

# 'Medical' Marijuana Is A Dangerous Fraud

by Colin Lowry

*The media skewed coverage of the Institute of Medicine's recent report to promote pot legalization. The report actually documents marijuana's damage.*

In the past few years, ballot initiatives permitting the medical use of marijuana, supposedly to treat chronically ill patients, have been approved in several states. These initiatives have been funded by the notorious international speculator George Soros, as a "Trojan Horse" for the legalization of illicit drugs. In response to this campaign, the Institute of Medicine (IOM) was commissioned to conduct a review of the scientific evidence "to assess the potential health benefits and risks of marijuana and its constituent cannabinoids," by the White House Office of National Drug Control Policy in January 1997.

The IOM report, released on March 17, 1999, reviews the biological effects of marijuana, documenting the damage it does to the brain's cognitive functions and motor coordination, its suppression of immune system function, and its damage to the reproductive system.<sup>1</sup>

The report also compares the effectiveness of marijuana to other drugs already in use to treat pain and nausea, finding it much less effective than currently prescribed drugs. In its conclusions, the IOM recommended against the use of smoked marijuana, citing the damage done by the tar and carcinogens to the lungs of users. It also concludes that the family of compounds known as cannabinoids, found in marijuana, may be useful for future drug development—the only conclusion to be played up, and distorted, by the media.

## Damaging Effects of Cannabinoids

The substance of the IOM report documents the damaging effects of cannabinoids.

There are about 60 chemicals known as cannabinoids found in marijuana, of

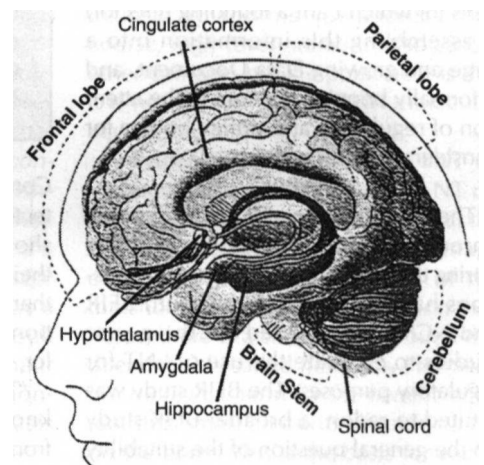
which delta-9-tetrahydrocannabinol, known as THC, is the most abundant of the psychoactive compounds. THC produces most of its effects in the brain and body by binding to specific receptors on the cell surface of neurons, or other cell types. One type of cannabinoid receptor was first found in the brain in 1990; a second type was found outside the brain in 1993. In 1992, a natural compound produced by the brain, called anandamide, was found to bind to the cannabinoid receptors, but its function remains mostly unknown. By also binding to these receptors, THC is interfering in a natural chemical signal pathway in the brain.<sup>2</sup>

The most consistent damage produced by chronic THC administration is loss of short-term memory. The area of the brain involved in short-term memory, and its transfer into long-term memory, is the hippocampus, which has a high concentration of cannabinoid receptors. Chronic marijuana users become tolerant of THC, and therefore have to smoke more and more to get the same "high." This causes permanent damage to the hippocampus, and may result in the inability to transfer information from short-term memory into long-term memory, a condition associated with Alzheimer's disease.

Studies of performance requiring auditory attention in people who have smoked only one marijuana cigarette show impaired performance, and

this is associated with a substantial decrease in blood flow to the temporal lobe of the brain.

Cannabinoids also affect spatial memory, balance, and coordination. The cerebellum is largely responsible for coordinating motor control of the body, and this brain region also has a high concentration of cannabinoid receptors. A study of experienced airplane pilots showed that even 24 hours after the smoking of a single marijuana cigarette, their performance on flight-simulator tests was impaired.



## BRAIN REGIONS IN WHICH CANNABINOID RECEPTORS ARE ABUNDANT

*These regions, which include the cerebellum, hippocampus, and the parietal and frontal lobes of the cerebral cortex, are the most strongly affected by THC in marijuana. Learning, memory, balance, and the coordination of movement are all significantly damaged by the drug.*

Source: Institute of Medicine



Stuart Lewis/EIRNS

*Mega-speculator George Soros has bankrolled "medical" marijuana ballot initiatives across the country.*

In addition, the regulation of hormones in the brain is altered by cannabinoids. Studies have shown that chronic THC administration in rats induces aging-like degenerative changes, which resemble the effects of stress exposure and elevated corticosteroid secretion.

#### Immunosuppression

One of the most serious consequences of the use of marijuana as a drug is the suppression of the immune system's function. Lymphocytes, including T-cells, which are responsible for fighting infection, are inhibited from proliferating by THC. B-cells, which produce antibodies that bind to foreign pathogens, are often inhibited from becoming active by THC, and even at very low doses, antibody production is reduced. THC also interferes with signals in the immune system that are mediated by cytokines. Studies in mice have shown that THC suppresses the cytokines that modulate the response to infection, and that the overall cytokine profile produced is abnormal.

Another detrimental effect is that THC from marijuana reduces the resistance to infection. In experiments with mice given THC, and then infected with sublethal doses of pneumonia-causing bacteria, most of these mice failed to fight the infection, and died of septic shock. However, control mice that were not exposed to THC fought off the infection, and became immune to repeated challenge by the bacteria.

#### Ludicrous Claims

Considering these dangerous consequences to human health from mari-

juana use, it is ludicrous to propose its use as a medicine. For example: One of the most ballyhooed proposed uses of marijuana is to treat nausea and weight loss experienced by AIDS patients. THC is not very effective at treating nausea, and the doses required for a modest effect are strongly hallucinogenic. Further, 90 percent of these AIDS patients are treated successfully with drugs already available. For the approximately 10 percent of AIDS patients who do not respond to standard treatments, synthetic THC, known as Marinol, can be legally prescribed in the United States.

However, THC is an immunosuppressant, so why would anyone want to give an AIDS patient, whose immune system is already gravely impaired, a drug that would decrease his or her resistance to infection?

Another of the proposed uses touted for marijuana is to treat nausea in cancer patients undergoing chemotherapy. The IOM report found that in clinical trials, THC provided only moderate control of nausea in 13 percent of the patients, as compared to drugs already available, which achieved complete control of nausea in almost 50 percent of the patients.

A profile of members of "medical use" cannabis buyers' clubs in California is included in the IOM report. Most of these "medical" users have used "recreational" drugs in the past, and more than 50 percent of these marijuana smokers tested positive for cocaine or amphetamines.

The IOM report also shot down the anecdotal evidence that marijuana is effective at treating glaucoma. In fact, marijuana was found to be *ineffective* at lowering the pressure in the eye of glaucoma patients over a period of time longer than a few hours. The report also found marijuana to be only mildly capable of treating pain, being slightly less effective than codeine.

Although the report's conclusions eliminated smoked marijuana as effective at treating symptoms of diseases such as multiple sclerosis and Parkinson's disease, it did not adequately emphasize marijuana's damage to the cognitive functions of the brain. What the IOM report should have said, is that attempts to portray this damaging drug as a medicine, are nothing but propaganda for drug legalization.

#### Notes

1. *Marijuana and Medicine: Assessing the Science Base*, Eds. Janet E. Joy, Stanley J. Watson, Jr., and John A. Benson, Jr., Institute of Medicine, Division of Neuroscience and Behavioral Health (Washington, D.C.: National Academy Press, March 1999).

The full text of the report is available on line at <http://www.nap.edu>

2. For more details, see "The Medical Effects of Marijuana on the Brain," by Karen Steiner and Thomas Vissing, *21st Century*, Winter 1997-1998, pp. 59-69.

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