### **Cannabis Use for Adults**

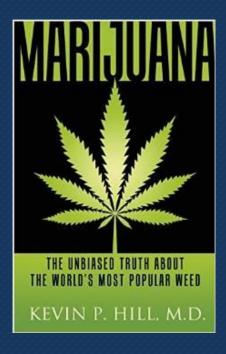
Kevin P. Hill, M.D., M.H.S. Wondering about Weed: Facts and Myths 11/28/18, Newton



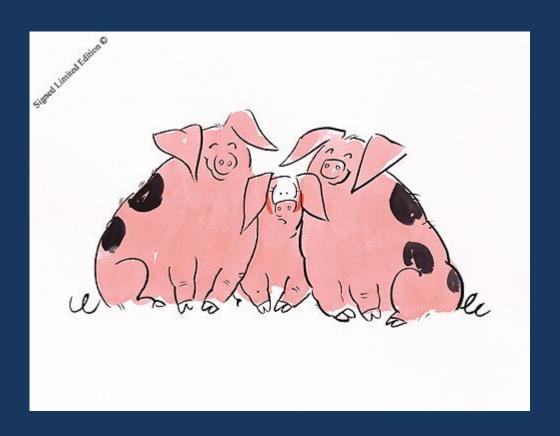
Division of Addiction Psychiatry, Beth Israel Deaconess Medical Center khill1@bidmc.harvard.edu, DrKevinHill.com, @DrKevinHill

#### Disclosures

- Grants from NIDA, World Health Organization.
- Book- Hazelden Publishing.



## In The Middle



#### **Current Trends in Cannabis Use**

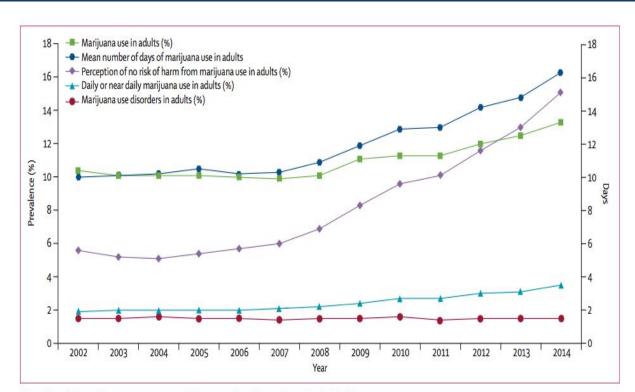


Figure: Trends in marijuana use patterns, marijuana use disorders, and perceived risk of harm

Annual prevalence and trends in any marijuana use, daily or near daily marijuana use, marijuana use disorders, mean number of days of marijuana use, and perception of no risk of harm from marijuana use in adults in the USA. \*Joinpoints indicate significant changes in non-linear trends.

## Potential Risks



## **ACUTE RISKS (partial list)**

- Short-term memory.
- Judgment.
- Anxiety/paranoia/hallucinations.
- Driving.

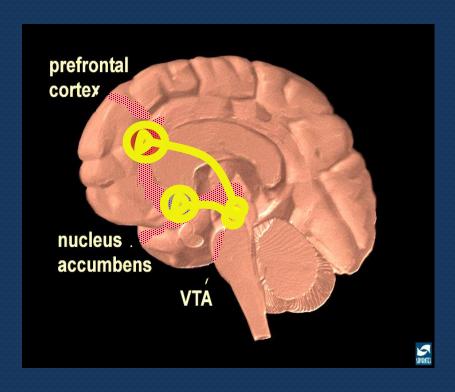


### **CHRONIC: DOSE MATTERS**

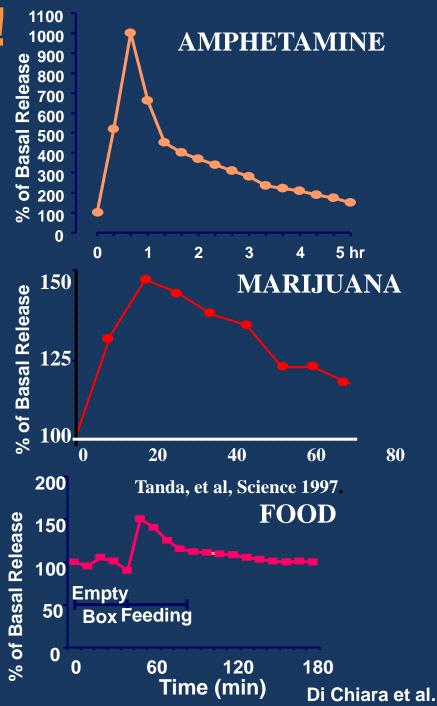
- Early onset poor cognitive function, IQ decline (Pope 2003, Gruber 2011, Meier 2012)
- Anxiety (Crippa 2009)
- Depression (Degenhardt 2003)
- Risk of psychosis (Kuepper 2011, Large 2011, Di Forti 2015)

Review of Cannabis and Psychiatric Disorders: Halah et al. Curr Addict Rep 2016

#### IT IS ADDICTIVE!

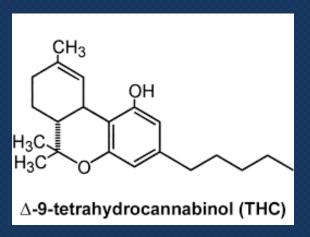


Drugs of abuse increase DA in the Nucleus Accumbens....triggers the neuroadaptions that result in addiction?



# Pharmacology of Cannabis

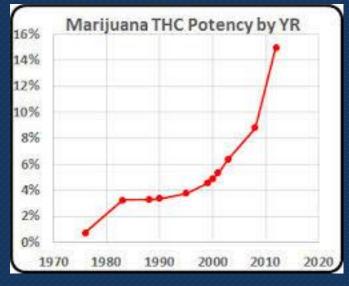
- 120+ pharmacologicallyactive cannabinoids.
- THC: euphoria, antiinflammatory, psychosis.
- CBD: non-intoxicating, anti-anxiety, antipsychotic?



## **Potency Rising**

- 60s, 70s, 80s: avg THC content 3-4%.
- Now: avg THC content 12% (EISohly 2016).
- BUT you can get cannabis (plant not oil)

in the 20s and low 30s. [68]



## Potential Benefits





Clinical Crossroads

Medical Marijuana for Treatment of Chronic Pain and Other Medical and Psychiatric Problems A Clinical Review

Kevin P. Hill, MD, MHS

## FDA-Approved Cannabinoids

- Dronabinol (Marinol)- oral THC.
- Nabilone (Cesamet)- CB<sub>1</sub> agonist.
- FDA-Approved for 1)Nausea and vomiting associated with chemotherapy 2) Appetite stimulation in wasting illnesses like AIDs.
- CBD- negative allosteric modulator.
- FDA-approved for 2 pediatric epilepsy syndromes.

# Medical Indications Based on Good Quality Evidence

- Over 50 clinical trials of cannabinoids, including cannabis.
- High quality evidence (approx. half of studies positive) for
- chronic pain
- neuropathic pain
- spasticity associated with Multiple Sclerosis.
   (Hill JAMA 2015)

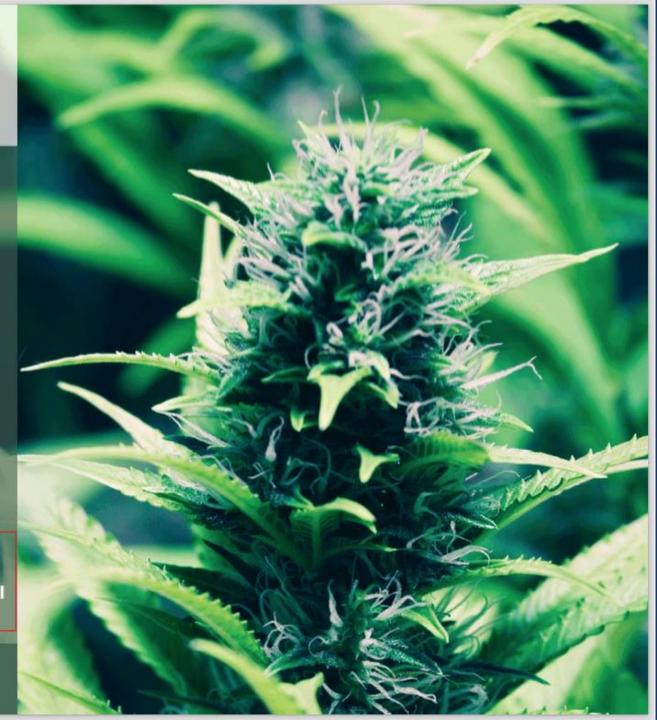
**Public Release** 

#### Health Effects of Cannabis and Cannabinoids

Current State of Evidence and Recommendations for Research

This report will be available to download as a free pdf:
Nationalacademies.org/CannabisHeal thEffects

The National Academies of SCIENCES • ENGINEERING • MEDICINE



### Other reviews

- Conclusive or substantial evidence that cannabis or cannabinoids are effective:
- chronic pain in adults,
- chemotherapy-induced nausea and vomiting,
- patient-reported multiple sclerosis spasticity symptoms. (NASEM 2017).
- Moderate quality: chronic pain and spasticity (Whiting JAMA 2015).

## The Appropriate Candidate

- Debilitating condition with evidence.
- Multiple failed trials of first- and secondline treatments.
- Failed trial of FDA-approved cannabinoid.
- No active condition (of DSM-IV Axis I variety).

# Suggestions on what you should do

- Be educated!
- Talk with your doctor, not a doctor that solely writes certifications for medical cannabis.
- Collaborate with your doctor and always make sure they know what you are taking.

## Thank you!