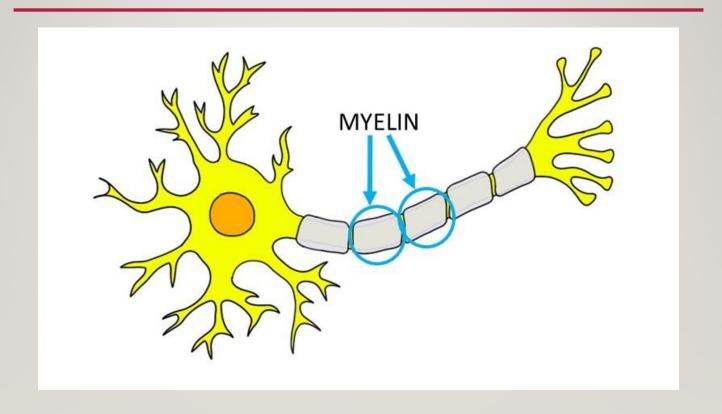
MARIJUANA, THE FACTS DAVID BOBLITT CDP - SUDP



What do we hear about Marijuana?

MYELINATION



CREATING NEURAL PATTERNS... MATURING

- The brain's plasticity means that neural pathways that get used survive and become defaults...and
- Pathways that do not get used don't survive.
- Example: dealing with social rejection, low self image?
- "Numb it out" with marijuana or learn ways to cope and feel better about self?

5 AGE OF FIRST USE/ADDICTION POTENTIAL/PERCEPTION OF HARM

- Age of first use early as 10 and avg. 12 13.
- Regular use before age 15 predicts 63% will have adult dependence. (Dennis 2002)
- Perception of harm very low compared to other drugs, but may be increasing with new brain research.
- It <u>is</u> a gateway drug <u>and</u> addiction to marijuana may follow youth for many adult years, sometimes daily regular use.

6 EARLY POT USE MAY CHANGE BRAIN

- Regular use before age 16 causes changes in brain that can impair ability to focus, learn from mistakes, think abstractly.
- Early exposure cause neural changes.
- Early users did more poorly on tests of cognitive functions and mental flexibility.
- Early chronic users "make repetitive incorrect responses even while being told they are wrong"; called <u>cognitive</u> <u>inflexibility</u>, often seen in babies.

7 RISK OF DEVELOPING CANNABIS USE DISORDER; MODERATE TO SEVERE?

- Risk of developing dependence in adulthood if began smoking at age 18?
- If began using in childhood or adolescence before age 18?
 18%
- Risk of dependence if daily user under age 18?
 18?
 35 to 40%
 11111
- Younger the user, greater risk of addiction.
- (Winters, Lee 2008; Kandel and Davies 1992; Budney et al. 2007)

8 THC – THE MOLECULAR MASQUERADER ("MARIJUANA: WHAT'S A PARENT TO BELIEVE" BY TIMMEN CERMAK)

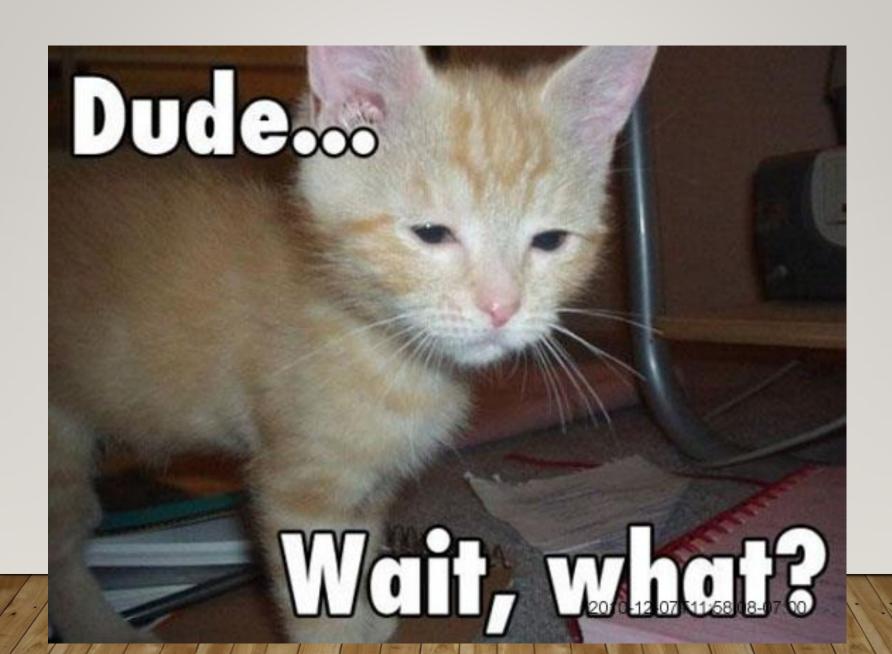
- Our brains are essentially pre-wired to respond to the chemicals found in marijuana.
- Cannabis-like molecules are important part of neurochemical balance in the brain.
- We have nerve cells that produce naturally occurring cannabinoid neurotransmitters that resemble THC.
- THC mimics these natural neurotransmitters.

THC – THE MOLECULAR MASQUERADER ("MARIJUANA: WHAT'S A PARENT TO BELIEVE" BY TIMMEN CERMAK)

- The artificial stimulation of novelty created by THC is like "virtual novelty".
- THC turns the mundane into a source of artificial fascination.
- May turn things that used to give us "awe" and wonder into boring and worthless.
- Overstimulation tends to "dumb-down" the natural experiences.
- This Malaise can be known as A-Motivational Syndrome

DUDE WAIT WHAT ..

- Considerable evidence suggests that students who smoke marijuana have poorer educational outcomes than their nonsmoking peers. For example, a review of 48 relevant studies found marijuana use to be associated with reduced educational attainment (i.e. reduced chances of graduating).³⁴ A recent analysis using data from three large studies in Australia and New Zealand found that adolescents who used marijuana regularly were significantly less likely than their non-using peers to finish high school or obtain a degree. They also had a much higher chance of later developing dependence, using other drugs, and attempting suicide.³⁵ Several studies have also linked heavy marijuana use to lower income, greater welfare dependence, unemployment, criminal behavior, and lower life
- saisfaction. 36,37



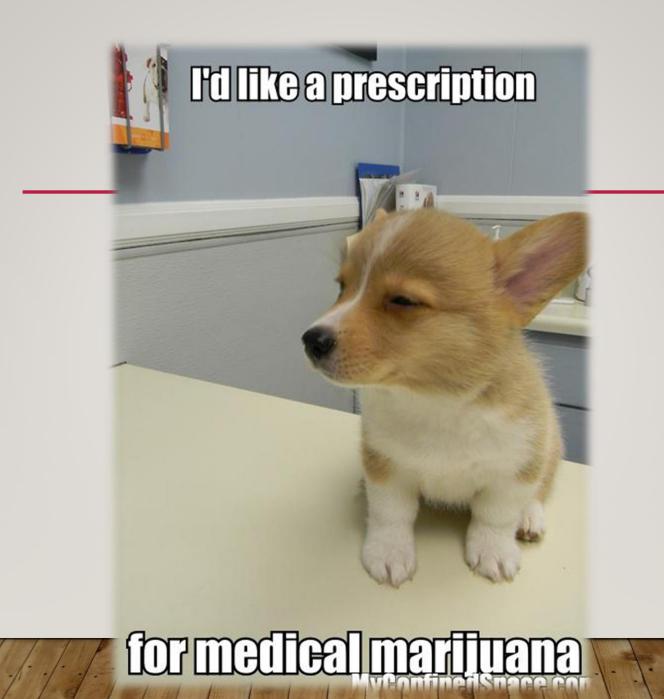
DUDEWAITWHAT ??

• Learning and memory. The hippocampus plays a critical role in certain types of learning. Disrupting its normal functioning can lead to problems studying, learning new things, and recalling recent events. A large long-term study in New Zealand showed that people who began smoking marijuana heavily in their teens lost an average of 8 points in IQ between age 13 and age 38.



MARIJUANA WITHDRAWAL – YES THERE IS SUCH A THING

- New Brain Research has prompted changes in the DSMV to include Marijuana Withdrawal.
- Insomnia
- Depression
- Anxiety
- Loss of Appetite
- The Medical Community now agree Marijuana withdrawal is real.



MEDICAL MARIJUANA



- 85 Active Cannabinoids
- Delta 9 Tetrahydrocannabinol (Psychoactive)
- Cannabadiol (Not Psychoactive)
- The higher the CBD the lower the THC
- CBD has low affinity THC has high affinity
- If a strain has high THC by default it has low CBD.
- Cannabadiol does not get you high.

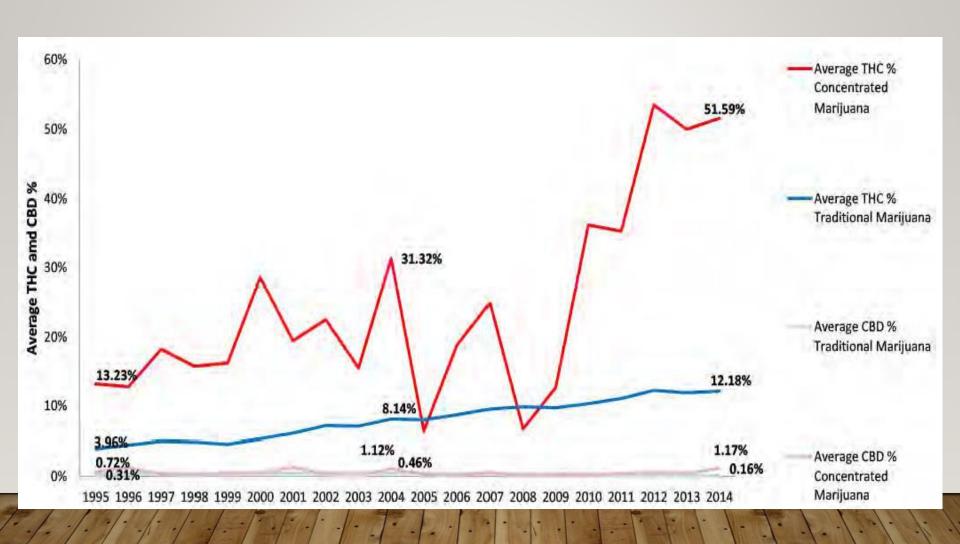
CANNABADIOL

- For reasons discussed previously, despite its molecular similarity to THC, CBD only interacts with cannabinoid receptors weakly at very high doses (100 times that of THC),^{xl} and the alterations in thinking and perception caused by THC are not observed with CBD. The different pharmacological properties of CBD give it a different safety profile from THC.
- Nora Volkow July 2015

CANNABADIOL WORKS FOR

- Anti Seizure
- Anti Inflammatory
- Anti anxiety
- And yes .. It is being talked about as an anti craving drug.

THC GOES UP CBD GOES DOWN





22 CONFUSING MESSAGES MAKE PREVENTION AND INTERVENTION MORE DIFFICULT...

- Is it legitimate medicine to heal pain?
- Or is it a recreational drug for getting high and having fun?
- Alcohol is a legal, recreational drug with addiction potential...
- Marijuana is now a legal, recreational drug with addiction potential AND it is also being dispensed as medicine.

RANDOM FACTS

- 80 % of the marijuana that was seized from adolescents and children in Washington state in 2013 originated at a dispensary. *National Bureau of Crime Statistics
- Oregon has seen a 26 % increase in cannabis use in youth in 8th and 9th grade since legal sales began in 2015 * Oregon Research Institute (Study published in addictions trend newsletter Jan 2018)

24 COST OF 3 YEARS OF LEGALIZATION...

A surge in regular marijuana use by minors.

- Colorado now leads the country in past-month marijuana use among 12 to 17 yr. olds
- Washington State is in 6th place.
- Use by minors grown faster than national rate since legalization began in 2012.
- (NSDUH SAMHSA 2015)

25 SURGE IN TREATMENT ADMISSIONS IN COLORADO, WASHINGTON...

- Major network of treatment providers reported that teen admissions for marijuana rose 66% from 2011 to 2014.
- In WA State, 2015 youth treatment admissions: **70% marijuana**, 19% all other drugs, 11% alcohol.
- (DBHR/DSHS Trends Report 2016) (Arapahoe House September 2014)

RESOURCES

- Drugabuse.gov (National Institute On Drug Abuse)
 https://www.drugabuse.gov/drugs-abuse/marijuana
- Center on Addiction
- https://www.centeronaddiction.org
- Us Department of Health and Human Services
- https://www.hhs.gov/ash/oah/adolescentdevelopment/substance-use/marijuana/resources/index.html

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