

# **How Marijuana Use Affects the Brain & Becomes a Factor in Fueling Both Addiction & the Fentanyl and Opioid Crisis**

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# **Identifying Some Key Factors Fueling the Current National Drug Crisis and with It the Deterioration of Many of Our Major Metropolitan Areas**

In jurisdictions where marijuana use and distribution for sale have been legalized, the following have been occurring:

- Many of those jurisdictions have had an influx of individuals from places where marijuana is illegal. Many of those individuals have moved to these jurisdictions so that they will be able to use marijuana without legal repercussions.

## **Some Key Factors Fueling the Current National Drug Crisis (Continued)**

- There has been a surge in the homeless population and in the refugee camp-type conditions in many large metropolitan areas where marijuana use is now allowed or where it goes unchecked. These conditions have gained national attention. Areas include Denver, Pueblo, Seattle, Portland, Eugene, San Francisco, Oakland, San Jose, Los Angeles, and San Diego. Conditions are also now similarly worsening in New York City and Washington, D.C.

## **Some Key Factors Fueling the Current National Drug Crisis ( Continued)**

- In jurisdictions where marijuana can be “legally” taxed and purchased, cartels and black marketers can easily undercut the price of “legal” marijuana. Indeed, they can sell heroin, cocaine, and methamphetamine, etc. for less than the cost of black-market marijuana. In this way the cartels and black marketers are creating a growing client base. Increasing numbers of individuals are becoming addicted to everything from marijuana to cocaine to heroin.

## **Some Key Factors Fueling the Current National Drug Crisis (Continued)**

- Social services and emergency rooms are being overwhelmed. Mental health problems, along with suicidal depression is on the increase, and the suicide rate as US Center for Disease Control's statistics attest, began sky-rocketing even before the advent of the COVID-19 pandemic.
- Refugee-type encampments have flourished in these areas in which drug use, vagrancy, unemployment, and crime, including crimes of violence, have been noticeably on the increase.
- For an account of these kinds of phenomenon, see the "Code Red" presentations by Dr. Karen Randall and other physicians in Colorado (<https://www.youtube.com/watch?v=G9X2qpGoUY>).

## **What Can Be Done to Turn Things Around?**

Why are so many people of all ages turning to the use of marijuana and other drugs?

Dr. Bertha Madras of Harvard University is one of the most knowledgeable persons in the world when it comes to the effects of marijuana and other psychoactive drugs on the mind. She has called for a “war to defend the brain.”

# **A Characterization of the Nature of the Problem**

## **by Bertha Madras, Ph.D.**

- At the end of a debate held April 14, 2016, at the Brookings Institution in Washington, D.C., Dr. Madras argued that the classification of marijuana not be changed from Schedule 1. She made the following statement concerning the role of government policy in protecting against the use of harmful substances.

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## **Dr. Bertha Madras' Concluding Statement at a April 14, 2016 Debate at the Brookings Institution**

“Why do nations schedule drugs? ..... Nations schedule psychoactive drugs because we revere this three-pound organ (of our brain) differently than any other part of our body. It is the repository of our humanity. It is the place that enables us to write poetry and to do theater, to conjure up calculus and send rockets to Pluto three billion miles away, and to create I Phones and 3 D computer printing. And that is the magnificence of the human brain. Drugs can influence (the brain) adversely. So, this is not a war on drugs. **This is a defense of our brains, the ultimate source of our humanity.**”

[A video and transcript of the debate are accessible at <https://www.brookings.edu/events/brookings-debate-should-the-federal-government-remove-marijuana-from-its-list-of-schedule-i-drugs/> ]



## **Among Many Other Harmful Effects, Psychoactive Substances Effectively Alter, Impair, Impact, or Disable Normal Brain Functioning**

Psychoactive substances affect the normal functioning of the brain. This includes the use of or exposure to marijuana that contains the active principal (–)  $\Delta^9$ -trans-tetrahydrocannabinol, here after referred to as “THC”. All of the other substances listed as Class 1 and Class 2 substances in the Federal Controlled Substances Act affect the brain. These include among other drugs and one’s perception of reality, time, and space: marijuana, LSD, psilocybin, mescaline, cocaine, heroin, fentanyl, and amphetamines. Effects can be temporary, long term, or even permanent. **Of extreme importance to the future of humankind is the fact that they can affect the progeny of those who use the drugs and the offspring in turn of those born to those who used drugs. Indeed, this might well help explain why the drug use and drug addiction have been increasing in recent decades.**

# The Progeny of Users

Similarly to the effects that alcohol and tobacco can have on progeny, there are the following kinds of syndromes found in fetuses and in babies born to users of psychoactive substances, opiates, cocaine, and amphetamines, etc.:

- Fetal marijuana or cannabis syndrome owing to pre-natal, peri-natal, or post-natal exposure to marijuana;
- Neo-natal abstinence syndrome born to mothers who were addicted to nicotine, alcohol, marijuana, cocaine, amphetamines, opiates, fentanyl, and poly drug use.

## **The Progeny of Users (Continued)**

Marijuana use harms the reproductive systems of human beings, resulting in DNA impairment and chromosomal abnormalities. The offspring of men and women who are marijuana users have shortened gestation periods and lower birth weights. They can be born with a variety of anomalies involving the brain, the heart, and other organs. Women who use marijuana who are pregnant or lactating also risk impairing the healthy development of their child.

For an extensive list of published work by Dr. Stuart Reece and others on the teratogenic, genotoxic, arteriopathic, congenital abnormalities, neurological impairments, and other physical effects of cannabis use, see [GordonDrugAbusePrevention.com](http://GordonDrugAbusePrevention.com), now also a part of <https://GordonHumankind.com> .

## **The Progeny of Users (Continued)**

The effects on chromosomal impairment resulting from marijuana use have been known for decades and the risks of epigenomic impairment are great. (See the **National Institute on Drug Abuse 1984 Monograph on Marijuana Effects on the Endocrine and Reproductive Systems** at <https://archives.drugabuse.gov/sites/default/files/monograph44.pdf> ).

**Not only is the mental health of human beings at stake, the very gene pool of humankind is in jeopardy.**

## **The Research Finding that Should Have Stopped Marijuana Use Dead in Its Tracks Decades Ago**

Research findings from 1967 showed that the active principle of cannabis, (-)  $\Delta^9$ -trans-tetrahydrocannabinol, had idiosyncratic psychotomimetic effects in healthy subjects (Harris Isbell et al., **Psychopharmacologia**, 1967).

## **The Isbell Study and Subsequent Studies Have Confirmed the Triggering of Psychoses and Schizophrenia**

Had experimenters and users known of this research, many may have thought twice about using cannabis for any purpose. Since 1967, other studies and clinical research have confirmed the triggering of psychoses and schizophrenia, as well as suicidal depression and suicides, and other acts of violence have occurred as a result of marijuana use.

Dr. Christine Miller's work has contributed greatly to the state of the science and an understanding of the scientific research. Alex Berenson's recent book, **Tell You Children the Truth About Marijuana, Mental Illness, and Violence** is helping educate all concerned.

## **Playing Russian Roulette with One's Brain**

Using cannabis with THC is tantamount to playing Russian Roulette, placing one's brain at risk. This is increasingly the case with the high levels of THC in today's cannabis products. Changing the classification of marijuana will leave the unknowing user or would be user with the impression that marijuana is harmless or relatively harmless which decidedly is not the case.

## **Playing Russian Roulette with One's Brain (Continued)**

It is important to recognize that by failing to enforce the Federal Controlled Substances Act, and by allowing the use and distribution of marijuana, it is easy for individuals of all ages to get the false impression that surely marijuana must be harmless or relatively harmless or its use would never have been effectively “sanctioned” in this way.



## Marijuana Addiction

Of great concern are longitudinal studies showing that one in six youth who use cannabis become addicted and that one in ten adults become addicted (Hall, National Addiction Center, King's College, London, 2014). These figures may have escalated upwards in intervening years with the increases in the levels of THC in the marijuana being used. **The 2017 UK Focal Point on Drugs Report** found that nine in ten teens at drug clinics are being treated for cannabis use (<https://dailym.ai/2K6wJQw>). Data also shows that marijuana users are increasingly getting involved in the use of opioids. Not only is marijuana use proving to be a gateway drug, it is proving to be a speedway drug. In fact, the majority of those dying from opioid overdoses according to findings of a decade ago have a 10-15 year history of marijuana use.

# **The “Sensitization” of the Brain and “Priming” of the Brain to Opioids**

Dr. Nora Volkow of NIDA has spoken of the way in which exposure to marijuana in utero sensitizes the developing brain, including the brain of the fetus.

The previous U.S. Surgeon General Jerome Adams had talked of the way in which marijuana “primes the brain” for the use of other drugs.

It is critical that those in roles of public responsibility comprehend the significance of the sensitization and priming of the brain to opioids and drug addiction.

## Connecting the Research Dots

Of great concern is the research that has been done on the brains of aborted or miscarried fetuses that were exposed to cannabis in utero. Researchers have found “discrete opioid gene expression impairment in human fetal brain [to be] associated with maternal marijuana use” (Wang et al., **Pharmacogenomics Journal**, 2006 and Spano et al., **Biol Psychiatry**, 2007).

## Connecting the Research Dots (Continued)

A related set of animal research findings has shown that when animals are exposed in utero to marijuana, that when grown, they will tend to opt for opioids when given a selection of things to choose from in an experimental setting. Those not so exposed in utero do not opt for opioids (Cadoni et al., **Psychopharmacology, Berl.**, 2001).

## Connecting the Research Dots (Continued)

For additional analysis of related research, see Paula D. Gordon, “Why Marijuana Legalization is a Very Bad Idea ~ Marijuana as a Contributor to the Opioid Crisis, the Homeless Problem, and Societal Unrest and Its Harm to the Brain, Body, Future Generations, and Environment”, October 22, 2020. See <https://acdemocracy.org/why-marijuana-legalization-is-a-very-bad-idea/>. (For a link to the article, all see [GordonDrugAbusePrevention.com](http://GordonDrugAbusePrevention.com) and <http://GordonHumankind.com>.)

- **Note:** Dr. Libby Stuyt, a psychiatrist based in Colorado, deserves credit for having initially identified the pertinent research cited in this “Connecting the Research Dots” section.

# **Learning from Clinicians: The Pueblo Colorado Physicians’ “Code Red” YouTube Video Series**

From this series of videos, one gets the perspectives of the doctors and others working in emergency rooms and on the frontlines of what they are facing in Pueblo, Colorado since the legalization of marijuana. They have been engaged in what amounts to a war in defense of the brain, and a war in defense of the mental, psychological, and physical health of those seeking treatment in their emergency rooms. They are being overwhelmed by an increasingly large number of people seeking treatment as a result using various forms of marijuana. Increasing numbers of chronic users are presenting with a painful syndrome known as cannabis hyperemesis or “scrommiting” (violent vomiting).

Dr. Simerville in his “Code Red” Presentation notes that toxicology tests on a majority of individuals who have committed suicide have THC in their systems.

## **Pueblo Colorado Physicians' Code Red Video Series (Continued)**

These users described in the “Code Red” videos are also buying black market marijuana because it is cheaper. This in turn is leading them to buy and use even less expensive heroin. Black market heroin prices can be even lower than black market marijuana prices. Dr. Karen Randall reports about this in the following video: <https://www.youtube.com/watch?v=G9X2qpGoUY>

The prices of legal marijuana that can be obtained through State-sanctioned dispensaries is taxed and therefore far more expensive than black market marijuana. The expectation that the cartels and black marketers would disappear, is just the opposite of what has happened.

# A Selected List of the Pueblo Colorado Physicians’ “Code Red” Video Series

- Pueblo Physicians “Code Red” Presentation: Dr. Karen Randall at <https://www.youtube.com/watch?v=G8X2qpGoUY>
- Pueblo Physicians “Code Red” Presentation: Dr. Steven Simerville at <https://www.youtube.com/watch?v=K4bcl9FqfIs>
- Pueblo Physicians “Code Red” Presentation: Dr. Elizabeth Stuyt “The Marijuana/Opioid Connection” at <https://www.youtube.com/watch?v=G8QpzZLgshw>



## **Pueblo Colorado Physicians’ “Code Red” Video Series (Continued)**

- Dr. Libby Stuyt’s presentation included the references to the research involving human and animal fetuses. She has done the world a great service by bring this extremely significant research to people’s attention.
- What these dedicated physicians describe is a horror story that is being repeated in hospitals in all areas of the country where marijuana use has become rampant. This could well increase exponentially if the drug use, addiction, and opioid crisis continue unabated.

# **Why Marijuana Use Should Never Be and Should Never Have Been Legalized: Marijuana Can Never Be “Responsibly” Regulated**

Owing to the wide range of **unpredictable mental and physical effects** that marijuana has on individuals who use it or who are exposed to it, there is no way to make the use of marijuana safe for human beings.

As cannabis use has been increasing and as the levels of THC have increased, individuals of all ages are having mental and physical reactions and are appearing in increasing numbers in emergency rooms seeking help.

## **A Call to Action (Continued)**

A massive educational campaign is needed to help all understand the ways in which marijuana use and other polydrug use are impacting society and literally dumbing down the potential IQ and brain power of all users, including those whose brains are still developing. Experts say the brain is developing thru the mid- to late twenties. Some experts say it is developing into the forties and fifties. The problem is that no one of any age or stage of development can afford to lose IQ points. A free society cannot expect to remain free if individuals have forsaken their mental faculties and their mental health, and with it their reason, their good judgement, their creativity, their authenticity, their motivation, their productivity, and their capacity and inclination to be human-hearted and to contribute in a responsible way to society.

# **A Must-See Video Exchange Between Dr. Nora Volkow and the Dalai Lama About Addiction and the Brain and the Possibility of Regaining One's Health and Authentic Self**

- In this video filmed in India in 2013, Dr. Nora Volkow of the National Institute for Drug Abuse shows the Dalai Lama brain scans of users and recovering addicts. The exchange provides great insight and understanding concerning the effects that the use of psychoactive drugs, including marijuana, can have on the brain, on the pre-frontal cortex, and on personal agency, initiative, creativity, and willpower. The exchange explains the process of addiction and yet provides hope concerning ways in which addiction can be overcome if users cease their drug use.
- The video can be seen at <https://media.dalailama.com/2013-10-28-MindandLifeXXVII/2013-10-30-MindandLifeXXVII-english-video-day3-am-hq.mp4>

## **The Dalai Lama and Dr. Volkow (Continued)**

- Dr. Volkow and the Dalai Lama both speak of the need for those involved in drug use to stop using drugs and work to restore their sense of personal agency, initiative, and willpower and to do this by restoring their sense of humanity and their care and concern for others and to do this through serving others and through constructive and creative involvement in life.

# **The End of Drug Abuse & Addiction**

The tidal wave of drug abuse and its aftermath will eventually end. The end to the scourge will come when more and more thoughtful, feeling human beings come forward, contribute to a critical mass of public wisdom and opinion, and effectively help to turn the tide.

## **The End of Drug Abuse & Addiction (Continued)**

Many individuals have allowed themselves to be blinded to current realities. Many have allowed themselves to be conned and dehumanized. When they become aware of what is going on, they will no longer succumb to groupthink, social pressure, and denial. There is then a hope that human values will overtake the magical thinking and ignorance of proponents and users and that the materialistic values of those who are promoting the societally destructive results of the efforts and greed of “Big Marijuana” will give way to reason and human values. The challenge is to help coalesce the efforts of these forces. The challenge can be met by those who at their core realize the nature and scope of the devastation that this enchantment with altered states of mind has wrought and those who are not enticed by the promise of material gain, and by those who are neither uncaring nor in denial concerning the cost of the destruction of all human and societal values, potentials, and goals.

# Contact Information

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**Appendix :**  
**Online Courses on Marijuana and on the Drug Abuse  
Epidemic Being Taught by Dr. Gordon for  
Auburn University Outreach**

**A 3-Week Online Course on  
“The Effects and Impacts of Marijuana Use ~ Policies  
and Approaches Addressing the Challenges”**

For information see

<http://www.auburn.edu/outreach/opce/marijuana.htm> or

call to register: 334-844-5100.

The course is taught in asynchronous time

on a pass/not pass basis .

Registrants are eligible for 3 CEUs.

**A 4-Week Online Course on  
“Combating and Treating the Drug Abuse, Addiction, and the  
Opioid and Fentanyl Crisis ~  
A National Public Health Disaster”**

The role that exposure to and the increasing use of marijuana are playing in the opioid epidemic will be highlighted in the course.

For information and to register, see

<http://www.auburn.edu/outreach/opce/emergencymgmt/#courses>

and <https://opce.catalog.auburn.edu/courses/c190128>

or call 334-844-5100

Registrants are eligible for 3 CEUs. The course is taught in asynchronous time on a pass/not pass basis.