impact California Medical Marijuana Law

The Supreme Court will rule in 2005 on *Ashcroft v. Raich*[14] to determine the extent to which the federal government has authority to interfere in the conduct of medical marijuana patients like plaintiffs Angel Raich and Diane Monson. If *Raich* is overturned, giving the federal government constitutional authority under its limited power to regulate interstate commerce and the activity of marijuana cultivation for personal medical use, the decision will not alter state law. Conduct currently protected under California law, as defined above, will continue to be enforced regardless of the Supreme Court's ruling.

The purpose of the federal Controlled Substances Act (CSA), in regulating conduct concerning marijuana, was not meant to regulate the practice of medicine or put limits on states' ability to regulate and care for the health and safety of their people. Nothing indicates that Congress wished to give the federal government (Drug Enforcement Administration) control over the practice of medicine by way of the CSA. The CSA itself recognizes that states are the primary regulators of the practice of medicine.[15] Ultimately, the CSA was never meant to preclude the judgment of sovereign states on what constitutes the legitimate practice of medicine.

A number of cities and counties are currently addressing the issue of regulating dispensing collectives and cooperatives. Many current moratoriums have been adopted to limit the establishment of such facilities until such time that the Supreme Court can rule on *Raich*. While it is reasonable to allow time for the development of sensible and fair policies, it is unnecessary and unduly burdensome to patients to wait for the High Court's decision.

It is also unacceptable to use any ruling in *Raich* to ban dispensing collectives and cooperatives, as that activity would be contrary to the spirit and intent of the CUA and SB 420. The ruling will not say anything about the regulation or operation of medical marijuana cooperatives and collectives and, as such, City Councils and Boards of Supervisors are still bound to uphold and enforce California law, including the provisions of the CUA and SB 420. The ruling will neither force nor authorize local law enforcement officers to arrest patients and caregivers. The ruling will not mandate the closure of dispensing collectives and cooperatives around the state. The ruling will not declare California's medical marijuana law unconstitutional or invalid. In fact, neither collective nor cooperative dispensaries are at issue in *Raich* at all.

Regardless of any assumed constitutional authority held by the federal government, California officials do not have the authority under state law to seek to enforce more expansive federal law, and the federal government may not constitutionally compel state law enforcement agents to enforce its law. In *Printz v. United States* (1997),[16] the federal court ruled that "the Federal Government may neither issue directives requiring the States to address particular problems, nor command the State's officers, or those of their political subdivisions, to administer or enforce a federal regulatory program...the Constitution contemplates that a State's government will represent and remain accountable to its own citizens." In *New York v. United States*, (1992),[17] the federal court stated that, "we have always understood that even where Congress has the authority under the Constitution to pass laws requiring or prohibiting certain acts, it lacks the power directly to compel the States to require or prohibit those acts."

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[14] *See Raich v. Ashcroft*, 352 F.3d 1222 (9th Cir. 2003), *cert. granted by Ashcroft v. Raich*, 124 S.Ct. 2909 (June 28, 2004).
[15] *See* Federal Controlled Substances Act, 21 USC Section 823(g)(2)(H)(i)(II).
[16] *See Printz v. United States*, 521 U.S. 898, 935 (1997).
[17] *See New York v. United States*, 505 U.S. 144, 166 (1992).

Cities and Counties Must Expeditiously Allow for Dispensing Collectives and Cooperatives
Medical marijuana patients must have safe and legal means to get their medication, rather than being forced to rely on the illicit drug market. Most patients do not have the means or ability to grow their own, and many patients do not know of people willing to act as caregiver and grow the medicine for them. SB 420 further restricts patients' access to their medicine by requiring that patient and caregiver reside in the same county.[18]

The reasonable alternative is an entity that exists solely to provide medicine to qualified patients, much as a pharmacy exists to provide prescribed medication. Dispensing collectives and cooperatives meet this need. Therefore, in order to fully implement the CUA and SB 420, cities and counties must expeditiously allow for these facilities providing safe access for medical marijuana patients.

Whether choosing to regulate or not, cities and counties must allow for the establishment of medical marijuana dispensing collectives and cooperatives. It is also critically important that patients remain at the center of any adopted policy providing for safe and affordable access to their medicine. As such, the leadership of local departments of health should be at the helm of developing sensible policies. In their development, consideration should be made to allow for onsite marijuana consumption as well as the sale of non-medical marijuana-related items. It is unnecessary to over-regulate these facilities and doing so can prove detrimental to the best interests of the patient.

Nothing currently prohibits cities and counties from allowing collective and cooperative dispensaries from existing. It is abundantly clear that public officials and local law enforcement are bound to uphold and enforce state law. In fact, evidence of the need to address this issue regardless of any decision by the U.S. Supreme Court can be found in the ordinances already developed and adopted by 10 counties and 10 cities within California. Therefore, local government must act expediently to implement medical marijuana law, thereby condoning and protecting the formation of dispensing collectives and cooperatives throughout the state.

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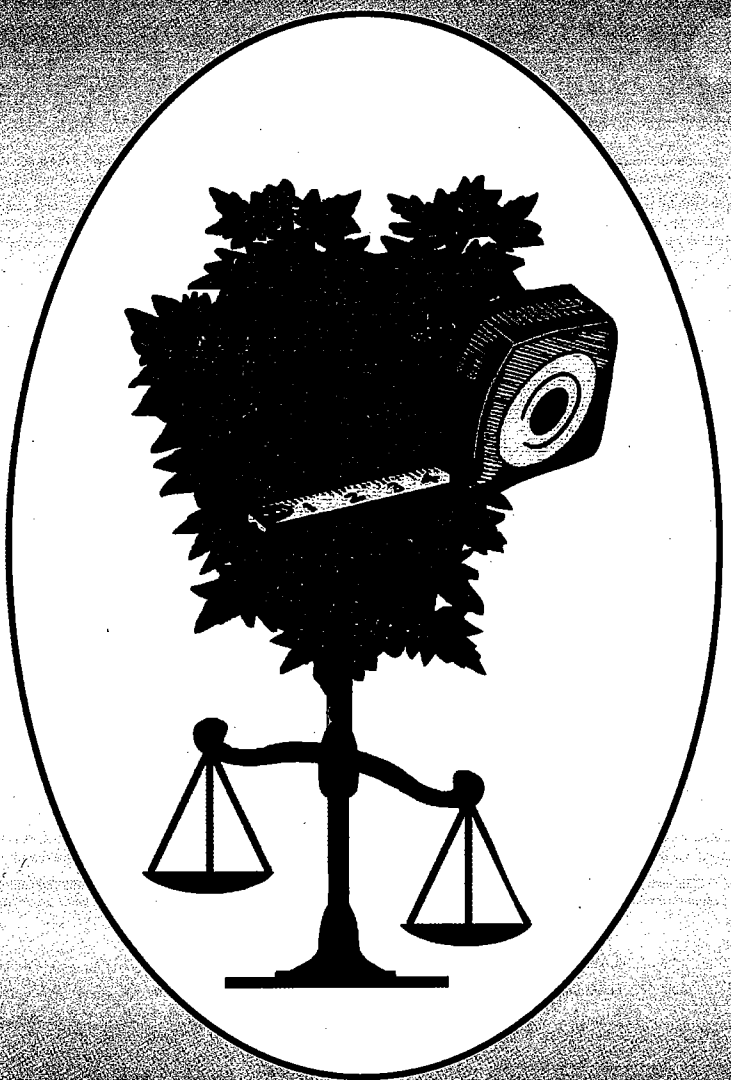
[18] *See* Health & Safety Code Section 11362.7(d)(2).

Cannabis Yields and Dosage



The Science and Reason Behind the Safe Access Now Medical Marijuana Garden Guidelines

— Chris Conrad —

Court-qualified cannabis expert

CANNABIS YIELDS AND DOSAGE

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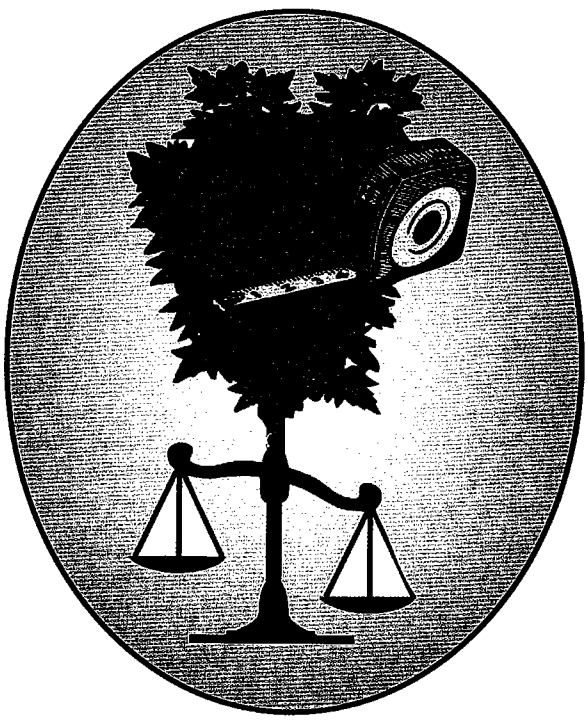

Chris Conrad

Court-qualified cannabis expert

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INTRODUCTION

Since the 1996 passage of California's medical marijuana law, Proposition 215, counties have grappled with the key question left unresolved in the measure: How can one tell if a cannabis garden is reasonably related to the medical needs of a patient? This booklet looks at that issue and offers a responsible solution.

The question is made difficult by several variables.

1) Every garden is different. 2) Grown outdoors, even a few big plants can produce large amounts of cannabis bud. 3) Many indoor gardens use a "Sea of Green" method with scores or even hundreds of very small plants. 4) Different growers using the same techniques get different yields. While some try to limit garden size to a few ounces and plants, an exceptional grower can produce many pounds by growing a few huge plants. At the same time, juries are acquitting patients with multiple pounds of processed bud and hundreds of plants. Such a trial can generate tons of bad publicity, send a mixed message about law enforcement priorities, and cost a county more than $100,000.

There is, however, a scientific method that lets patients grow in any variation they wish, indoors or out, yet makes it easy to control the output. It is a formula developed in 1992 by the US Drug Enforcement Administration and published as *Cannabis Yields*. Put simply, 100 square feet of outdoor mature garden canopy will typically yield three pounds of processed bud per year, a common amount for daily-use patients.

That study is the basis of the "Sonoma Guidelines," now known as Safe Access Now guidelines. They allow up to three pounds of bud and 100 square feet of canopy per patient. If a patient decides to grow larger plants, they must reduce the number of plants to fit within the canopy limit. This gives patients wide latitude to grow an adequate personal supply, indoor or out, but restricts even the most prolific grower. Some policies limit patients to less than 100 plants, to stay below a federal five-year sentencing threshold, but that is not relevant to the canopy formula.

This system is simple, yet it works! Patients, doctors, experts, courts and communities across the state have endorsed these model medical marijuana guidelines as being safe and effective. They eliminate the need to train police to assess patient needs, calculate yields, distinguish male from female or vegetative from flowering plants, determine what part of a crop is usable, or understand consumption, processing and storage. To see if a garden is in compliance, the only thing a field officer needs is a tape measure. Counting plants is never required. Any excess is either confiscated or spared, if the patient has a statement from a physician that they use more. Nothing is perfect, but these guidelines really can protect most patients.

This booklet explains the basics of medical marijuana. Part I talks about dosage and yields. Part II gives a model ordinance for a reasonable safe harbor from arrest for patients and providers. Part III explains the legal setting in which cannabis is being used, and Part IV gives excerpts from state law. We also included some reference groups and websites for the reader.

I have spent years in the courts arguing these facts, and have written this booklet in the hope that a common understanding of medical marijuana will prevent needless arrests and prosecutions, free up law enforcement to focus on serious crime, and save California's communities millions of dollars that are desperately needed for schools, libraries and vital programs. Reasonable guidelines are good for everyone.

Senate Bill 420, HS11362.7, set a floor amount of six mature or 12 immature plants plus eight ounces of dry cannabis bud or conversion and left it to the doctors, cities, counties and courts to protect patients and caregivers who use more. This booklet shows why this floor is inadequate for so many patients and why it must be raised. Safe Access Now proposes a scientific and reasonable plan, based on canopy area, that really works.

You can help advance this process. Whether a patient, physician, policy maker, prosecutor, police officer, or concerned citizen, you are important. I urge you to take a stand for the principles of reason, compassion and the rule of law. For more information on what you can do, visit www.safeaccessnow.net. Thank you.

Chris Conrad

Special thanks to attorneys David Nick, Omar Figueroa, William Logan, Robert Raich and Joe Elford for their editorial review of legal issues, and to the Marijuana Policy Project, Ralph Sherrow, Michael Baldwin, Andrew Lesure, Mikki Norris and many others for their help in researching, preparing and publishing this document.

Part I

FEDERAL MEDICAL MARIJUANA

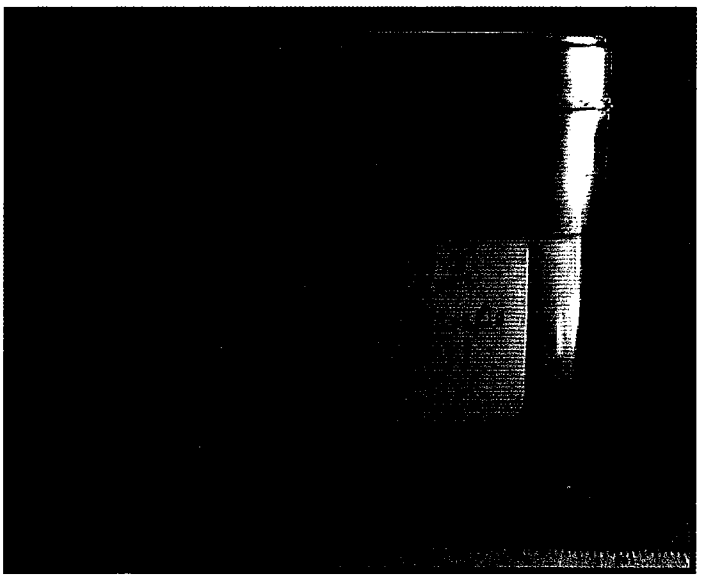
Cannabis: Legally grown and provided in daily smoked dosages

Marijuana (*Cannabis sativa*) is a treatment for pain and other symptoms of many diseases; its medical use goes back some 5,000 years. Sometimes cannabis can halt the development of a condition. It is medicine with a safe and effective dosage demonstrated by United States government research. The National Institute on Drug Abuse provides by prescription a standard dose of smoked cannabis to patients in the Compassionate Investigational New Drug (IND) program. This is about two ounces per week — a half-pound per month — mailed in canisters of 300 pre-rolled cigarettes consumed at a rate of 10 or more per day.

"Marijuana, in its natural form, is one of the safest therapeutically active substances known to man."

— DEA Administrative Law Judge Francis Young
Docket No. 86-22. 1988.

This long-term dosage has proven to be safe and effective, with no unacceptable side effects. As seen below in Table 1, from the *Journal of Cannabis Therapeutics*, the annual dose comes to between 5.6 and 7.23 pounds of cannabis bud mixed with leaf. The documented federal single patient dosage averages 8.24 grams per day — that's more than 1/4 ounce per day, or 6.63 pounds smoked per year.



This 6-inch diameter canister held 254.89 grams of federal medical marijuana for an IND patient, a typical monthly supply mailed from the federal cannabis research garden in Mississippi.

Table 1: Chronic cannabis IND* patient demographics

* The Investigational New Drug (IND) program is overseen by National Institute on Drug Abuse: NIDA

Patient	*Age / Gender*	*Qualifying Condition*	*IND Approval / **Cannabis Usage***	***Daily Cannabis / THC Content***	*Current Status*
A	62 F	Glaucoma	1988 **25 years**	**8 grams (0.28 oz)** 3.80%	Disabled operator / singer / activist / vision stable
B	52 M	Nail-Patella Syndrome	1989 **27 years**	**7 grams (0.25 oz)** 3.75%	Disabled laborer / factotum / ambulatory
C	48 M	Multiple Congenital Cartilaginous Exostoses	1982 **26 years**	**9 grams (0.32 oz)** 2.75%	Full time stockbroker / disabled sailor / ambulatory
D	45 F	Multiple Sclerosis	1991 **11 years**	**9 grams (0.32 oz)** 3.5%	Disabled clothier / visual impairment / ambulatory aids

Source: Russo, Mathre, Byrne, Velin, Bach, Sanchez-Ramos and Kirlin. *Journal of Cannabis Therapeutics*, Vol. 2(1) 2002. p. 9

DAILY THERAPEUTIC USE

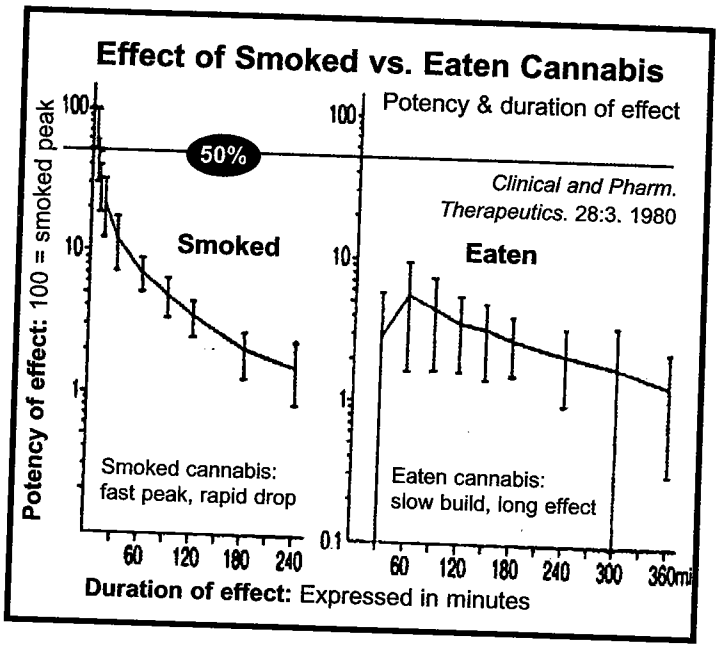
Titrating medical marijuana use

Most people are familiar with the use of smoked marijuana for symptomatic relief of chronic and acute health disorders, but there is much more to know about this traditional herbal remedy.

"Its margin of safety is immense and underscores the lack of any meaningful danger in using not only daily doses in the 3.5 – 9 gram range, but also considerably higher doses."

— David Bearman, M.D.

Physician, researcher, court-qualified cannabis expert



The phrase "medical marijuana," as commonly used, refers to the cured, mature female flowers of high-potency strains of cannabis or a conversion thereof. Since cannabis is an annual plant, it is logical to measure its use as an annual dosage. Many patients need three pounds of bud or more per year. A smaller number of daily use patients smoke six, nine, 12 pounds or more per year for chronic conditions, but dosage varies with each person and how they consume it.

Potency is one factor, but other concerns affect titration, as well. "Whether a one gram marihuana cigarette contains 2% or 8% THC, the cigarette will generally be smoked so as to deliver the smoker's desired cannabinoid dose," NIDA researcher Dr. Reese Jones noted in the UC San Francisco CME class syllabus *Cannabis Therapy* (June 10, 2000, p. 315).

Table 2: Daily Smoked Dosages

A single cigarette per day weighing less than one gram equates to roughly one ounce per month, or 12 ounces per year.

The national average weight of a cannabis cigarette ranges from 0.5 to one gram each, according to NIDA, the federal National Institute on Drug Abuse.

Some patients consume small cigarettes to conserve their medicine, but for a patient who consumes one gram cigarettes, an ounce (28.3 grams) offers less than one cigarette per day for a month. Furthermore, stem and possibly seeds must be cleaned out of cannabis before it is used. A patient who gets 24 cleaned grams per ounce can roll 30 cigarettes at 0.8 grams each, one per day for a month. However, many patients must smoke cannabis throughout the day.

Three to five average-size cannabis cigarettes per day comes to about one ounce a week, or 3.25 pounds in a year.

Chronic pain patients tend to use larger amounts, while acute and terminal patients may use less. Conditions like glaucoma or MS may require continuous use to prevent attacks. Health conditions may periodically or cyclically improve or get worse, causing usage to fall or rise. Some require daily and multiple-daily dosages.

The means of ingestion also affects patient dosage. Smoked cannabis provides rapid and efficient delivery. Most patients consume it this way, but some wish to avoid the smoke. "Vaporizing" it (heat without combustion) may require twice as much. NIDA estimates that eating requires three to five times the smoked dosage. This means that a patient who smokes one pound per year needs about four pounds for the same effect if they eat it, although often they prefer a combination of the two. When eaten, cannabis' effects are spread out over a longer period of time (see graph). This may be particularly good for sleep or situations where smoking is impractical or impossible, but due to its delayed onset and varied metabolic activity, eating is hard to titrate. Consumable goods spoil over time, there is a learning curve on preparing recipes, and not every experiment produces usable medicine. Making kef, hash, tinctures, oil, extracts, topical salves and liniment all require ample amounts of cannabis. Patients need to keep an accurate scale on hand to measure, track and titrate their own personal dosage and supply of cannabis.

All patients need to obtain and possess an adequate supply for some period of future need. Since patients can't simply go to the pharmacy to get this medicine, they are forced to stockpile. From three to six pounds is reasonable as a personal supply. Potency diminishes with age, but cannabis can be stored in a cool, dry, dark place for years on end without significant loss of effect.

USABLE MEDICAL MARIJUANA

Plant, tend, harvest, prepare and store

Cannabis takes root as either seedlings or cuttings (clones). Later, male plants are cut out of the garden to prevent pollination. Female plants grow to full maturity before being cut and harvested. About 75% of the fresh weight is moisture that is lost in the drying process.

"[T]he quantity possessed by the patient or the primary caregiver, and the form and manner in which it is possessed, should be reasonably related to the patient's current medical needs."

— ***California Court of Appeals,***
People v. Trippet (1997)

Almost half of the dried plant matter is stem; only about a quarter (18% to 28%) remains after the herb is cured and manicured into medical-grade bud. This bud portion of the plant has a coating of resin glands that contain cannabinoids, the active compounds.

Since different kinds of cannabis have distinct medicinal benefits, genetics are critical. Breeding is preferably done through selection from among very large numbers — hundreds or even thousands — of individual plants. The list below shows just a few of the ways cannabis is prepared or converted and utilized by patients, caregivers, collectives and cooperatives.

Inhaled cannabis: smoked or vaporized

Bud, the dried, manicured mature female cannabis flower
Sinsemilla, seedless bud
Kef (kif, keif), the powdery resin glands of the plant
Hashish, compressed resin glands
Oil, liquefied resin glands

Eaten: oral ingestion

The various conversions above can all be eaten
Butter, used for cooking or baking edibles
Pastries, candies, sauces, made with the above items
Tinctures, drinking-alcohol-based (liquor), by the dropper
Mari-pills, encapsulated cannabis in oil
Dronabinol, marinol, synthetic THC

Topical use: external application

Tinctures, isopropyl alcohol-based suspensions
Liniment, isopropyl alcohol- or DMSO-based suspensions
Salves, cream or oil-based compounds

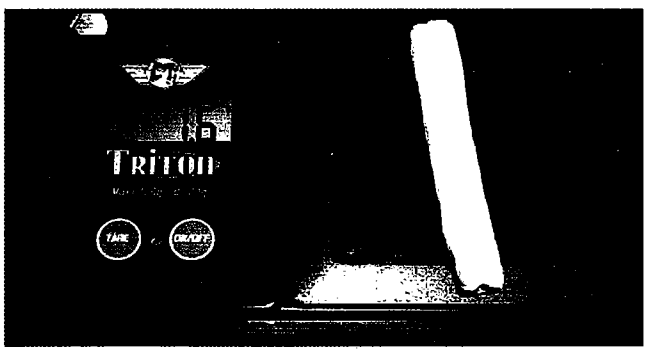
Pending means of ingestion

Cannabinoid inhalers GW Pharmaceuticals product (not available in USA)

Mature female cannabis plants, like the one shown above, produce buds with the concentrated medicinal compounds. Male plants are unusable, and so are promptly removed and destroyed unless pollen is desired for seeds. After the first appearance of their flowers, it typically takes months for female bud to fully mature. According to the federal *Cannabis Yields* study, only about 7% of the freshly cut mature plant weight becomes dried, manicured medical-grade bud.

"Only the dried mature processed flowers of female cannabis plant or the plant conversion shall be considered when determining allowable quantities of marijuana under this section."

— California Health and Safety Code 11362.77(d)



Patients often roll cigarettes well over 1.0 grams. In this case, a single dosage unit weighed 1.6 grams.

FEDERAL CANNABIS YIELD STUDY

Table 3: Average leaf plus flower yields at maturity for high planting densities

Sponsor	*Year*	*Density*	*Yield**	*Seed Stock*
Univ of MS	1985	9 ft. sq.	222 grams	Mexico
Univ of MS	1986	9 ft. sq.	274 grams	Mexico
DEA	1990	18 ft. sq.	233 grams	Colombia
DEA	1991	9 ft. sq.	215 grams	Mexico

*Yield: Oven dry weight of usable **leaf and bud** from mature 120 day or older plants.

Source: Table 1, *Cannabis Yields.* US Department of Justice (DOJ), Drug Enforcement Administration (DEA), 1992. Page 3.

SINSEMILLA CANOPY

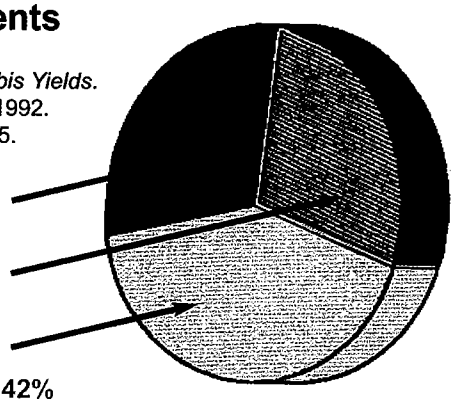
52% LEAF
Low potency / Waste matter

48% BUD
Medical grade
Source: DEA

Ratio of sinsemilla bud to leaf, excluding stems and branches.

Dry Sinsemilla Cannabis Components

Source: *Cannabis Yields.* US DOJ/DEA. 1992. Figure 2, page 5.



LEAF 30%

BUD 28%

STEM / BRANCHES 42%

Percent oven dry weight for 90 day or older plants which did not have any seed development

The canopy size predicts yield

The US Drug Enforcement Administration (DEA) conducted scientific research with the National Institute on Drug Abuse (NIDA) at the University of Mississippi, published in the 1992 DOJ report, *Cannabis Yields.* Both seeded and sinsemilla plants of several seed varieties were measured.

Canopy is a term used in agriculture to describe the foliage of growing plants. The area shaded by foliage is called its canopy cover. The data on this page are based on the higher yielding, more potent seedless buds, sinsemilla. The federal field data show that on average each square foot of mature, female outdoor canopy yields less than a half-ounce of dried and manicured bud (Table 4), consistent with growers' reports and gardens seized by police as evidence and later weighed and examined.

All other things being equal, a large filled-in garden canopy will always yield more than a small one, regardless of the number of plants it contains. This is true for skilled or unskilled gardener alike. Restricting the canopy will limit any garden's total bud yield, no matter which growing technique is used or how many plants make up the combined canopy cover.

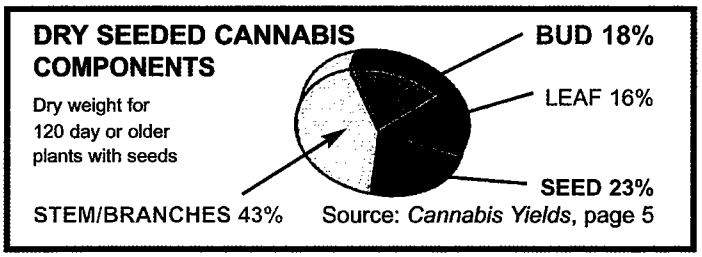
Table 4: Sinsemilla bud yields per square foot of garden canopy

(Oven dry. calculated from the DEA data above.)

222 grams x 0.48 = 106.56 g (3.76 oz) ÷ 9 square feet =	**0.41 ounce**
274 grams x 0.48 = 131.52 g (4.64 oz) ÷ 9 square feet =	**0.51 ounce**
233 grams x 0.48 = 111.84 g (3.95 oz) ÷ 18 square feet =	**0.21 ounce**
215 grams x 0.48 = 103.2 g (3.64 oz) ÷ 9 square feet =	**0.40 ounce**
Average plant canopy size:	11.25 square feet
Average oven-dry bud yield per plant:	4 ounces
Average oven-dry bud per square foot:	0.38 ounce
Average air-dry bud* per square foot:	0.41 ounce

(* Adds 10% moisture, per the IND suggestion)

GARDEN ADVERSITY



Pollen, pests and plant problems

Contrary to cannabis' reputation as a weed, it's not easy to grow quality medicine. Not all gardens have ideal conditions and few patients are trained botanists. The NIDA field data has a solid scientific basis, but it does not reflect all the realities a patient or caregiver faces in obtaining medical-grade cannabis. It is reliable for a mature female garden grown in optimum conditions, but several key factors must be clarified:

- The NIDA Mississippi garden was grown in ideal conditions with full sunlight and fertile, loose, well-drained soil. Many patient gardens are partially shaded or rely on soils of uncertain pH and quality.
- Trained scientists maintain the NIDA garden. Most patients and caregivers are self-taught from books, may overlook serious problems until too late, and seldom have access to expert advice when needed.
- Only mature female plants were considered in the study. Male plants were removed before NIDA made its calculations. Statistically, half of all cannabis plants grown from seed are males with no medical value.
- Only healthy plants were considered. Plants that were sick or died were excluded from the study, but in a real garden this can be a very serious problem.
- NIDA had no loss to theft, pests or law enforcement.
- Unreliable police estimates were listed in the back.

Some gardens yield less than average. Some patients need to grow or store more than a year supply at a time for security issues or as a hedge against crop failure.

When seedless (sinsemilla) cannabis goes to seed, the quality drops and net yield of bud goes down by a third (see chart). Female plants may suddenly become hermaphrodite and grow male flowers. Deer, rodents and snails snack on young plants and can destroy an entire garden. White fly, spider mites, mealy bugs, thrips, aphids and scores of other insects feed on cannabis. A power failure can wipe out an indoor crop light cycle. Molds, fungus and mildew may attack a crop at any time, but are most common just before harvest and can make an entire crop unusable. Floods, and other bad weather can destroy the garden.

Table 5 on the left, using data from the DEA study, shows that even big plants may produce less than an eighth of an ounce per square foot. After you remove seeds, that leaves a tenth of an ounce — 1/5 as much as its projected yield, and requiring 500 square feet to obtain three pounds of bud and 1000 square feet for six pounds.

Despite its shortcomings, the best way to estimate crop yields is still measured by the acre — or, in this case, by the square foot.

Table 5: Big plants can have reduced canopy yields

Source: *Cannabis Yields.* US Dept. of Justice, Drug Enforcement Admin. 1992. p. 3

Average Cannabis Yields at Maturity for Low Planting Densities

Sponsor	*Year*	*Density*	*Gross Yield**	*Seed Stock*
DEA-A	1990	81 ft.sq.	777 grams (27.3 ounces)	Mexico
DEA-B	1990	81 ft.sq.	936 grams (32.8 ounces)	Mexico
DEA-C	1990	81 ft.sq.	640 grams (22.5 ounces)	Mexico
DEA	1991	72 ft.sq.	1015 grams (35.6 ounces)	Mexico
DEA	1991	36 ft.sq.	860 grams (30.2 ounces)	Mexico

* Yield = Dry usable **leaf and bud** from mature 120 day or older plants.

Calculations using the DEA canopy yield formulae*

* Whereas 48% of gross sinsemilla yield is bud, only 32% of seeded yield is bud.

NIDA leaf plus bud yields	*Sinsemilla bud net*	*Clean seeded bud*
A: 27.3 ounces foliage	x 0.48 = 13.1oz	x 0.32 = 8.7oz net
B: 32.8 ounces foliage	x 0.48 = 15.7oz	x 0.32 = 10.4oz net
C: 22.5 ounces foliage	x 0.48 = 10.8oz	x 0.32 = 7.2oz net
DEA: 35.6 ounces	x 0.48 = 17.0oz	x 0.32 = 11.4oz net
DEA: 30.2 ounces	x 0.48 = 14.5oz	x 0.32 = 9.7oz net

Cannabis bud yields per square foot based on low density field data

NIDA leaf and bud yields	*Sinsemilla bud net*	*Clean seeded bud*
27.3 ÷ 81 sq' = 0.34oz/sq'	x 0.48 = **0.16oz/sq.ft.**	x 0.32 = **0.11oz/sq.ft.**
32.8 ÷ 81 sq' = 0.40oz/sq'	x 0.48 = **0.19oz/sq.ft.**	x 0.32 = **0.13oz/sq.ft.**
22.5 ÷ 81 sq' = 0.27oz/sq'	x 0.48 = **0.13oz/sq.ft.**	x 0.32 = **0.09oz/sq.ft.**
35.6 ÷ 72 sq' = 0.49oz/sq'	x 0.48 = **0.24oz/sq.ft.**	x 0.32 = **0.16oz/sq.ft.**
30.2 ÷ 36 sq' = 0.83oz/sq'	x 0.48 = **0.40oz/sq.ft.**	x 0.32 = **0.27oz/sq.ft.**

INDOOR AND OUTDOOR GARDENS

Different methods, similar yields

Depending on their interest and abilities, individuals may plant a medicine garden outdoors or inside, under electric lamps. Most patients have difficulty gauging their future yield, so barring clear evidence of sales or diversion, even seemingly large gardens may be honest efforts to comply. California Narcotics Officers Association trainer and California Bureau of Narcotics Enforcement expert Earl "Mick" Mollica, testified in *People v. Urziceanu* (Sacramento) on December 15, 2000 that "I have seen plants that produce a quarter gram per plant, 900 of them." (900 plants times 0.25 grams equals 225 grams, just less than eight ounces.)

Some harvests are better or worse for each grower. Some growers get better yields than others, but most fall in the middle, so using the average is the most reasonable basis to make projections. Outdoor plants typically yield more bud at one harvest per year. Indoor plants yield less with but give several harvests. Either way, it takes about 200 square feet of garden canopy to obtain six pounds of bud per year.

OUTDOORS: ALL MATURE TOGETHER

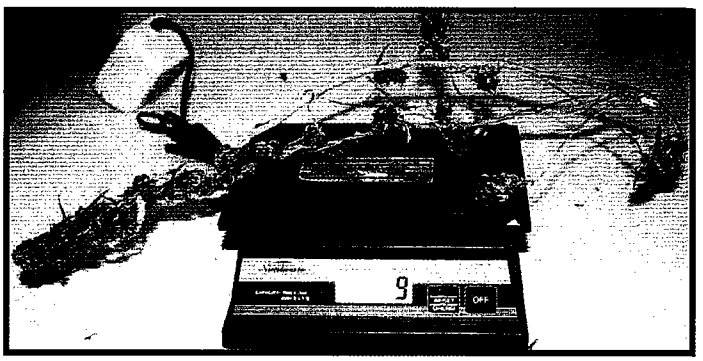
Plants grow together throughout the season.
When flowering begins, the male plants are destroyed.

100 square feet of mature female canopy from seed or clone is harvested at one time, with a total yield of ±50 ounces (3.1 pounds) of bud to last the entire year.

Outdoors: With a typical growing season that lasts from March or April into September or October, outdoor plants have a long time to grow and more space to spread out, so they tend to be larger.

Half the plants grown from cannabis seed tend to be males that are worthless as marijuana. That's why outdoor canopy should not be evaluated until flowering is fully underway, usually in August. After that, males are eliminated, leaving gaps in the canopy and giving a better sense of the useable canopy size. Plant canopy need not be continuous. A backyard garden often has various sized plants scattered over a wide area. Measure each plant's canopy and add the total to find the actual area of a garden; e.g., 11 round plants each having a 42" diameter (9 square feet) totals 99 square feet of canopy cover.

The remaining plants are killed with only one harvest per year. To obtain three pounds of sinsemilla bud from



More harvests, but smaller plants: An indoor garden often involves many small plants rather than a few large ones. This dry, mature female plant weighed only nine grams including bud, stem, leaf and roots. When manicured and finished, it yielded less than three grams — about 1/10 ounce of usable bud. It would take 80 plants this size to yield eight ounces of finished sinsemilla bud.

100 square feet of canopy requires a yield of 0.48 ounces per square feet. While the DEA data show an oven-dried average of 0.38 ounces per square foot, by using better genetics, a good grower often harvest a half-ounce of air-cured bud per square foot outdoors.

Indoors: A personal indoor garden typically fits into one or two average size rooms using electric lamps, fans and basic garden supplies. While an indoor garden is typically harvested three times a year, its annual yield is often about the same as outdoors.

Only part of an indoor garden is used for flowering at any given time. The rest is nursery and vegetative area that does not produce bud. Cannabis plants are light sensitive, so a barrier is required to separate vegetative from flowering areas. If half a 100 square foot area is used to obtain cannabis flowers three times a year, 150 square feet of bud is harvested annually. The typical indoor yield range is 0.25 to 0.5 ounces per square foot for an average of 0.38 ounces, so those 150 square feet should yield 56.25 ounces (3.5 pounds), just over one ounce per week.

Once a patient has an adequate supply, they can periodically shut down an indoor flowering area but keep the nursery going for future use. Any supply of cannabis or garden canopy that is larger than the local guidelines or statewide default amounts should be accompanied by a physician's written authorization whenever possible. This allows for a small buffer against adversity and crop loss and lets law enforcement know that the supply is legitimate for the patient's current needs.

INDOORS: TWO CYCLES OF GROWTH

About half of the area is used for flowering females and harvested three times per year, for a total of 56.25 ounces.

The other half is for mothers, seedlings, clones and young plants that will used to refill the flowering area as needed.

MEASURING CANOPY

Larger gardens give bigger yields

Some people can grow bushy plants outdoors, others need to grow small "Sea of Green" gardens with tiny plants indoors. Safe Access Now garden guidelines are easy to use and follow for either circumstance. All you need is a tape measure to calculate the canopy size.

Consider the overall plant and garden configuration, layout and density, then do the math:

1) If a garden is rectangular and densely filled-in (no gaps or open areas), measure the length and width and multiply to find square footage. Some examples: 4'x8' bed = 32 sq. ft. 4'x25' = 100 sq. ft. 8'x12.5' = 100 sq. ft.

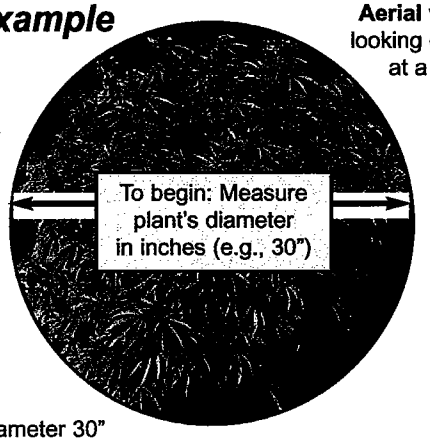
2) If a garden is rectangular and mostly filled in, but has pathways or gaps, calculate the overall area in square feet and subtract open spaces to find net square footage. Example: 12'x12' greenhouse = 144 sq. ft minus 44 sq. ft open space = 100 sq. ft canopy area.

3) If a garden is irregular in shape or plants are scattered about an open area, measure the individual plant diameters or patches of area that the plants occupy, not the open space between them. Calculate for each plant or patch and repeat; add to find the garden total.

Remember that indoors or out, only the mature flowering area provides usable cannabis bud. After they are ripe, the plants must still be cut, dried, manicured, cured and processed before they are ready to use.

Outdoor Example

A single plant with a rounded canopy 30" in diameter covers almost 5 square feet of area



Example: Plant diameter 30"
Area = (pi) x radius squared
Find radius: 30 ÷ 2 = 15"
Area = x (15 x 15)
A = 3.14 x 225 = 706.5 sq. in.
706.5 sq in ÷ 144* = 4.9 sq. ft
Result: canopy = 4.9 sq. ft.

Short cut: Diameter = 30"
Area = diameter sq. x 0.7854
Diameter sq. = 30 x 30 = 900
900 x 0.7854 = 706.86 sq. in.
706.86 ÷ 144* = 4.9 sq. ft.

**1 square foot = 144 square inches*

Many small plants or a few big ones

The following reference list shows the number of plants of approximately similar sizes that can fit within 100 square feet of total garden canopy:

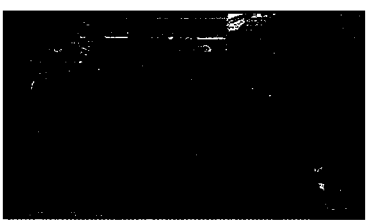
- 1 plant at 9-11' diameter each
- 2 at 7-8' diameter
- 3 at 6' diameter
- 5 at 5' diameter
- 7 at 4' diameter
- 14 at 3' diameter (typical outdoor girth)
- 33 plants at 2' diameter
- 99 plants at 1 foot diameter.

Most gardens naturally comprise a combination of plants of various sizes. A typical mature outdoor garden might hold two plants at 4' diameter, six at 3', four at 2' and 12 at 1' diameter for a total of 24 plants in 92 square feet. A typical indoor garden might include 12 flowering plants in 32 sq' area, 24 vegetative in 32 sq', 4 mothers in 24 sq', and 48 starters in 8 sq', for a garden total of 88 plants in 96 square feet.

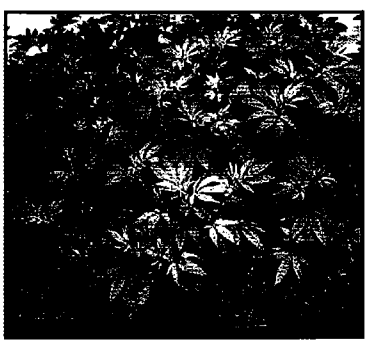
How many are too many? It depends. Since a few large cannabis plants can out-produce hundreds of small ones, the number of plants in a garden cannot accurately predict yield. Canopy indicates a garden's likely yield without counting plants, knowing if they are seedlings or clones, etc. A 99-plant cap is below the federal five year mandatory sentence for 100 plants and ensures that state jurisdiction applies. The California default guidelines in SB 420 protect from arrest only eight ounces of bud and six mature or 12 immature cannabis plants per patient.

Indoor Example

8 + 24 + 32 + 32 = 96 sq. ft.



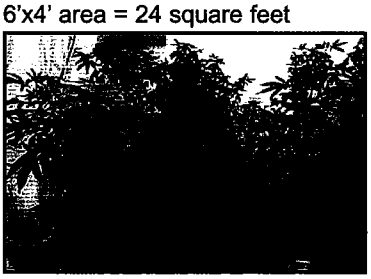
Nursery: Starter plants (seedlings or clones) in a 4'x2' tray = 8 square feet

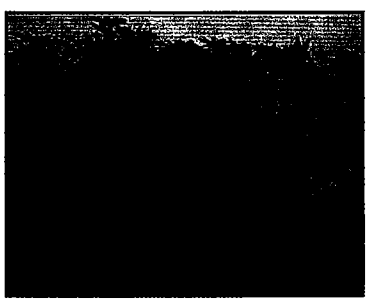


Vegetative plants in a 4'x8' tray = 32 square feet

Flowering female plants in a 4'x8' tray = 32 square feet

Mother plants growing in a 6'x4' area = 24 square feet





Part II

Safe Access Now recommends the following model ordinance for local medical marijuana guidelines:

BOARD OF SUPERVISORS

COUNTY OF _____

ORDINANCE NO. 2004 - _____

AN ORDINANCE ENACTING MEDICAL MARIJUANA GUIDELINES FOR THE IMPLEMENTATION OF PROPOSITION 215 [HS 11362.5] AND SB 420 [HS 11362.7]

WHEREAS, in 1996 the voters of the State of California approved Proposition 215, also known as the Compassionate Use Act of 1996, creating Health and Safety Code 11362.5; and

WHEREAS, HS 11362.5(d) states, "Section 11357, relating to the possession of marijuana [cannabis], and Section 11358, relating to the cultivation of marijuana, shall not apply to a patient, or to a patient's primary caregiver, who possesses or cultivates marijuana for the personal medical purposes of the patient upon the written or oral recommendation or approval of a physician"; and

WHEREAS, since the 1970s, medical marijuana patients in the federal IND program have received and smoked approximately 6.5 pounds of dried cannabis per year, thereby establishing a safe and effective dosage for a chronic daily use patient to possess and consume; and

WHEREAS, some patients require more than that amount of cannabis bud per year, especially when it is eaten, used in tincture, used topically or by methods other than being smoked; and

WHEREAS, 3 pounds of dried cannabis bud per year is a reasonable compromise safe harbor amount that allows most compliant individuals to cultivate, possess and consume their medicine; and

WHEREAS, a 100 square foot canopy of mature female cannabis plants, typically will yield 3 pounds of dried and processed cannabis bud per year outdoor; regardless of the number of plants; and

WHEREAS, successful propagation, breeding and cultivation of cannabis may require large numbers of plants in various stages of growth, especially when grown in the indoor "Sea of Green" method which typically produces lower yields than outdoor gardens but affords multiple harvests per year; and

WHEREAS, in 2003, Senate Bill 420 created HS 11362.7 that, among other things, sets forth in HS 11362.77(a) an impractical default threshold for immunity from arrest at 8 ounces of dried female cannabis flowers in addition to 6 mature or 12 immature plants per qualified patient; and

WHEREAS, HS 11362.77(c) empowers this jurisdiction when it states that "Counties and cities may retain or enact medical marijuana guidelines allowing qualified patients or primary caregivers to exceed the state limits set forth in subdivision (a)"; and

WHEREAS, other counties and cities throughout the State of California have enacted or retained guidelines for the implementation and enforcement of HS 11362.5 in amounts that are significantly greater than the threshold amounts set forth in HS 11362.77(a); and

WHEREAS, failure to enact a community standard for presumed compliance with HS 11362.77 may effectively limit local patients and caregivers to the arbitrary and unreasonable amounts as set forth in HS 11362.77(a), thereby causing undue pain, suffering and legal risks; and

WHEREAS, pursuant to HS 11362.775, qualified patients and caregivers "who associate within the State of California in order collectively or cooperatively to cultivate marijuana for medical purposes,

shall not solely on the basis of that fact be subject to state criminal sanctions under Section 11357, 11358, 11359, 11360, 11366, 11366.5, or 11570"; and

WHEREAS, law enforcement officers require a simple, reasonable and efficient guideline to use in evaluating individual and collective patient medical marijuana gardens and on-hand supplies; and

WHEREAS, this resolution does not address the enforcement of federal law.

THEREFORE, BE IT NOW RESOLVED that this County Board of Supervisors does hereby enact the following medical marijuana guidelines within its jurisdiction per HS 11362.77(c):

A) A qualified patient, a person holding a valid identification card, or the designated primary caregiver of that qualified patient or person may possess and cultivate any amount of marijuana consistent with the patient's current medical needs.

B) Possession of up to 3 pounds of dried cannabis bud or conversion per patient shall not constitute probable cause for arrest or prosecution of any person listed in (A).

C) To obtain that amount, any person listed in (A) may also cultivate any number of cannabis plants per patient with up to 100 square feet of total garden canopy, measured by the combined vegetative growth area. Gardens that are consistent with this provision shall not constitute probable cause for arrest or prosecution.

D) Qualified patients, caregivers and providers who collectively or cooperatively cultivate marijuana for medical purposes shall not exceed the standards set forth in (B) and (C).

E) Any person listed in (A) and having a physician's assent that this guideline is not adequate for the qualified patient's medical needs may possess and cultivate an amount of cannabis up to six pounds of bud or conversion and up to 200 square feet of canopy.

F) As defined in HS 11362.5, "Primary caregiver means the individual designated by the person exempted under this act that has consistently assumed responsibility for the housing, health or safety of that person." For purposes of this policy, a primary caregiver shall include any adult designated as such in writing by a qualified or card-holding patient, in the interests of their personal health and safety.

G) For purposes of identification, such designation shall be posted at the garden site or in the possession of the caregiver, along with a copy of the physician's document.

H) Law enforcement shall not arrest persons who are compliant with these provisions, and shall leave them, their medical marijuana supply and their garden unmolested. Amounts in excess of those above shall be preserved in usable form in case it need be returned.

PASSED AND ADOPTED

This _____th day of _____, 200_____ at a regular meeting of the

_____ County Board of Supervisors by the following vote:

Part III

FEDERAL LAW

Under the Commerce Clause of the Constitution, the federal Controlled Substances Act of 1970 set up five schedules to establish varying degrees of control over certain drugs. In any federal case involving a controlled substance, the presence of a gun can often be used to add charges and increase sentences. Marijuana is in Schedule I, prohibited. As such, doctors may not prescribe natural cannabis under any circumstances. The DEA listed synthetic THC in gel capsules, *marinol*, in Schedule III, which is available by prescription.

OCBC: Sales subject to federal ban

In *United States v. Oakland Cannabis Buyers' Coop.*, the Supreme Court held the doctrine of "medical necessity" does not provide an exemption to the federal ban on cannabis sales and distribution, even to seriously ill patients who would suffer imminent harm without it and who have tried all other alternatives.

In the case of the Controlled Substances Act, the statute reflects a determination that marijuana has no medical benefits worthy of an exception (outside the confines of a Government-approved research project).

— *US v. OCBC*, 532 U.S. 483, 491 (2001).

Ninth Circuit Court of Appeals

The Ninth Circuit has spoken loud and clear, first in its 2002 decision affirming a doctor's First Amendment right to talk to a patient about medical marijuana in *Conant v. Walters* and later in *Raich v. Ashcroft*. It is sending a message to the executive and legislature: There are limits on federal power. The *Conant* decision was appealed to the Supreme Court, which denied cert, confirming its validity. *Raich* has been appealed to the Court, which has decided to hear the case.

Conant: Doctors can recommend it

This is an appeal from a permanent injunction entered to protect First Amendment rights. The order enjoins the federal government from either revoking a physician's license to prescribe controlled substances or conducting an investigation of a physician that might lead to such revocation, where the basis for the government's action is solely the physician's professional 'recommendation' of the use of medical marijuana. ... The government has not provided any empirical evidence to demonstrate that this injunction interferes with or threatens to interfere with any legitimate law enforcement activities. Nor is there any evidence that the similarly phrased preliminary injunction that preceded this injunction, Conant v. McCaffrey, which the government did not appeal, interfered with law enforcement. The district court, on the other hand, explained convincingly when it entered both the earlier preliminary injunction and this permanent injunction, how the government's professed enforcement policy threatens to interfere with expression protected by the First Amendment. We therefore affirm.

— *Conant v. Walters* (9th Cir 2002) 309 F.3d 629, Cert denied Oct. 14, 2003

Controlled Substances Act of 1970

Criteria for the highest [prohibited] drug schedule in US Code Title 21 Section 812(b):

Schedule I (includes heroin, cannabis) requirements:

A. The drug or other substance has a high potential for abuse.

B. The drug or other substance has no currently accepted medical use in treatment in the United States, AND

C. There is a lack of accepted safety for use of the drug or other substance under medical supervision.

Left to Right: David Michael, Diane Monson, Randy Barnett, Angel McClary Raich, and Robert Raich, at the Ninth Circuit Court of Appeals in San Francisco, California, where they argued for medical rights. October 7, 2003.

Raich: Some patients are protected

Fearing raids in the future and the prospect of being deprived of medicinal marijuana, the appellants sued the US Attorney General John Ashcroft and the Administrator of the DEA Asa Hutchison on October 9, 2002. Their suit seeks declaratory relief and preliminary and permanent injunctive relief. ... Congress passed the CSA based on its authority under the Commerce Clause of the Constitution. ... The appellants argue that the Commerce Clause cannot support the exercise of federal authority over the appellants' activities. The Supreme Court expressly reserved this issue in its recent decision, *US v. Oakland Cannabis Buyers' Cooperative*. ... We find that the CSA, as applied to the appellants, is likely unconstitutional. ...

CONCLUSION: For the reasons discussed above, we reverse the district court. We find that the appellants have demonstrated a strong likelihood of success on the merits. This conclusion, coupled with public interest considerations and the burden faced by the appellants if, contrary to California law, they are denied access to medicinal marijuana, warrants the entry of a preliminary injunction. We remand to the district court for entry of a preliminary injunction consistent with this opinion.

— Raich v. Ashcroft, 2003 US.App.LEXIS 25317 (9th Cir. Dec. 16, 2003)

Raich and *WAMM* injunctions

Federal courts have issued injunctions barring the federal government from raiding the medical gardens of Angel Raich, Diane Monson and the WAMM collective. The Supreme Court has since taken *Raich* on appeal. The outcome of that decision will have a profound impact on the medical marijuana issue.

California voters passed an initiative

Proposition 215: The law of the land

In the California State Constitution, when a state law conflicts with federal statute, state officials are required to follow and enforce state law and leave federal law to federal agencies.

An administrative agency, including an administrative agency created by the Constitution or an initiative statute, has no power: ... (c) To declare a statute unenforceable, or to refuse to enforce a statute on the basis that federal law or federal regulations prohibit the enforcement of such statute unless an appellate court has made a determination that the enforcement of such statute is prohibited by federal law or federal regulations.

— California State Constitution Amendment III, Section 3.5

Qualified patients and caregivers have a right to use and cultivate

Proposition 215, *The Compassionate Use Act of 1996*, passed by more than 56% of the vote, creating broad protections for doctors, patients and primary caregivers who may use or cultivate marijuana legally. It did not legalize sales of cannabis. "Stop arresting patients" was a campaign theme, but it has not since been the case. The measure does not limit personal amounts of cannabis that can be grown or possessed, nor did it authorize the legislature or any other entity to set such a limit.

On this page are some key elements of this law and court decisions, or case law, that apply to cannabis use within the state. Two sections merit our notice here:

HS 11362.5(c): Notwithstanding any other provision of law, no physician in this state shall be punished, or denied any right or privilege, for having recommended marijuana to a patient for medical purposes.

(d) Section 11357, relating to the possession of marijuana, and Section 11358, relating to the cultivation of marijuana, shall not apply to a patient, or to a patient's primary caregiver, who possesses or cultivates marijuana for the personal medical purposes of the patient upon the written or oral recommendation or approval of a physician.

— California Health and Safety Code

A qualified individual who is arrested and charged with possession or cultivation of any amount of cannabis can file a demurrer or seek a 995 or *Mower* hearing to get charges dismissed. They can also assert an affirmative defense in court to have charges dropped at a preliminary hearing or win acquittal by a jury.

CA Supreme Court's *Mower* Decision

Patient Myron Mower took his case to the California Supreme Court — and won.

While not immune from arrest, a qualified patient should not be indicted. Once an approval is shown, the burden shifts to the prosecutor to prove that any cannabis so cultivated or possessed is beyond the scope of Proposition 215.

[A] defendant moving to set aside an indictment or information prior to trial based on his or her status as a qualified patient or primary caregiver may proceed under Penal Code section 995. ... Of course, in the absence of reasonable or probable cause to believe that a defendant is guilty of possession or cultivation of marijuana, in view of his or her status as a qualified patient or primary caregiver, the grand jury or the magistrate should not indict or commit the defendant in the first place, but instead should bring the prosecution to an end at that point. ... We agree that, in light of its language and purpose, section 11362.5(d) must be interpreted to allow a defense at trial. ...

As a result of the enactment of section 11362.5(d), the possession and cultivation of marijuana is no more criminal — so long as its conditions are satisfied — than the possession and acquisition of any prescription drug with a physician's prescription. ... the provision renders possession and cultivation of marijuana noncriminal under the conditions specified.

— California Supreme Court, *People v. Mower* (2002) 28Cal.4th 457.

Appeals Court's *Trippet* Decision

Benefits of legislative reform are retroactive and Prop 215 may cover transportation of cannabis; however, any amount of cannabis cultivated, possessed or transported must be reasonably related to current use.

As the Attorney General concedes, absent contrary indicia, 'the Legislature is presumed to have extended to defendants whose appeals are pending the benefits of intervening statutory amendments which decriminalize formerly illicit conduct [citation], or reduce the punishment for acts which remain unlawful.' ...

The rule should be that the quantity possessed by the patient or the primary caregiver, and the form and manner in which it is possessed, should be reasonably related to the patient's current medical needs. ... [T]ransportation may be allowed if quantity transported and method, time and distance of transportation are reasonably related to patient's current medical needs.

— California Court of Appeals, *People v. Trippet* (1997) 56 Cal.App. 4th 1532, 57 Cal.App.4th 754A

Appeals Court's *Spark* decision

The physician's opinion is not on trial.

A physician's determination on this medical issue is not to be second-guessed by jurors who might not deem the patient's condition to be sufficiently "serious."

— California Court of Appeals, *People v. Spark* (2004) C.A. 5th 08-02-2004 F042331. Cite as 04 C.D.O.S. 6972

SB 420 Basics

Authors: John Vasconcellos

Mark Leno

2003: State legislators get involved in implementation

Despite the law and rulings, patients continue to be arrested and prosecuted, even for small amounts. Senator John Vasconcellos and Assemblyman Mark Leno introduced California SB 420 in 2003, passed and signed into law as Health and Safety Code 11362.7, et seq. It expands the scope of activities protected under medical marijuana and formalizes the role of patient collectives. It also created a voluntary identification card system to protect against arrest but at the last minute they inserted low and non-scientific guideline amounts as a safe harbor from arrest. They explained the writing process in an open letter.

> Fully appreciating that Proposition 215 cannot be amended by the Legislature, we have resisted all efforts to make the new identification card system created by SB 420 mandatory – at least two times our SB 420 contains specific language declaring our intent that the program is wholly voluntary. ...
>
> We tried to incorporate NIDA guidelines, but learned that they do not really exist in any form we could incorporate into SB 420; ... We chose guidelines we believe best meet our search for balance between patient's needs and *practical results in getting SB 420 signed into law;* (emphasis added)
>
> In addition we allow localities with higher possession or cultivation amounts to retain them, and other localities to establish new guidelines which exceed what is set forth in this bill. No jurisdiction may establish guidelines lower than those set forth in SB 420;
>
> In addition we provided individuals the option to get in excess of the guidelines upon a doctor's recommendation for amounts exceeding the cultivation and possession guidelines set in this bill. Our letter in the Assembly and Senate Journals expresses legislative intent that these guidelines are intended to be the threshold, and not a ceiling. ...
>
> — Sen. John Vasconcellos,
> Assemblyman Mark Leno, authors of SB 420,

Some points made above were put into the introduction to SB 420 but are not in the resulting legal code.

SB 420 SECTION 1. (b) It is the intent of the Legislature, therefore, to do all of the following:

(1) Clarify the scope of the application of the act and facilitate the prompt identification of qualified patients and their designated primary caregivers in order to avoid unnecessary arrest and prosecution of these individuals and provide needed guidance to law enforcement officers.

(2) Promote uniform and consistent application of the act among the counties within the state.

(3) Enhance the access of patients and caregivers to medical marijuana through collective, cooperative cultivation projects.

Local implementation is mandatory

To ensure that qualified patients, caregivers and collectives are protected all over the state, every county has been required to take steps to accommodate and implement the voluntary card system.

HS 11362.71.(b) Every county health department, or the county's designee, shall do all of the following:

(1) Provide applications upon request to individuals seeking to join the identification card program.

(2) Receive and process completed applications in accordance with Section 11362.72.

(3) Maintain records of identification card programs.

(4) Utilize protocols developed by the department pursuant to paragraph (1) of subdivision (d).

(5) Issue identification cards developed by the department to approved applicants and designated primary caregivers.

(c) The county board of supervisors may designate another health-related governmental or non-governmental entity or organization to perform the functions described in subdivision (b), except for an entity or organization that cultivates or distributes marijuana.

Creates limited immunity for sales, transportation and intent to distribute

One of the most powerful aspects of SB 420 is its inclusion of sections authorizing activities not included in Prop 215, such as intent to distribute, transportation, processing, sales and maintaining a place where cannabis is used or produced.

11362.765. (a) Subject to the requirements of this article, the individuals specified in subdivision (b) shall not be subject, on that sole basis, to criminal liability under Section 11357, 11358, 11359, 11360, 11366, 11366.5, or 11570. However, nothing in this section shall authorize the individual to smoke or otherwise consume marijuana unless otherwise authorized by this article, nor shall anything in this section authorize any individual or group to cultivate or distribute marijuana for profit.

(b) Subdivision (a) shall apply to all of the following:

(1) A qualified patient or a person with an identification card who transports or processes marijuana for his or her own personal medical use.

(2) A designated primary caregiver who transports, processes, administers, delivers, or gives away marijuana for medical purposes, in amounts not exceeding those established in subdivision (a) of Section 11362.77, only to the qualified patient of the primary caregiver, or to the person with an identification card who has designated the individual as a primary caregiver.

(3) Any individual who provides assistance to a qualified patient or a person with an identification card, or his or her designated primary caregiver, in administering medical marijuana to the qualified patient or person or acquiring the skills necessary to cultivate or administer marijuana for medical purposes to the qualified patient or person.

(c) A primary caregiver who receives compensation for actual expenses, including reasonable compensation incurred for services provided to an eligible qualified patient or person with an identification card to enable that person to use marijuana under this article, or for payment for out-of-pocket expenses incurred in providing those services, or both, shall not, on the sole basis of that fact, be subject to prosecution or punishment under Section 11359 or 11360.

PATIENTS, CAREGIVERS AND CARDHOLDERS

SB 420 preserves all Prop 215 rights and protects cardholders from arrest

Proposition 215 was a California voter initiative creating our state medical marijuana law, HS 11362.5, so the legislature cannot modify it directly.

Article 2 Section 10(c) The Legislature. . . May amend or repeal an initiative statute by another statute that becomes effective only when approved by the electors unless the initiative statute permits amendment or repeal without their approval.

— California State Constitution, Art. 2 sec 10(c)

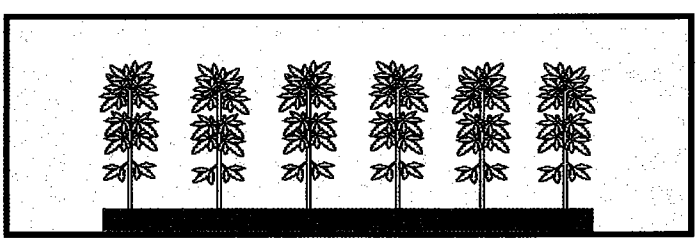
Senate Bill 420 is statutory law that created HS 11362.7 and 11362.8, subject to future modification by the legislature, for example to increase the guidelines in 2005 at the suggestion of the Attorney General. It established a voluntary and confidential patient ID card program administered by the Department of Health Services but not yet implemented. Among other things, this new law:

- Defines medical marijuana as dry mature female cannabis buds or conversion
- Creates two legal categories: "qualified patients" protected by Prop 215 and "persons with an identification card" with distinct rights and responsibilities
- Sets criminal penalties for abuse of the card system
- Allows cardholder-caregivers to have more than one patient in their home county, but only one patient from out of county
- Sets a default guideline of six mature plants and eight ounces of bud or conversion as a safe harbor from arrest for patients and caregivers with valid cards:

HS 11362.71(e) No person or designated primary caregiver in possession of a valid identification card shall be subject to arrest for possession, transportation, delivery, or cultivation of medical marijuana in an amount established pursuant to this article, unless there is reasonable cause to believe that the information contained in the card is false or falsified, the card has been obtained by means of fraud, or the person is otherwise in violation of the provisions of this article.

(f) It shall not be necessary for a person to obtain an identification card in order to claim the protections of Section 11362.5.

HS 11362.77. (a) A qualified patient or primary caregiver may possess no more than eight ounces of dried marijuana per qualified patient. In addition, a qualified patient or primary caregiver may also maintain no more than six mature or 12 immature marijuana plants per qualified patient.



All state law enforcement officers must respect the voluntary ID cards

The problem of police continuing to arrest innocent patients is addressed, but only for cardholders and only up to the floor amounts in SB 420 unless a local jurisdiction allows larger amounts, or the patient has a physician's note exempting them from the guidelines.

11362.78. A state or local law enforcement agency or officer shall not refuse to accept an identification card issued by the department unless the state or local law enforcement agency or officer has reasonable cause to believe that the information contained in the card is false or fraudulent, or the card is being used fraudulently.

ID card is a voluntary contract that couples protections with limitations

Prop 215 did not protect people from arrest, and it did not set any limits on gardens or dosages. The courts have held this to mean any reasonable amount accepted by a judge or jury. A person with a valid ID card, on the other hand, is immune from arrest — but only for these very small amounts of medicine: eight ounces of dry, mature bud or conversion and a garden with no more than six mature plants. For many patients, this is not enough, and the more cannabis a patient needs, the more vulnerable they are to arrest and prosecution. There are two immediate remedies to this problem.

Doctor's exemption protects dosage

First, a physician may authorize unspecified amounts greater than the state and local guidelines.

HS 11362.77(b) If a qualified patient or primary caregiver has a doctor's recommendation that this quantity does not meet the qualified patient's medical needs, the qualified patient or primary caregiver may possess an amount of marijuana consistent with the patient's needs.

Cities and Counties are empowered

Another provision protects the integrity of local medical marijuana guidelines around the state, which allowed up to three pounds and 100 square feet of canopy as in Sonoma and Humboldt Counties. Localities are empowered to adopt new guidelines, as long as the amounts are no lower than the state floor.

HS 11362.77(c) Counties and cities may retain or enact medical marijuana guidelines allowing qualified patients or primary caregivers to exceed the state limits set forth in subdivision (a).

Why should any locality enact guidelines greater than the SB 420 floor? Because to do so is a cost effective, reasonable and compassionate. A cost effective policy saves on law enforcement and court resources and expense. A reasonable review shows that the specified floor amount is neither scientific nor adequate for many patients. A compassionate policy would stop arresting patients, leave them their medicine and not ruin them financially by causing prohibitive legal costs.

CANNABIS COOPS AND COLLECTIVES

Where to get California's medicine: The Appeals Court Peron Decision

Obtaining cannabis is one thing, but sales are a different matter. The problem has to do with receiving payment for cannabis. Shortly after passage of Prop 215, an Appeals Court decided a case in which the initiative's chief proponent, Dennis Peron, argued that he had a right to sell at his San Francisco dispensary.

Dennis Peron

Although the sale and distribution of marijuana remain as criminal offenses under section 11360, bona fide primary caregivers for section 11362.5 patients should not be precluded from receiving bona fide reimbursement for their actual expense of cultivating and furnishing marijuana for the patient's approved medical treatment. ...

Assuming responsibility for housing, health, or safety does not preclude the caregiver from charging the patient [59 Cal.App.4th 1400] for those services. A primary caregiver who consistently grows and supplies physician-approved or -prescribed medicinal marijuana for a section 11362.5 patient is serving a health need of the patient, and may seek reimbursement... .

We find no support in section 11362.5 for respondents' argument that sales of marijuana on an allegedly nonprofit basis do not violate state laws against marijuana sales. No provision in section 11362.5 so states. Sections 11359 and 11360 explicitly forbid both the sale and the "giv[ing] away" of marijuana. Section 11362.5(d) exempts "a patient" and "a patient's primary caregiver" from prosecution for two specific offenses only: possession of marijuana (§ 11357) and cultivation of marijuana (§ 11358). It does not preclude prosecution under sections 11359 (possession of marijuana for sale) or 11360(a), which makes it a crime for anyone to "*sell, furnish, administer, or give* away" marijuana (italics added).

— (1997) 59 Cal.App.4th 1383, 70 Cal.Rptr.2d 20
[No. A077630. First Dist., Div. Five. Dec 12, 1997.]

The "right to obtain" marijuana is, of course, meaningless if it cannot legally be satisfied. ... Local governments in California are now exploring ways in which to responsibly implement the new law (as, for example, through licensing ordinances) so as to relieve those medically in need of marijuana but unable to cultivate it from the need to do so. I do not think we should make gratuitous blanket determinations which might prematurely interfere with those efforts. (Concurring opinion, Ibid.)

Based on that decision, cities like West Hollywood, San Francisco, and Arcata have allowed caregiver- and patient-run dispensaries to operate within their jurisdictions, although this has not prevented federal or state law enforcement raids. Oakland City Council has authorized four dispensaries to operate. The WAMM cooperative in Santa Cruz has an injunction against federal DEA raids at the time of this writing.

HS 11362.7 is even more clear in authorizing certain kinds of production, sales and distribution.

HS 11362.765. (a) Subject to the requirements of this article, the individuals specified in subdivision (b) shall not be subject, on that sole basis, to criminal liability under Section 11357, 11358, 11359, 11360, 11366, 11366.5, or 11570. However, nothing in this section shall authorize the individual to smoke or otherwise consume marijuana unless otherwise authorized by this article, nor shall anything in this section authorize any individual or group to cultivate or distribute marijuana for profit. ... (b) ...

(c) A primary caregiver who receives compensation for actual expenses, including reasonable compensation incurred for services provided to an eligible qualified patient or person with an identification card to enable that person to use marijuana under this article, or for payment for out-of-pocket expenses incurred in providing those services, or both, shall not, on the sole basis of that fact, be subject to prosecution or punishment under Section 11359 or 11360. ...

HS 11362.775. Qualified patients, persons with valid identification cards, and the designated primary caregivers of qualified patients and persons with identification cards, who associate within the State of California in order collectively or cooperatively to cultivate marijuana for medical purposes, shall not solely on the basis of that fact be subject to state criminal sanctions under § 11357, 11358, 11359, 11360, 11366, 11366.5, or 11570.

Organizing a collective or coop

After Prop 215 passed, patient cooperatives and collectives took root around the state, as noted above. There is no clear definition in the law as to what that means, but courts and communities are recognizing a broad array of arrangements. In general terms it constitutes a group of individual bona fide patients and caregivers working within a mutually agreed relationship as property holder, workers and patients who obtain cannabis. In some groups everything is voluntary, some have mandatory participation in the garden itself, and some have paid support staff. All require that the physician's authorization be verified. Most require written, rather than oral, approvals and keep documents on at the garden and supply sites. Some seek the approval of a government agency, but many prefer to "fly under the radar" and provide information only as an affirmative defense after the fact.

Every qualified patient or arrangement thereof has a right to argue any quantity or arrangement under state law, but they still might lose in court. Those with valid identification cards are protected to the minimal extent in HS 11362.77(a) eight ounces, 12 immature *or* six mature plants per patient, (b) a physician's exemption or (c) a local policy. In theory that means no arrest and no destruction of medicine. Collectives might follow pro-rata amounts, like 36 mature plants for six cardholders.

Unfortunately, the same records that may prove helpful in defending a collective under state law add greater risk under federal law.

Zoning, permits and taxes

Some cities have zoning and permitting laws that affect dispensaries. Cannabis is an over-the-counter medication, so the Board of Equalization requires sales tax.

LEGAL PROCESS

Living within acceptable risks

This booklet is not a substitute for legal counsel. The issues discussed in it are either factual or subject to legal interpretation and changes in law. Before undertaking the cultivation or provision of medicinal cannabis, it is always a good idea to spend the time and money to talk with a knowledgeable attorney. Even if what a person is doing is legal under state law, there is risk. A patient can still be prosecuted in state court. Primary caregivers are especially at risk because supplying medicine may be charged as "distribution." Anyone should be aware how serious the offense could be, how likely they are to be held criminal, and whether they can handle its consequences. If a case goes federal, a five-year mandatory sentence begins at 100 plants, and 10-years at 1000 plants, so it is important to balance legal rights against the ability to endure persecution.

In the end, you make the choice and take the risks.

Many layers of legal process

What follows is not a comprehensive listing, but serves merely as a general outline of what might occur at some point if you are involved with medical marijuana. Not everything here applies to every circumstance.

It may never happen, but here is a glimpse of the entanglements that may await.

Talk to a knowledgeable attorney. If you don't already have an attorney, ask some questions. What do they offer? Do they know about the sections of law in this booklet? What is it going to cost? You need to balance money against freedom. Remember you can also educate your lawyer, but you have much more on the line than they do — so choose well and be ready to do some of your own leg work. If you can't afford an attorney, after arraignment you are entitled to a public defender.

Contact with law enforcement is often triggered by some minor incident, such as an officer thinking they smell cannabis during a routine traffic pullover or cannabis left out in plain sight. This is the time to exercise your right to remain silent (until you have an attorney on hand) other than to refuse to consent to a search. If the officer locates medicine, the defense should be asserted immediately, such as to say "that medicine is legal under Health and Safety Code 11362.5" and showing a medical approval or card. This is not the time to make spontaneous statements or argue your case. What you say might be different than what the officers hear or write down. The police are not there to help you, they are there to build a case against you and send you to prison if possible. Ask if you are under arrest or if you can leave. If you can leave, do so. If you are under arrest, ask to see an attorney at once, then be silent.

Booking is when the police transport and process a suspect after an arrest and put them in a holding cell.

Consider getting an investigator or an expert witness. If your case involves more than a very small amount of cannabis, their participation can make a big difference. An expert can consult with your attorney, analyze evidence, prepare reports and testify on your behalf at a hearing or a trial. If you can't afford to pay for one, ask your attorney to file an Evidence Code section 730 *ex parte* motion for the court to pay the cost.

Plea negotiations occur when your attorney and the DA argue between getting your charges dismissed or altered and them throwing the book at you. If you can have them talking before charges are filed, so much the better. It's never too soon to bring in legal counsel to resolve the issues.

Reading of charges and bail hearing. An opportunity to make a record that it was legal medical marijuana, ask for dismissal of charges, return of property and release on your own recognizance, known as "O.R."

Arraignment is the defendant's first hearing, to enter the plea. A demurrer is an alternative to entering a plea. Continue the arraignment and tell the judge you need to review the police reports and may be filing a demurrer.

Preparations. During the discovery process, you learn the prosecutor's evidence against you and glean what areas need to be addressed. You may wish to consult with an expert witness or investigator. Plea bargaining, phase two: Ask the DA to reconsider and dismiss, think about what they want you to plead guilty to and all the consequences of your plea. Can you comply with the requirements, or is it creating future problems for you?

Mower Hearing, a PC 995 hearing or common law (speaking) motion to dismiss, is a proceeding before a judge prior to trial in which a person gets to wage a medical defense with the burden of proof beyond reasonable doubt placed upon the prosecution.

Williamson Hearing is a PC section 1000 pre-trial process for growers who are not medical users or whose approvals are invalid, allowing them to refute charges of commercial intent and get diversion based on a preponderance of the evidence.

Preliminary Hearing is where a prosecution presents to a judge witnesses and other evidence of guilt, and the defendant is able to present a defense and attempt to win a dismissal. The court only requires the prosecutor to show probable cause. This means something gives the court a strong suspicion of guilt, so it usually holds the accused over for trial. This is an opportunity to hear the government's case and have the option of whether or not to respond. If the judge dismisses the charges, a prosecutor may be able to refile them, anyway.

Evidentiary Hearing is for a judge to decide what evidence to admit and what to suppress. Sometimes the decisions help the defense, other times they hurt it. In any case, these decisions shape the case and can form the basis for an appeal in case of conviction.

Jury Trial is when a jury of 12 (plus several alternates) hears evidence, testimony and arguments, then renders a verdict of either guilty or not-proved-guilty-beyond-reasonable-doubt. At this point the burden of proof again favors the defendant and the defense goal is full acquittal. There may also be a hung jury, meaning that it cannot come to a unanimous decision and the charges may or may not be retried. If there is a conviction, there may be basis for an appeal.

Return of Property Hearing after dismissal or acquittal seeks to clarify that your legal property is not contraband and have the court order the return of medicine, equipment, etc.

Sentencing is after a conviction when evidence is considered and points argued to determine your sentence. Mitigating circumstances are considered in both state and federal courts.

Part III

CALIFORNIA LEGAL CODE REFERENCES

California State Law excerpts:

Health & Safety Code 11018: Marijuana means all parts of the plant Cannabis sativa L., whether growing or not; the seeds thereof; the resin extracted from any part of the plant; and every compound, manufacture, salt, derivative, mixture, or preparation of the plant, its seeds, or resin. It does not include the mature stalks of the plant, fiber produced from the stalks, oil or cake made from the seeds of the plant, any other compound, manufacture, salt, derivative, mixture, or preparation of the mature stalks (except the resin extracted therefrom), fiber, oil, or cake, or the sterilized seed of the plant which is incapable of germination.

HS 11006.5: Concentrated cannabis means the separated resin, whether crude or purified, obtained from marijuana.

HS 11362.77(d): Only the dried mature processed flowers of female cannabis plant or the plant conversion shall be considered when determining allowable quantities of [medical] marijuana under this section.

Transportation of Cannabis:

VC 23222. (b) Except as authorized by law, every person who possesses, while driving a motor vehicle upon a highway or on lands, as described in subdivision (b) of Section 23220, not more than one *avoirdupois* ounce of marijuana, other than concentrated cannabis as defined by Section 11006.5 of the Health and Safety Code, is guilty of a misdemeanor and shall be punished by a fine of not more than one hundred dollars ($100).

Also see: HS 11360 (below, under processing and sales).

Possession of Cannabis:

HS 11357 (a) Except as authorized by law, every person who possesses any concentrated cannabis shall be punished by imprisonment in the county jail for a period of not more than one year or by a fine of not more than five hundred dollars ($500), or by both such fine and imprisonment, or shall be punished by imprisonment in the state prison.

(b) Except as authorized by law, every person who possesses not more than 28.5 grams of marijuana, other than concentrated cannabis, is guilty of a misdemeanor and shall be punished by a fine of not more than one hundred dollars ($100). Notwithstanding other provisions of law, if such person has been previously convicted three or more times of an offense described in this subdivision during the two-year period immediately preceding the date of commission of the violation to be charged, the previous convictions shall also be charged in the accusatory pleading and, if found to be true by the jury upon a jury trial or by the court upon a court trial or if admitted by the person, the provisions of Sections 1000.1 and 1000.2 of the Penal Code shall be applicable to him, and the court shall divert and refer him for education, treatment, or rehabilitation, without a court hearing or determination or the concurrence of the district attorney, to an appropriate community program which will accept him. If the person is so diverted and referred he shall not be subject to the fine specified in this subdivision. If no community program will accept him, the person shall be subject to the fine specified in this subdivision. In any case in which a person is arrested for a violation of this subdivision and does not demand to be taken before a magistrate, such person shall be released by the arresting officer upon presentation of satisfactory evidence of identity and giving his written promise to appear in court, as provided in Section 853.6 of the Penal Code, and shall not be subjected to booking.

(c) Except as authorized by law, every person who possesses more than 28.5 grams of marijuana, other than concentrated cannabis, shall be punished by imprisonment in the county jail for a period of not more than six months or by a fine of not more than five hundred dollars ($500), or by both such fine and imprisonment. ...

Cultivation of Cannabis:

HS 11358. Every person who plants, cultivates, harvests, dries, or processes any marijuana or any part thereof, except as otherwise provided by law, shall be punished by imprisonment in the state prison.

Possession of Cannabis for sales:

HS 11359. Every person who possesses for sale any marijuana, except as otherwise provided by law, shall be punished by imprisonment in the state prison.

Processing, transportation and sales of Cannabis:

HS 11360. (a) Except as otherwise provided by this section or as authorized by law, every person who transports, imports into this state, sells, furnishes, administers, or gives away, or offers to transport, import into this state, sell, furnish, administer, or give away, or attempts to import into this state or transport any marijuana shall be punished by imprisonment in the state prison for a period of two, three or four years.

(b) Except as authorized by law, every person who gives away, offers to give away, transports, offers to transport, or attempts to transport not more than 28.5 grams of marijuana, other than concentrated cannabis, is guilty of a misdemeanor and shall be punished by a fine of not more than one hundred dollars ($100). In any case in which a person is arrested for a violation of this subdivision and does not demand to be taken before a magistrate, such person shall be released by the arresting officer upon presentation of satisfactory evidence of identity and giving his written promise to appear in court, as provided in Section 853.6 of the Penal Code, and shall not be subjected to booking.

Medical marijuana, The Compassionate Use Act:

HS 11362.5. (a) This section shall be known and may be cited as the Compassionate Use Act of 1996.

(b) (1) The people of the State of California hereby find and declare that the purposes of the Compassionate Use Act of 1996 are as follows:

(A) To ensure that seriously ill Californians have the right to obtain and use marijuana for medical purposes where that medical use is deemed appropriate and has been recommended by a physician who has determined that the persons health would benefit from the use of marijuana in the treatment of cancer, anorexia, AIDS, chronic pain, spasticity, glaucoma, arthritis, migraine or any other illness for which marijuana provides relief.

(B) To ensure that patients and their primary caregivers who obtain and use marijuana for medical purposes upon the recommendation of a physician are not subject to criminal prosecution or sanction.

(C) To encourage the federal and state governments to implement a plan for the safe and affordable distribution of marijuana to all patients in medical need of marijuana.

(2) Nothing in this act shall be construed to supersede legislation prohibiting persons from engaging in conduct that endangers others, nor to condone the diversion of marijuana for non-medical purposes.

(c) Notwithstanding any other provision of law, no physician in this state shall be punished, or denied any right or privilege, for having recommended marijuana to a patient for medical purposes.

(d) Section 11357, relating to the possession of marijuana, and Section 11358, relating to the cultivation of marijuana, shall not apply to a patient, or to a patient's primary caregiver, who possesses or cultivates marijuana for the personal medical purposes of the patient upon the written or oral recommendation or approval of a physician.

(e) For the purposes of this section, Primary caregiver means the individual designated by the person exempted under this act who has consistently assumed responsibility for the housing, health or safety of that person.

SB 420: The voluntary ID card system:

HS 11362.715(a) A person who seeks an identification card shall pay the fee, as provided in Section 11362.755, and provide all of the following to the county health department or the county's designee on a form developed and provided by the department:

(1) The name of the person, and proof of his or her residency within the county.

(2) Written documentation by the attending physician in the person' s medical records stating that the person has been diagnosed with a serious medical condition and that the medical use of marijuana is appropriate.

(3) The name, office address, office telephone number, and California medical license number of the person's attending physician.

(4) The name and the duties of the primary caregiver.

(5) A government-issued photo identification card of the person and of the designated primary caregiver, if any. If the applicant is a person under 18 years of age, a certified copy of a birth certificate shall be deemed sufficient proof of identity.

HS 11362.74. (a) The county health department or the county's designee may deny an application only for any of the following reasons:

(1) The applicant did not provide the information required by Section 11362.715, and upon notice of the deficiency pursuant to subdivision (d) of Section 11362.72, did not provide the information within 30 days.

(2) The county health department or the county's designee determines that the information provided was false.

(3) The applicant does not meet the criteria set forth in this article.

(b) Any person whose application has been denied pursuant to subdivision (a) may not reapply for six months from the date of denial unless otherwise authorized by the county health department or the county's designee or by a court of competent jurisdiction.

(c) Any person whose application has been denied pursuant to subdivision (a) may appeal that decision to the department. The county health department or the county's designee shall make available a telephone number or address to which the denied applicant can direct an appeal.

HS 11362.745. (a) An identification card shall be valid for a period of one year....

HS 11362.76. (a) A person who possesses an identification card shall:

(1) Within seven days, notify the county health department or the county's designee of any change in the person's attending physician or designated primary caregiver, if any.

(2) Annually submit to the county health department or the county' s designee the following:

(A) Updated written documentation of the person's serious medical condition.

(B) The name and duties of the person's designated primary caregiver, if any, for the forthcoming year.

(b) If a person who possesses an identification card fails to comply with this section, the card shall be deemed expired. If an identification card expires, the identification card of any designated primary caregiver of the person shall also expire.

(c) If the designated primary caregiver has been changed, the previous primary caregiver shall return his or her identification card to the department or to the county health department or the county's designee.

(d) If the owner or operator or an employee of the owner or operator of a provider has been designated as a primary caregiver pursuant to paragraph (1) of subdivision (d) of Section 11362.7, of the qualified patient or person with an identification card, the owner or operator shall notify the county health department or the county's designee, pursuant to Section 11362.715, if a change in the designated primary caregiver has occurred.

HS 11362.765. (a) Subject to the requirements of this article, the individuals specified in subdivision (b) shall not be subject, on that sole basis, to criminal liability under Section 11357, 11358, 11359, 11360, 11366, 11366.5, or 11570. However, nothing in this section shall authorize the individual to smoke or otherwise consume marijuana unless otherwise authorized by this article, nor shall anything in this section authorize any individual or group to cultivate or distribute marijuana for profit.

(b) Subdivision (a) shall apply to all of the following:

(1) A qualified patient or a person with an identification card who transports or processes marijuana for his or her own personal medical use.

(2) A designated primary caregiver who transports, processes, administers, delivers, or gives away marijuana for medical purposes, in amounts not exceeding those established in subdivision (a) of Section 11362.77, only to the qualified patient of the primary caregiver, or to the person with an identification card who has designated the individual as a primary caregiver.

(3) Any individual who provides assistance to a qualified patient or a person with an identification card, or his or her designated primary caregiver, in administering medical marijuana to the qualified patient or person or acquiring the skills necessary to cultivate or administer marijuana for medical purposes to the qualified patient or person.

(c) A primary caregiver who receives compensation for actual expenses, including reasonable compensation incurred for services provided to an eligible qualified patient or person with an identification card to enable that person to use marijuana under this article, or for payment for out-of-pocket expenses incurred in providing those services, or both, shall not, on the sole basis of that fact, be subject to prosecution or punishment under Section 11359 or 11360.

HS 11362.77. (a) A qualified patient or primary caregiver may possess no more than eight ounces of dried marijuana per qualified patient. In addition, a qualified patient or primary caregiver may also maintain no more than six mature or 12 immature marijuana plants per qualified patient.

(b) If a qualified patient or primary caregiver has a doctor's recommendation that this quantity does not meet the qualified patient' s medical needs, the qualified patient or primary caregiver may possess an amount of marijuana consistent with the patient's needs.

(c) Counties and cities may retain or enact medical marijuana guidelines allowing qualified patients or primary caregivers to exceed the state limits set forth in subdivision (a).

(d) Only the dried mature processed flowers of female cannabis plant or the plant conversion shall be considered when determining allowable quantities of marijuana under this section.

(e) The Attorney General may recommend modifications to the possession or cultivation limits set forth in this section. These recommendations, if any, shall be made to the Legislature no later than December 1, 2005, and may be made only after public comment and consultation with interested organizations, including, but not limited to, patients, health care professionals, researchers, law enforcement, and local governments. Any recommended modification shall be consistent with the intent of this article and shall be based on currently available scientific research.

(f) A qualified patient or a person holding a valid identification card, or the designated primary caregiver of that qualified patient or person, may possess amounts of marijuana consistent with this article.

HS 11362.775. Qualified patients, persons with valid identification cards, and the designated primary caregivers of qualified patients and persons with identification cards, who associate within the State of California in order collectively or cooperatively to cultivate marijuana for medical purposes, shall not solely on the basis of that fact be subject to state criminal sanctions under Section 11357, 11358, 11359, 11360, 11366, 11366.5, or 11570.

HS 11362.78. A state or local law enforcement agency or officer shall not refuse to accept an identification card issued by the department unless the state or local law enforcement agency or officer has reasonable cause to believe that the information contained in the card is false or fraudulent, or the card is being used fraudulently.

HS 11362.785. (a) Nothing in this article shall require any accommodation of any medical use of marijuana on the property or premises of any place of employment or during the hours of employment or on the property or premises of any jail, correctional facility, or other type of penal institution in which prisoners reside or persons under arrest are detained.

(b) Notwithstanding subdivision (a), a person shall not be prohibited or prevented from obtaining and submitting the written information and documentation necessary to apply for an identification card on the basis that the person is incarcerated in a jail, correctional facility, or other penal institution in which prisoners reside or persons under arrest are detained.

(c) Nothing in this article shall prohibit a jail, correctional facility, or other penal institution in which prisoners reside or persons under arrest are detained, from permitting a prisoner or a person under arrest who has an identification card, to use marijuana for medical purposes under circumstances that will not endanger the health or safety of other prisoners or the security of the facility.

(d) Nothing in this article shall require a governmental, private, or any other health insurance provider or health care service plan to be liable for any claim for reimbursement for the medical use of marijuana.

HS 11362.79. Nothing in this article shall authorize a qualified patient or person with an identification card to engage in the smoking of medical marijuana under any of the following circumstances:

(a) In any place where smoking is prohibited by law.

(b) In or within 1,000 feet of the grounds of a school, recreation center, or youth center, unless the medical use occurs within a residence.

(c) On a schoolbus.

(d) While in a motor vehicle that is being operated.

(e) While operating a boat.

HS 11362.795. (a) (1) Any criminal defendant who is eligible to use marijuana pursuant to Section 11362.5 may request that the court confirm that he or she is allowed to use medical marijuana while he or she is on probation or released on bail.

(2) The court's decision and the reasons for the decision shall be stated on the record and an entry stating those reasons shall be made in the minutes of the court.

(3) During the period of probation or release on bail, if a physician recommends that the probationer or defendant use medical marijuana, the probationer or defendant may request a modification of the conditions of probation or bail to authorize the use of medical marijuana.

(4) The court's consideration of the modification request authorized by this subdivision shall comply with the requirements of this section.

(b) (1) Any person who is to be released on parole from a jail, state prison, school, road camp, or other state or local institution of confinement and who is eligible to use medical marijuana pursuant to Section 11362.5 may request that he or she be allowed to use medical marijuana during the period he or she is released on parole. A parolee's written conditions of parole shall reflect whether or not a request for a modification of the conditions of his or her parole to use medical marijuana was made, and whether the request was granted or denied.

(2) During the period of the parole, where a physician recommends that the parolee use medical marijuana, the parolee may request a modification of the conditions of the parole to authorize the use of medical marijuana.

(3) Any parolee whose request to use medical marijuana while on parole was denied may pursue an administrative appeal of the decision. Any decision on the appeal shall be in writing and shall reflect the reasons for the decision.

(4) The administrative consideration of the modification request authorized by this subdivision shall comply with the requirements of this section.

HS 11362.8. No professional licensing board may impose a civil penalty or take other disciplinary action against a licensee based solely on the fact that the licensee has performed acts that are necessary or appropriate to carry out the licensee's role as a designated primary caregiver to a person who is a qualified patient or who possesses a lawful identification card issued pursuant to Section 11362.72. However, this section shall not apply to acts performed by a physician relating to the discussion or recommendation of the medical use of marijuana to a patient. These discussions or recommendations, or both, shall be governed by Section 11362.5.

State laws may change during the legislative session or at any time in the courts. For the text of any California law or the status of pending state legislation go to:

http://www.leginfo.ca.gov/

Safe Access Now hopes you find this booklet to be useful. We wish to reiterate that this is not a substitute for professional legal or medical advice, and encourage you to urge your officials to adopt Safe Access Guidelines. That means allowing as a safe harbor from arrest three to six pounds of cannabis per patient. To obtain that amount, any garden with 100 to 200 square feet of canopy should be exempt from arrest or prosecution. Be sure to visit our website:

http://www.safeaccessnow.net.

RESOURCES

For more information, visit:

http://www.safeaccessnow.net/
http://www.chrisconrad.com/
http://www.leginfo.ca.gov/

Other useful websites:

mpp.org/ Marijuana Policy Project
letfreedomgrow.org/
American Alliance for Medical Cannabis
drugpolicy.org/ Drug Policy Alliance
canorml.org/ California NORML
safeaccessnow.org/ Americans for Safe Access
medicalcannabis.com/ Patients Out of Time

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Cannabis Yields and Dosage

Chris Conrad and Safe Access Now have prepared a handy and authoritative reference book for everyone who needs to know the basics of medical marijuana titration and cultivation, as well as the tangle of laws and policies that surround this natural medicine.

"Safe Access Now medical marijuana dosage and garden guidelines are responsible and based on federal research. They meet the needs of a majority of patients."

— **Philip Denny, M.D.**
Physician, court-qualified cannabis expert

"Based on various government and non-governmental sources, a patient will use up to three pounds of processed usable marijuana per year. Therefore these guidelines are intended to allow for the cultivation and use of up to three pounds of marijuana per year."

— **Paul Gallegos**, 2/14/03
Humboldt County District Attorney

"[A] mathematical formula can use plant canopy diameter information to accurately estimate usable yield."

— ***Cannabis Yields***, US Department of Justice, NIDA and Drug Enforcement Administration, 1992. pp 10-11

"Each patient will be allowed to possess three pounds of processed marijuana per year. In order to grow that quantity we are allowing a canopy of 100 square feet, not to exceed 99 plants. The key here is we have not made a strict plant restriction, but allowed the number of plants to be grown according to the conditions present at each caregiver or patient site."

— **Michael J. Mullins**, 5/7/01
Sonoma County District Attorney

"The study subjects were habitual marijuana users. During the study, they were hospitalized and allowed free access to marijuana cigarettes for a period of four weeks, consuming an average of four to 17 marijuana cigarettes per day."

— ***Marijuana and Medicine***
National Academy of Science, Institute of Medicine (IOM), 1999. p. 141

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