

MARIHUANA ,MARIJUANA CANNABIS

Medical use AND Legal Recreational Use

Presenter Dwayne Cameron

www.2Bsure.ca



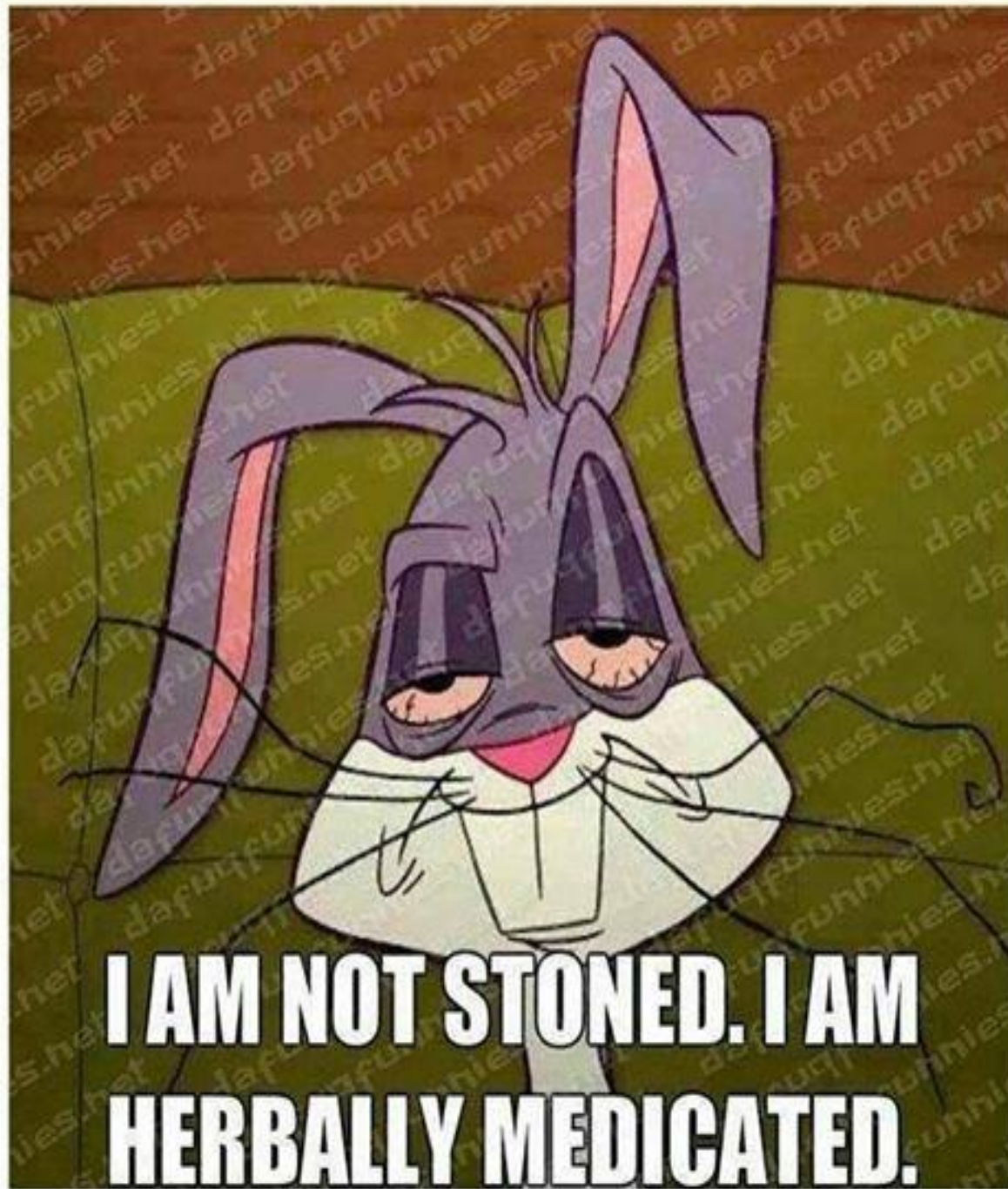
HOW IT ALL BEGAN

- 1978 I watched a movie, gained lived experience
- 1988 graduated as an addiction specialist
- Many addictions roles with adults and youth
- 2015 in jail began a deep dive into the medical cannabis world
- 2018 Answering my fathers questions on medical Cannabis

MANY MARIHUANAMYTHS

- My goal today is to have you go away with some basic factual information on difference between medical and recreational use/dispel myths
- How cannabis can help or harm health
- Basic understanding, info to screen & guide client for accurate info
- WHY?? So you can....
- Have a basic factual conversation with clients and other HCP's
- Use your basic info & skills to direct/guide if needed regarding safety and difference between medical/recreational
- Talk to your Teenagers & even Neighbors about facts

A picture is worth a thousand words





If it wasn't for weed,
I would have never
been created in the
first place.

I DON'T DO DRUGS



**I SET PLANTS ON FIRE AND
BREATHE**

MYTHS VS FACTS

- All physicians can prescribe medical Cannabis?
- Under the ACMPR, (Access to Cannabis for Medical Purposes Regulations) any authorized health care practitioner includes physicians in all provinces and territories- may include N.P.'s in some provinces and territories can complete medical authorization
- RECREATIONAL Only legally purchase from store with retail permit NOT Ganjaexpress since 1990
- Once I have my “green card” I can carry as much pot on me as I want.
- MEDICAL The amount of dried marijuana you can possess is the lesser of thirty times the daily amount stipulated by your healthcare practitioner up to max 150 grams. Your documentation needs to be sent to a Licensed Medical facility. You keep a copy for verification.
- RECREATIONAL possess up to 30 grams of legal dried cannabis, go straight home

OVER HIS MEDICAL & RECREATIONAL LIMIT



MORE MYTHS/FACTS

- You can get just as much medical benefit from buying POT from a store front.
- Medical... ONLY verified and tested from a licensed producer (L.P.) by Health Canada, TESTED for EXACT THC/CBD content & medical strains used
- RECREATIONAL cannabis retail permits 52 in Sask., tested for THC/CBD levels and other quality control ie mold
- You can't get addicted to marijuana especially if using it medically.
- CUD Cannabis Use Disorder in medical diagnostic manual assessed by Doctor/Addiction Specialist THC has psychological and physical addictive properties, slow-cook concept
- ALL mood altering addictive drugs effect the brain/body especially brains under construction.... more about this later

LAY OF THE LAND FOR MARIHUANA

- In the CTADS report for 2015
- Among past-year cannabis users, 24% (or 831,000) reported using it for medical purposes. The survey does not collect information on how users of cannabis for medical purposes obtain their cannabis. NO definition of medical use either. Health Canada has 375,000 registered
- Use of cannabis was more prevalent among youth aged 15 to 19 (21% or 426,000)
- Young adults aged 20 to 24 (30% or 715,000)
- Adults aged 25 or older (10% or 2.5 million).
- Cannabis use among adults aged 25 and older increased from 8% in 2013 to 10% in 2015 to 15 % in 2017 since legalization scan showed 18%

CHALLENGES

MEDICAL USE AND LEGALIZATION OF CANNABIS

WHAT'S THE DIFFERENCE?

- It is important to help people to know the difference between medical and legalization for recreational use.
- Medical Cannabis has been around in Canada for over 15 years with Health Canada producing medical Cannabis
- Buying marijuana off your local black market distributor (recent illegal store fronts) been around 1000's of years
- Since serious Legalization discussions Medical registrants increased dramatically

MEDICAL CANNABIS USERS REGISTERED IN CANADA

- Mid 2014 aprox..... 7900
- Sept 2016 aprox.....98,000
- Year end Dec 31, 2016..... 130,000
- Year end Dec 31, 2017..... 269,502
- Nov.1 2018 330,000
- Currently over 375, 000 registered
- yet CTADS 831,000 admit medical usage

LEGAL USE LEGISLATION HIGHLIGHTS

Oct 17/18 Federal government Legalized the production (4 plants in your dwelling), purchase (from provincially licensed distributor), possession (30 g) & consumption of marihuana for **RECREATIONAL** use, similar to the legal use of alcohol.

Each province will need to adopt provincial guidelines for legal distribution process with a minimum age of 18.

NO EDIBLES ... watch your ice cream!

SASKATCHEWAN HIGH..Lights..19 years, aprox 60 retail permits, similar limits for smoking as cigarettes....ZERO tolerance for impaired driving

Possession of more than 5 grams by YOUTH will be a criminal offence subject to the Youth Criminal Justice Act. (a fine)

MEDICAL

The Doctor is the Doorway:

Your medical form from your doctor is sent to a LP of your choice with the recommended amounts you are to use. If unsure you can call a LP to get suggestions on various strengths for various symptoms.

Your product is then sent to you through the mail.

OR you can register with Health Canada to grow your own for medical purposes or anyone can grow 4 plants.

3 WAYS TO TAKE RECREATIONAL MARIHUANA OR MEDICAL CANNABIS

Smoking a joint- rapid onset however increases health risks, some studies indicate by 4 to 20 times more cancer causing tar and carcinogens.

One study in New Zealand found an 8 % increase in lung cancer (one joint/day smoking average) to 7 % increase from tobacco smokers (20 cigarettes/day)

Vaping gives the more immediate affect on body with less harmful amounts of carcinogens due to vaporizing rather than burning.

Cannabis oil- most effective for accurate dose and no health impacts on lungs does take slightly longer to be absorbed however lasts longer.

Eating has slowest absorption- caution potential accidental OD especially recreationally

POT 101





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IS ALL CANNABIS CREATED EQUAL?
— NO!!! —

WHAT'S IN CANNABIS ANYWAY?


- Over 113 active cannabinoids identified in cannabis
- Two main cannabinoids are focus of research and attention
- THC tetrahydrocannabinol
- CBD Cannabidiol
- Some research on effects for safety sensitive, medical benefits, impact on brain short and long term HOWEVER more coming out weekly!
- So here is the basics of what we know.....

WE NEED TO KNOW THE BASICS

Tetrahydrocannabinol/**THC**- responsible for most of marijuana's psychological effects. Acts much like the cannabinoid chemicals made naturally by the body, according to the National Institute on Drug Abuse (NIDA).

Our Natural Cannabinoid receptors are concentrated in certain areas of the brain associated with thinking, memory, pleasure, coordination and time perception.

THC attaches to these receptors and activates them and affects a person's memory, pleasure, movements, thinking, concentration, coordination, and sensory and time perception, according to NIDA



CANNABIDIOL -CBD

- It is a major phytocannabinoid, accounting for up to 40% of the plant's extract.
- CBD does not appear to have any intoxicating effects such as those caused by THC in marijuana, but may have a downregulating impact on disordered thinking and anxiety.
- CBD is where a lot of the medical research is landing right now with LOW levels of THC also being investigated for synergy in medical affects.
- If people truly seeking medical cannabis they are **NOT** seeking the high effect.
- One example of why confusion recent study Glaucoma -CONCLUSIONS: A single 5 mg sublingual dose of Delta-9-THC reduced the IOP temporarily and was well tolerated by most patients. Sublingual administration of 20 mg CBD did not reduce IOP, whereas 40 mg CBD produced a transient increase IOP rise."

WHAT'S IN YOUR RECREATIONAL POT??

- CBC Market place did an investigative documentary
- [https://www.youtube.com/watch?v= DIFcMWdsxw](https://www.youtube.com/watch?v=DIFcMWdsxw)

HIGH LITES FROM VIDEO.....

- Purchased Marihuana from 10 Toronto illegal store fronts
- Results ranged from 18% to 28 % THC
- ZERO CBD
- CBD in Marihuana is what buffers the psychoactive effects of the TCH, such as anxiety, paranoia,
- THC content in 70's and 80's was 1- 3%
- Lets dig deeper

MEDICAL CANNABIS

- Early research indicates certain strains have more medicinal effects
- Different levels of THC & CBD impact different symptoms
- L.P.'s have HCP's such as pharmacist, nurses with experience and also patient experience
- They are professional and some companies are working with research ..U of S has some leading research going on

LP CANNIMED MEDICAL CONDITIONS LISTED

Arthritis pain and inflammation

Cancer pain and related symptoms, Nausea and vomiting

Chronic pain

Crohn's disease and ulcerative colitis

Depression and anxiety HIGH CBD - LOW THC

Epilepsy • Fibromyalgia • Multiple sclerosis

Glaucoma

HIV and AIDS (to stimulate appetite and produce weight gain)

Insomnia • Muscle spasms • Neuropathic pain • Parkinson's disease

Post-Traumatic Stress Disorder (PTSD)

CANNIMED PRODUCTS LISTED

- THC CBD
- 22 % THC 1 % CBD
- 17 % THC 1 % CBD
- 15.% THC 0.5 % CBD
- 12.5% THC 9.0% CBD
- 9 % THC 9.5 % CBD
- 4.0 % THC10.0% CBD
- 0.7% THC 13.0% CBD
- **OIL products**
- 18.3 THC 0.2 CBD mg/ml
- 9.8 THC 9.9 CBD mg/ml
- 1.0 THC 20 CBD mg/ml

ONLY 2 PHARMACEUTICAL DRUGS APPROVED IN CANADA

- Sativex Mouth spray derived from natural extracts of the cannabis plant, THC CBD tx for MS and pain (27 mg THC and 25 mg CBD)
- Nabilone / Cesamet tx of nausea/vomiting primarily in Chemo therapy tx

WHAT ABOUT CARDIO VASCULAR

- Cannabis exerts bidirectional effects on the cardiovascular system.
- Cannabinoids can dilate blood vessels, improving blood flow, and animal studies suggest that some cannabinoids could prevent or reduce atherosclerosis (hardening of the arteries).
- Ultra-low doses of THC have been shown to limit the damage of heart attack while preserving cardiac function and promoting faster healing.
- In general, therapeutic doses of cannabis have a cardioprotective effect, while very high doses of cannabis and synthetic cannabinoids could be dangerous to the heart, especially in patients with pre-existing heart conditions.
- Early research indicates high levels of THC increase heart rate
- Low doses of THC with higher levels of CBD titrated low and slow may have positive outcomes
- Important to recommend to clients choosing to use cannabis that it be medical cannabis and guided with HCP

BRAIN CHEMISTRY 101

- THC stimulates cells in the brain to release dopamine, creating euphoria, according to NIDA. Dopamine increased by drugs in the pleasure center hijacks the brain.
- This then can progress over time to correlate with DSM criteria such as increased tolerance and loss of control
- It can also interfere with how information is processed in the hippocampus, which is part of the brain responsible for forming new memories. (amotivational syndrome is real)
 - THC is what gets you HIGH!!



Did you know

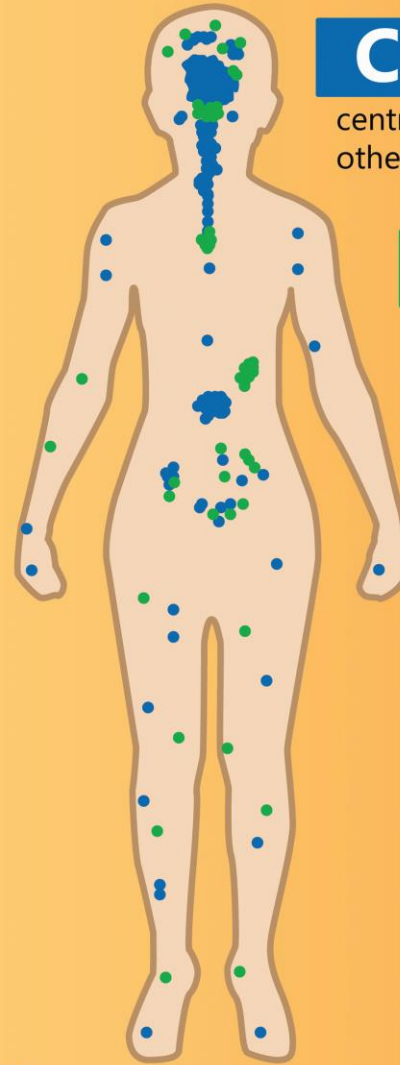
that your body has the

**ENDOCANNABINOID
SYSTEM ?**



The Human Endocannabinoid System

The endocannabinoid system consists of two receptors, called CB1 and CB2. These receptors are found on cell surfaces and impact various biological processes.



CB₁

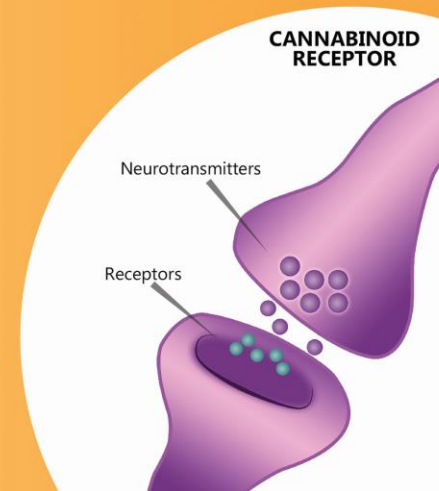
Located in the brain, central nervous system, and many other parts of the body.

CB₂

Found throughout the body on cells associated with our immune system.

Cannabidiol (CBD)

CBD is one of the primary cannabinoids found in hemp. It interacts with **CB₁** and **CB₂** receptors for many effects still being studied.



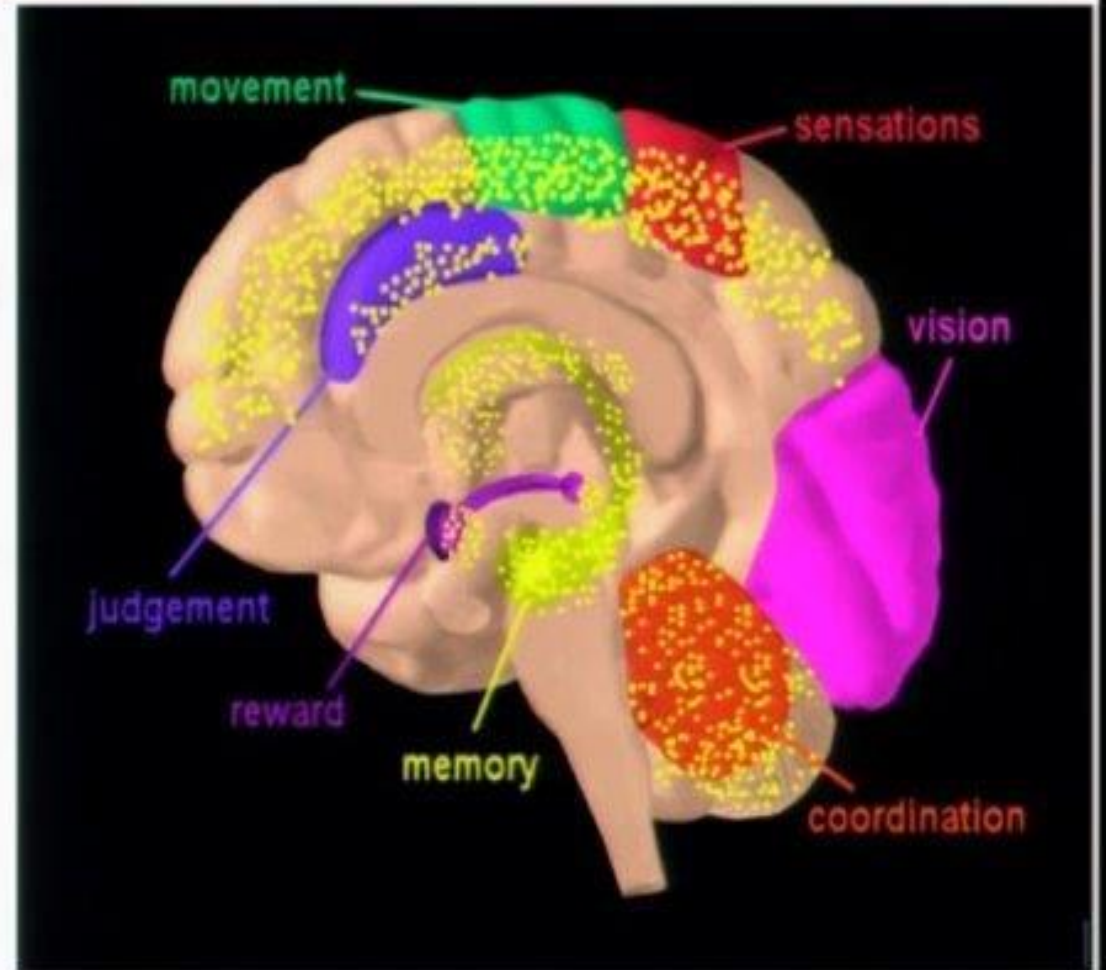
Sources

<http://norml.org/library/item/introduction-to-the-endocannabinoid-system>
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2241751/>

These statements have not been evaluated by the FDA and are not intended to diagnose, treat or cure any disease.

Cannabinoid Receptors Are Located Throughout the Brain and Regulate:

- Brain Development
- Memory & Cognition
- Motivation & Reward
- Appetite
- Immunological Function
- Stress
- Movement
- Pain & Analgesia



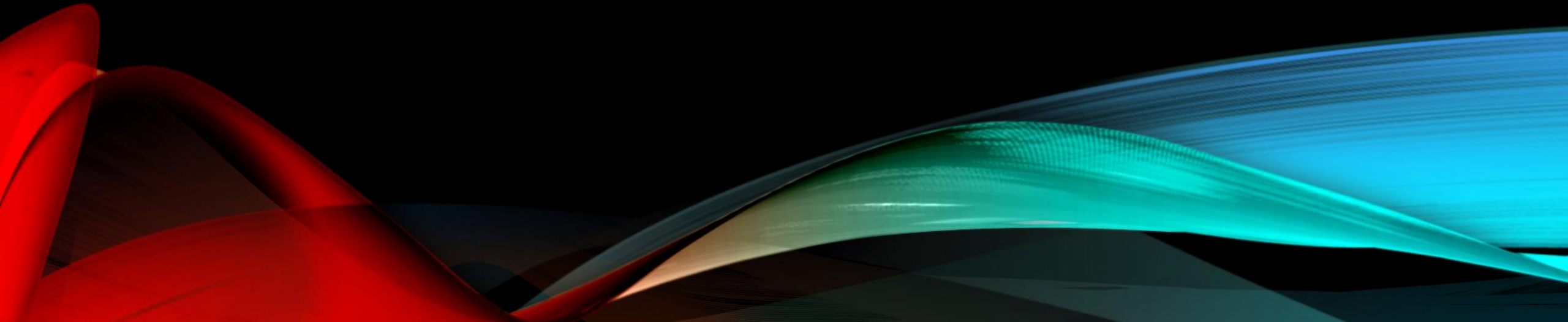
- Immune function,
- Inflammation (especially tamping it down)
- Energy intake and storage
- Appetite control and cravings
- Nutrient transport & Cellular communication
- Emotional balance
- Reproduction
- Pain sensation
- Sleep,
- Bone growth
- Memory
- Science is still trying to understand this system of the body and how the CBD & THC interacts we have barely scratched the surface!

- “Endocannabinoids are central players in life’s multidimensional biochemical balancing act known as homeostasis,” says biologist Robert Melamede, who describes the endocannabinoid system as “the Ur-Regulator,” the master modulator, which is constantly multitasking, adjusting and readjusting the complex network of molecular thermostats that control our physiological tempo.
- The human immune system, an amazing physiological wonder, kicks on like a furnace when a fever is required to fry a virus or bacterial invader. And when the job is done, endocannabinoid signaling turns down the flame, cools the fever, and restores homeostasis. (Cannabinoids —endo, herbal, and synthetic— are anti-inflammatory; they literally cool the body.)

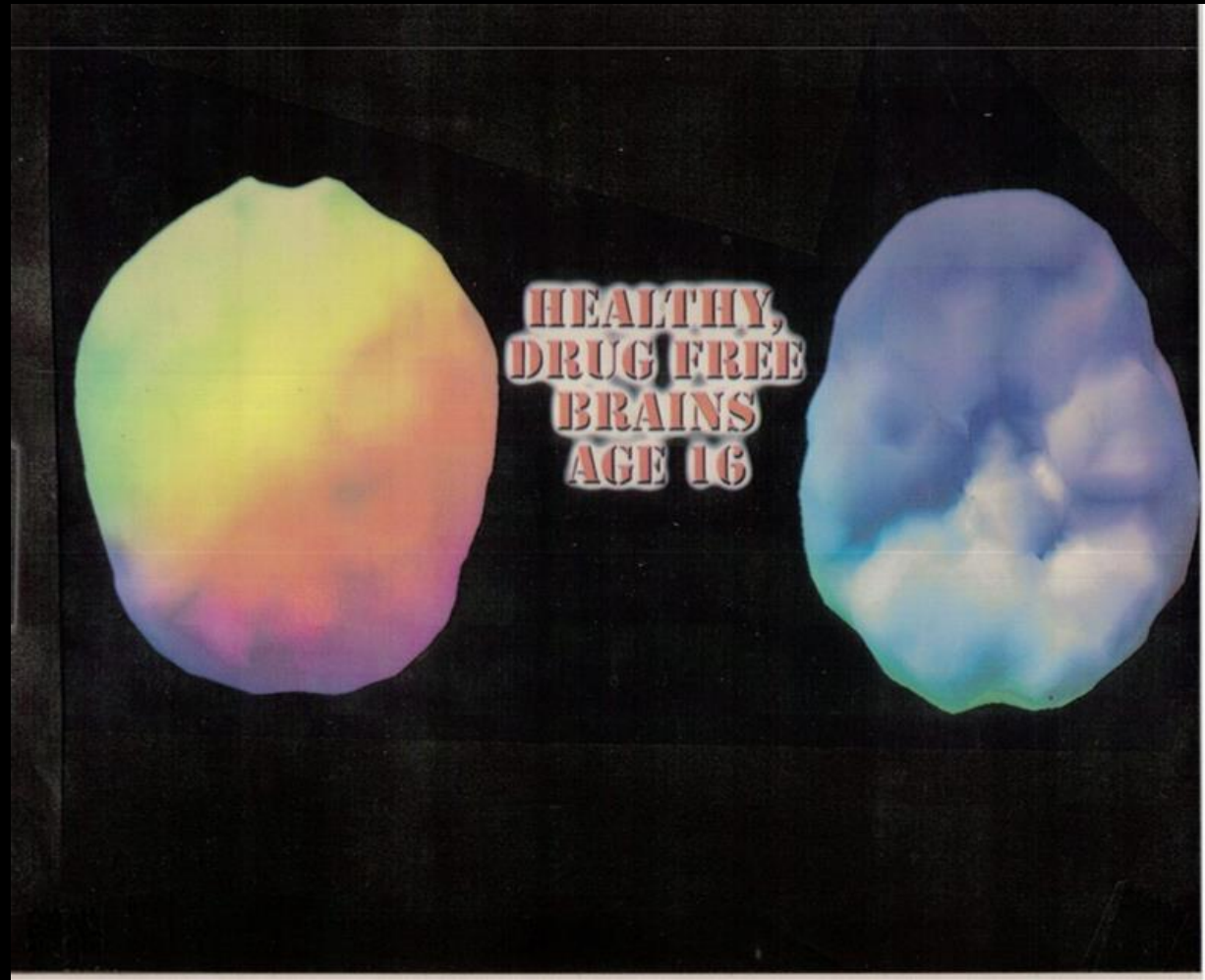
DR AMEN'S WORK

<https://www.youtube.com/watch?v=esPRsT-lmw8>

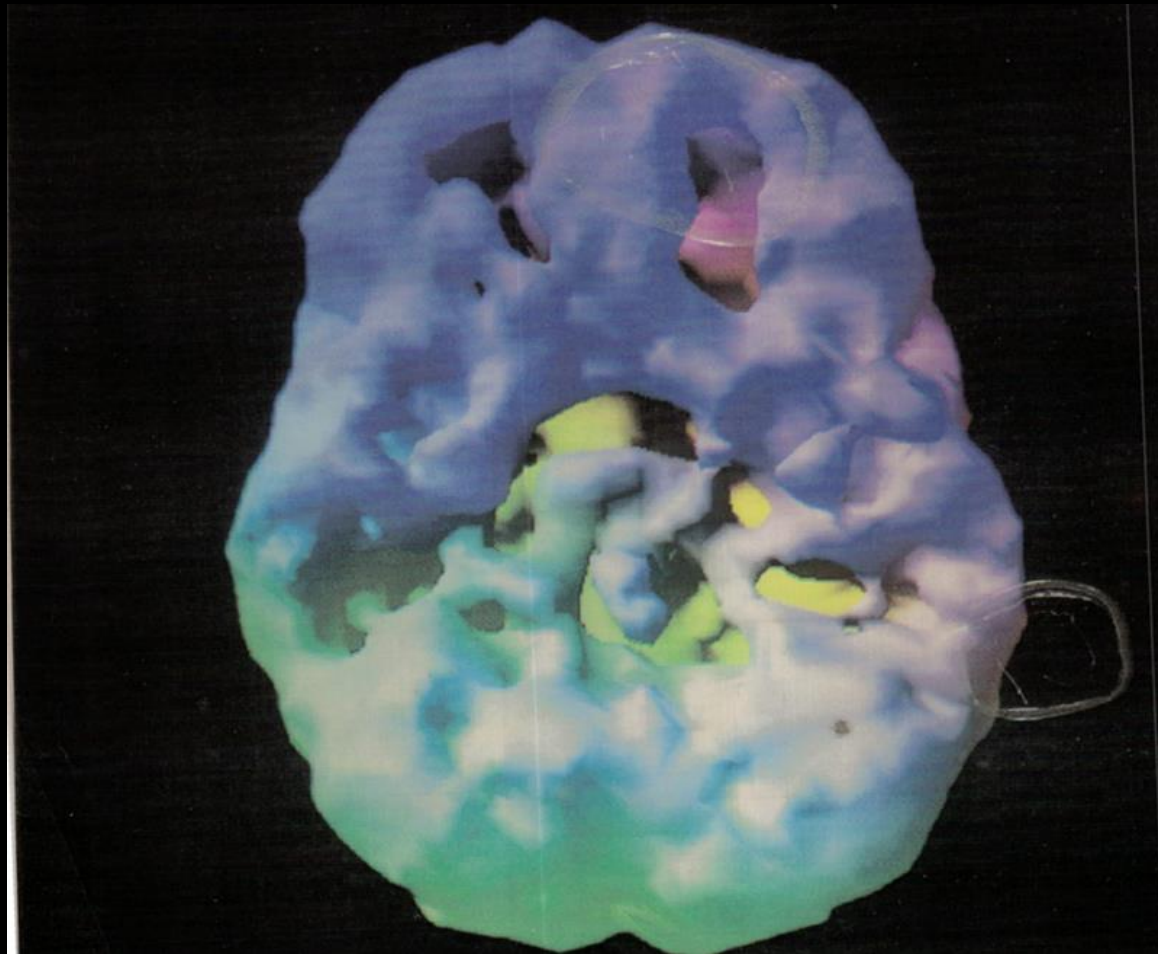
How Recreational Marijuana impacts the brain



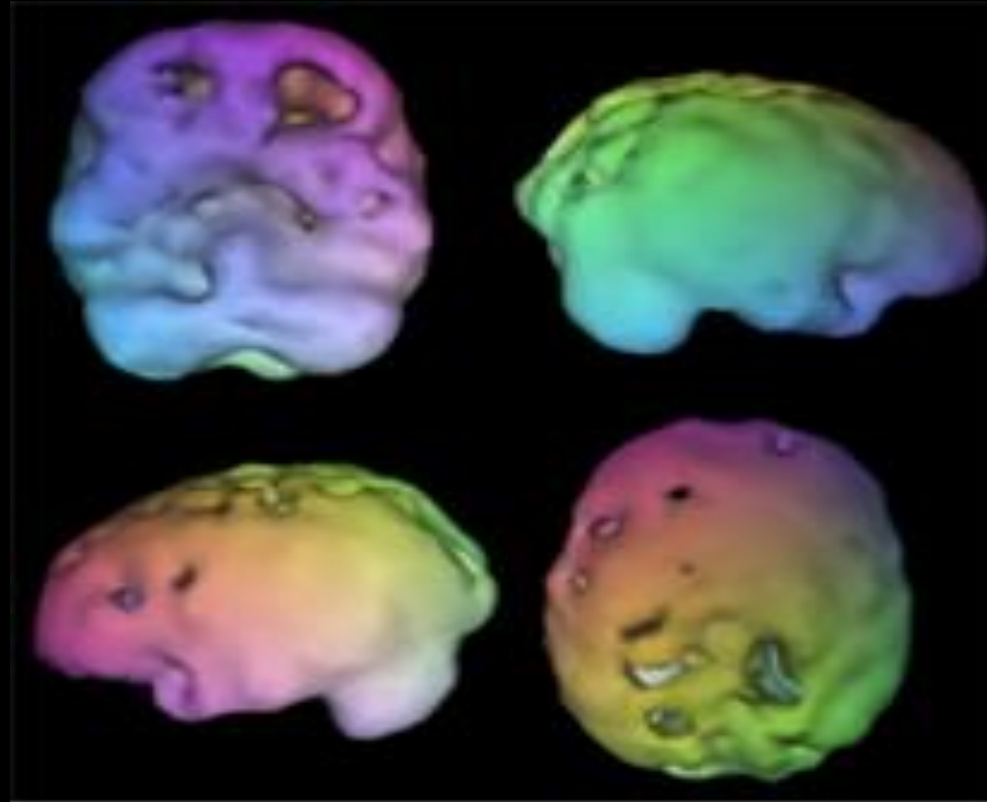
HEALTHY SPECT BRAIN IMAGE 16 YEAR OLD NO DRUG USAGE



16 YEAR OLD WITH 2 YEARS OF
MODERATE 3-5 TIMES PER WEEK USE



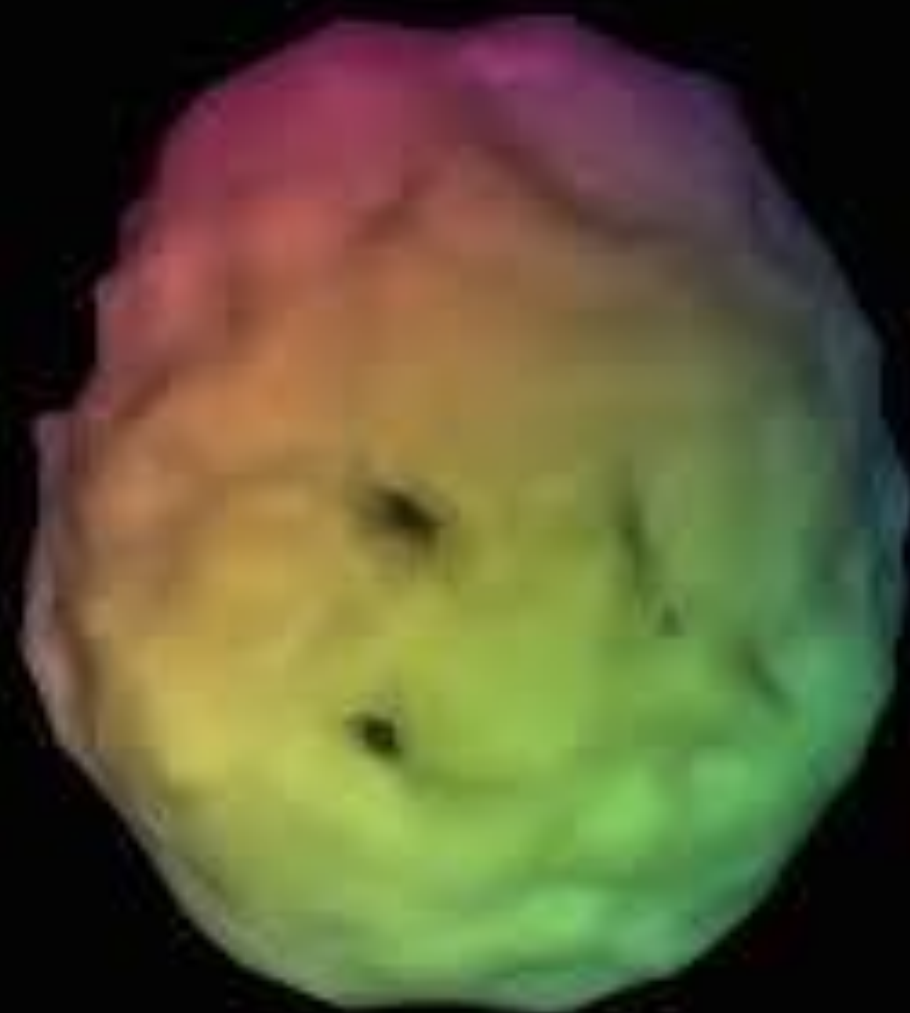
DR AMEN SPECT BRAIN IMAGES



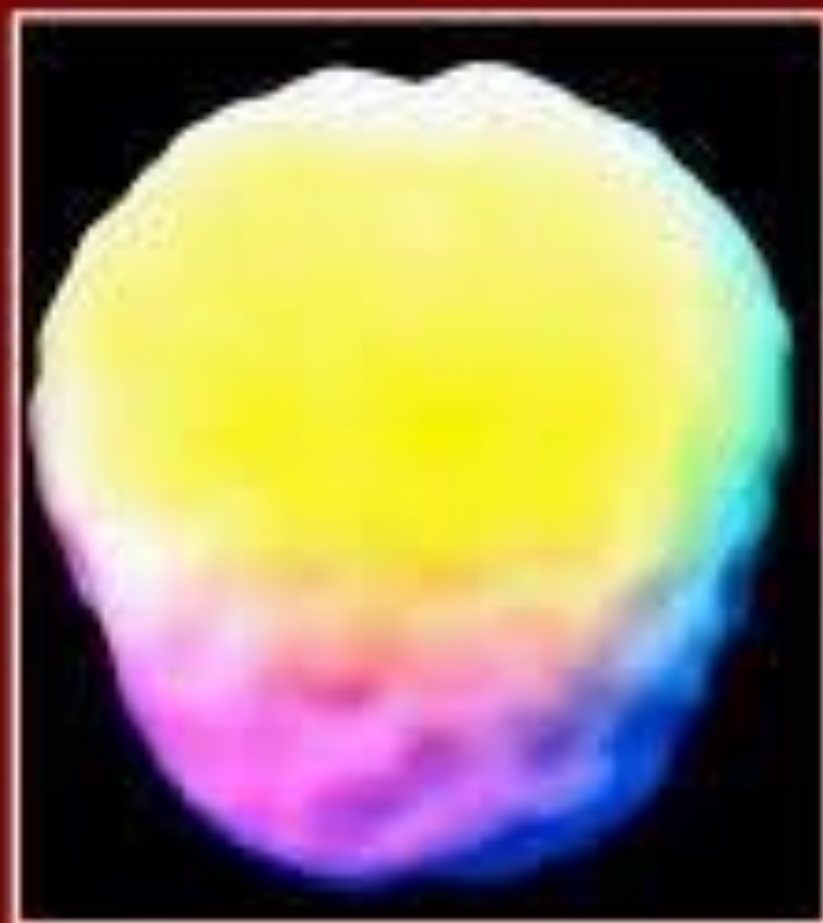
SPECT Image:
25 year-old daily marijuana smoker



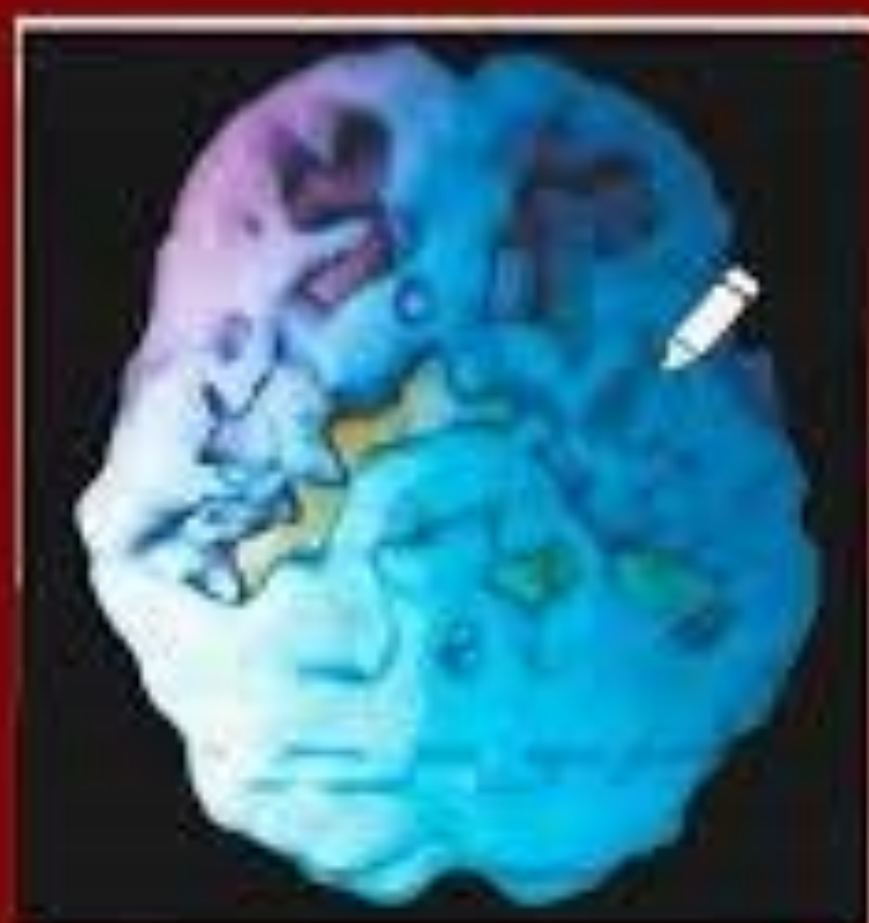
Healthy



Age 18, Daily User

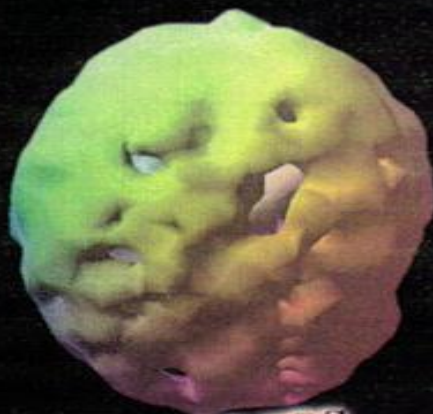


Normal Brain

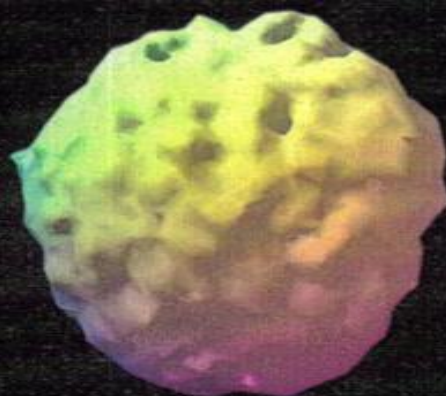


Marijuana Abuse

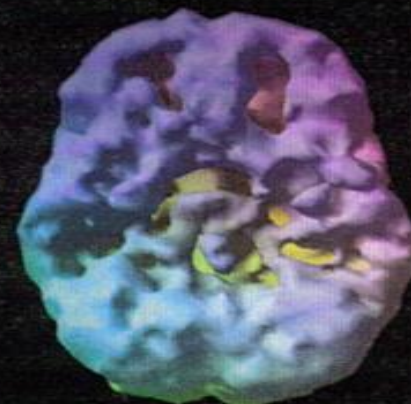
Courtesy of Daniel Amen, M.D.



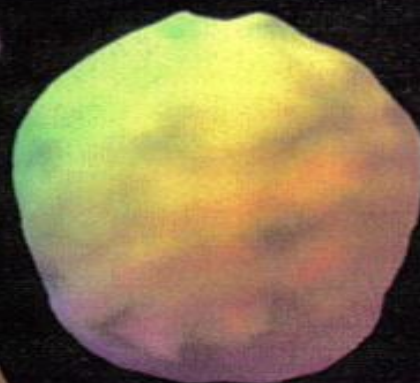
**3 YEARS
OF CRACK
AGE 22**



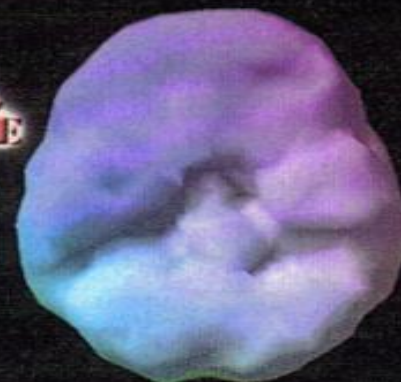
**4 YEARS
OF ALCOHOL
AGE 21**



**2 YEARS
OF MARIJUANA
AGE 16**



**HEALTHY,
DRUG FREE
BRAINS
AGE 16**



**3 YEARS
OF SMOKING
AGE 16**



**3 YEARS
OF COCAINE
AGE 22**



**6 YEARS
OF INHALANTS
AGE 24**

DR AMEN'S SPECT IMAGE DATA ON RECREATIONAL MARIHUANA

- One thousand Marihuana spect images compared to 100 healthy controls, the researchers saw a stark difference in blood flow levels.
- Every marijuana user had significantly lower blood flow in the right hippocampus compared to the controls.
- Marijuana use is thought to interfere with memory formation by inhibiting activity in this part of the brain.
- Co-author Dr Elisabeth Jorandby said even she was shocked by the findings, despite dealing with marijuana patients on a routine basis. As a physician who routinely sees marijuana users, what struck me was not only the global reduction in blood flow in the marijuana users brains , but that the hippocampus was the most affected region due to its role in memory and Alzheimer's disease,' she said.
- Our research has proven that marijuana users have lower cerebral blood flow than non-users.

MORE DR. AMEN RESEARCH.....

- 'Second, the most predictive region separating these two groups is low blood flow in the hippocampus on concentration brain SPECT imaging.
- 'This work suggests that marijuana use has damaging influences in the brain – particularly regions important in memory and learning and known to be affected by Alzheimer's.'
- Dr Daniel Amen, founder of Amen Clinics, said: 'Our research demonstrates that marijuana can have significant negative effects on brain function.'
- The media has given the general impression that recreational marijuana is a safe drug, this research directly challenges that notion.
- In another new study just released, researchers showed that Recreational marijuana use tripled the risk of psychosis. Caution is clearly in order.'

CASE STUDY

- 19 year old male
- 1st incarceration related to methamphetamine drug use
- Assessment indicates methamphetamine primary drug of choice
- Secondary cannabis age of onset 14, minimal use past 3 years
- 1 admissions to inpatient psychiatric with symptoms of anxiety, mild paranoia, aggression. Likely drug induced due to stabilization of symptoms in 2 weeks with no use.
- First attempt at outpatient education and treatment
- Proposed tx plan increase education re affects and goal of abstinence from methamphetamine

CLINICAL PROGRESSION

- Client decided to use cannabis as way to cope.
- Relapses to methamphetamine after several weeks, 2 admissions to psychiatric within 6 weeks and return to incarceration.
- Re-engages in outpatient with option for inpatient if unable to maintain stability and drug free in community
- Begins using cannabis to cope again unmotivated to change use but stays engaged in outpatient.
- Anxiety and paranoia increases. Psychiatric referral made while plans to reduce cannabis implemented with client more motivated re plan
- In 4 weeks symptoms reduce to mild as cannabis is reduced to zero
- Followed through with psychiatrist referral anti psychotic prescribed client decides not to use as symptoms are now well managed without medication

SYMPTOMS OF CANNABIS USE DISORDER

- According to the DSM-5, (Diagnostic and Statistical Manual of Mental Disorders, fifth edition) the criteria for Cannabis Use Disorder is as follows:

Use of cannabis for at least a one year period, with the presence of at least two of the following symptoms, accompanied by significant impairment of functioning and distress:

1. Difficulty containing use of cannabis- the drug is used in larger amounts and over a longer period than intended.
2. Repeated failed efforts to discontinue or reduce the amount of cannabis that is used
3. An inordinate amount of time is occupied acquiring, using, or recovering from the effects of cannabis.
4. Cravings or desires to use cannabis. This can include intrusive thoughts and images, and dreams about cannabis, or olfactory perceptions of the smell of cannabis, due to preoccupation with cannabis.

5. Continued use of cannabis despite adverse consequences from its use, such as criminal charges, ultimatums of abandonment from spouse/partner/friends, and poor productivity.


6. Other important activities in life, such as work, school, hygiene, and responsibility to family and friends are superseded by the desire to use cannabis.

7. Cannabis is used in contexts that are potentially dangerous, such as operating a motor vehicle.

8. Use of cannabis continues despite awareness of physical or psychological problems attributed to use- e.g., anergia, amotivation, chronic cough.

9. Tolerance to Cannabis, as defined by progressively larger amounts of cannabis are needed to obtain the psychoactive effect experienced when use first commenced, or, noticeably reduced effect of use of the same amount of cannabis

10. Withdrawal, defined as the typical withdrawal syndrome associate with cannabis, or cannabis or a similar substance is used to prevent withdrawal symptoms.

- 
- The severity of the disorder is also noted, depending on the number of symptoms noted:
 - Mild – Two or Three Symptoms
 - Moderate- Four or five symptoms
 - Severe- Six or more symptoms

WHERE TO SEND CLIENTS FOR ACCURATE INFORMATION

Resource Websites

Canadian Centre on Substance Use & Addiction WWW.CCSA.CA
[Clearing the Smoke on Cannabis](#)

Health Canada Cannabis for Medical Purposes WWW.HealthCanada.ca

National Institute on Drug Abuse WWW.drugabuse.gov

Canadian Centre for Occupational Health & Safety WWW.CCOHS.CA
[Workplace Strategies: Risk of Impairment from Cannabis](#)

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