Marijuana: The Unbiased Truth

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Disclosure

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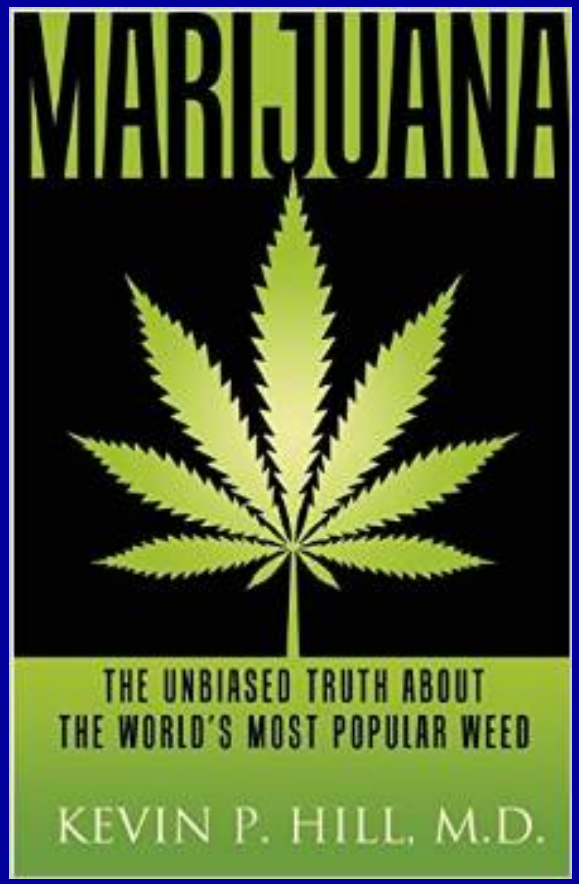
New Book- Available Now!



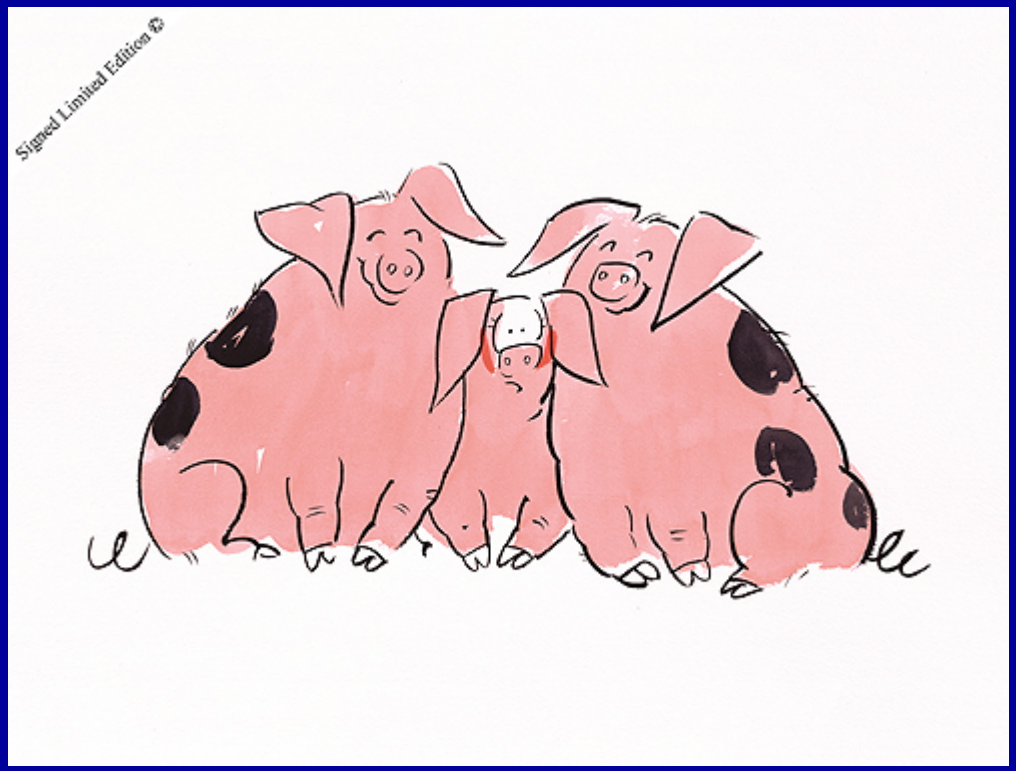
Three Areas of Focus

- Clinical work: McLean Substance Abuse consultation service, private practice, pro sports teams and leagues.
- Clinical research: 3 clinical trials (2 marijuana, 1 tobacco cigarettes).
- Educational outreach: Science vs. public perception, official community partner to Boston Public Schools, book.

Why Marijuana?

- ADATP: 40% alcohol, 40% opioids, 20% everything else.
- Around 60%: time when smoked MJ daily for years.
- How many of these folks would you see down the road if an effective MJ intervention existed?

In The Middle



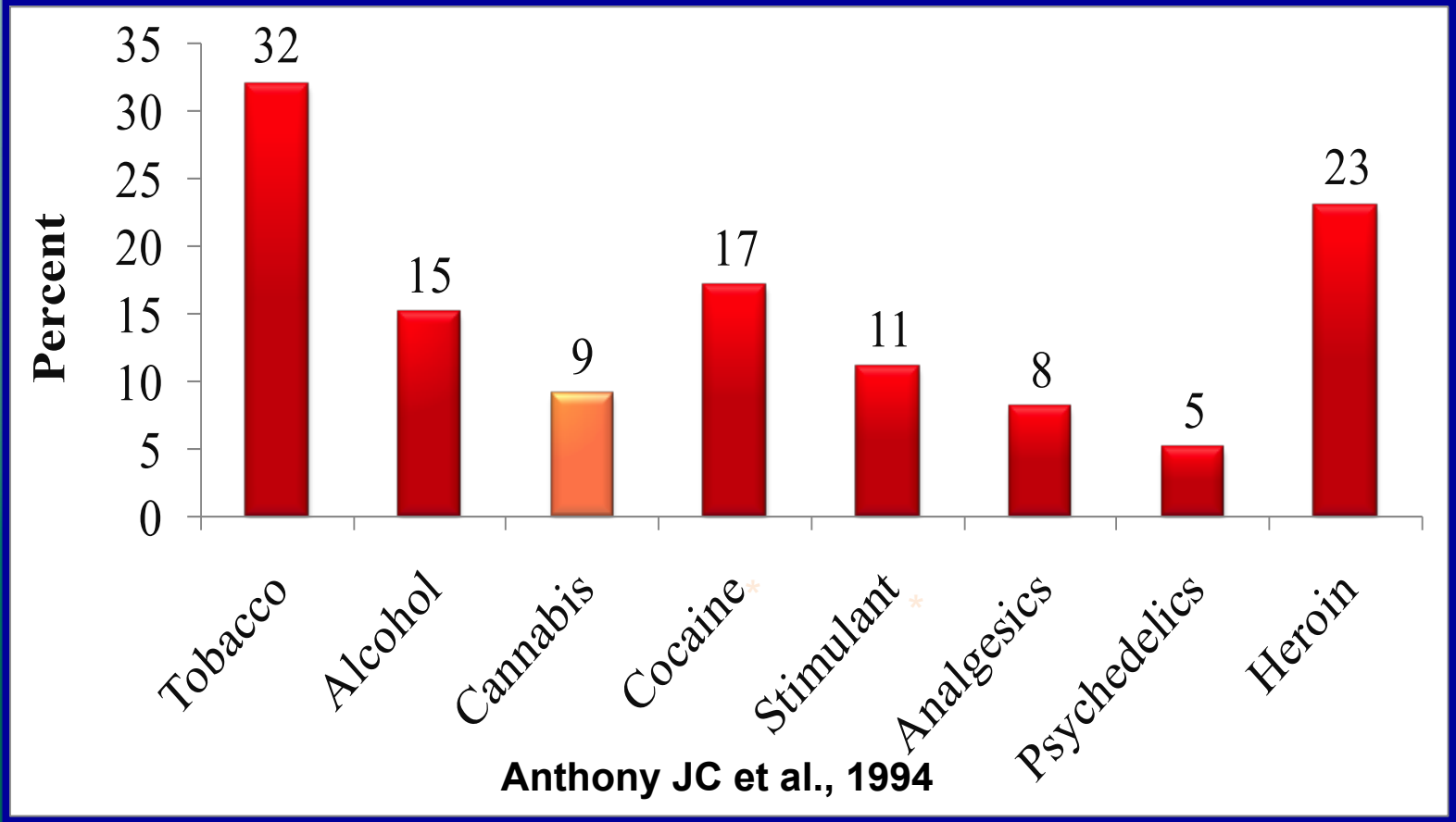
Marijuana Use: Scope of the Problem

Context of Current Laws- National Statistics

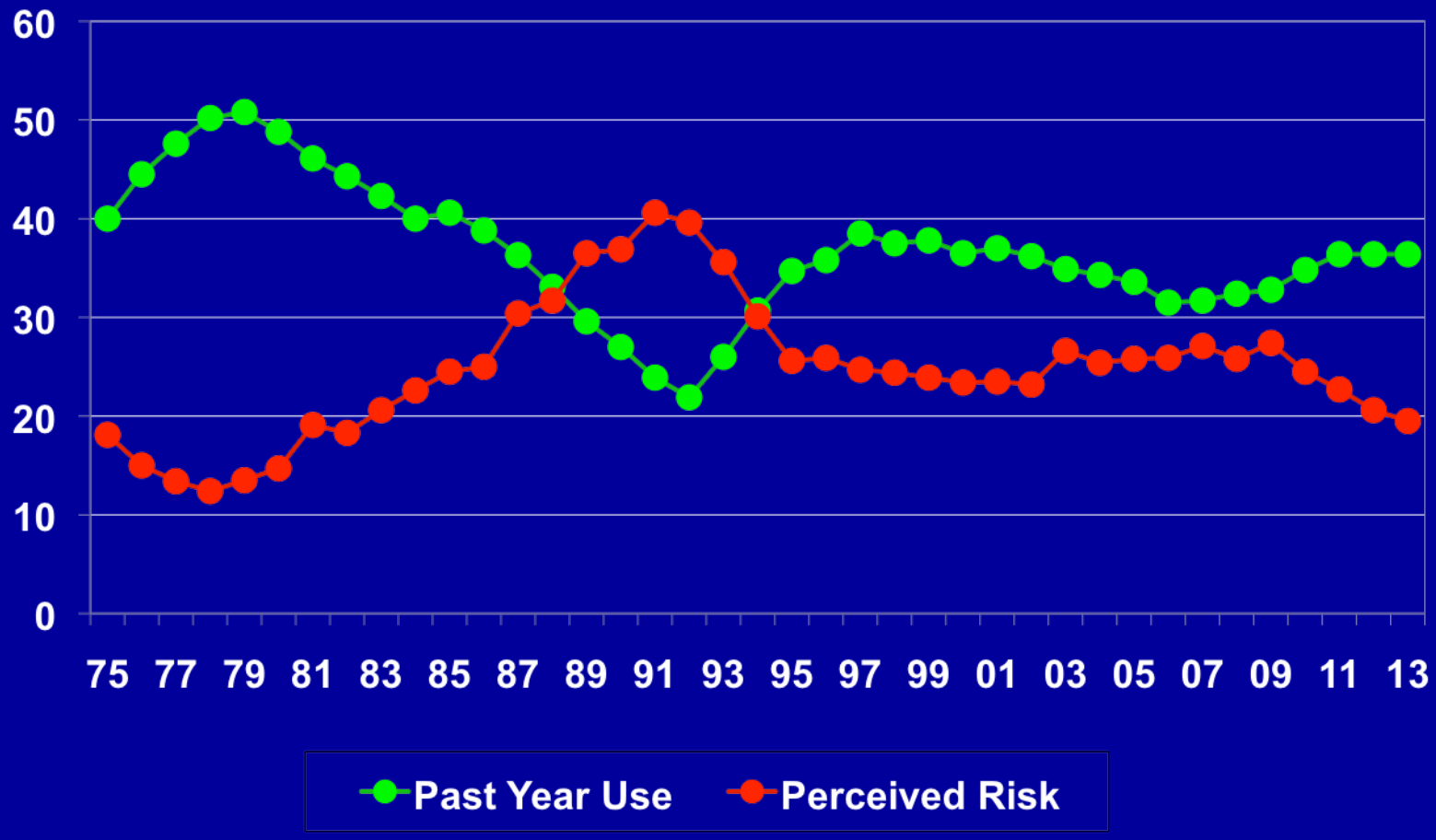
- About 20 million Americans used marijuana in the past year.
- Powerful messages– medical marijuana, legalization, entertainers/athletes.
- Some messages off the mark, contribute to gap between science and public perception.

Development of Problems: About 9% of users may become dependent; 17% (1 in 6) who start use in adolescence

Estimated Prevalence of Dependence Among Users



12th Graders' Past Year Marijuana Use vs. Perceived Risk of Occasional Marijuana Use



SOURCE: University of Michigan, 2013 Monitoring the Future Study

Why So Complicated?

- Can’t paint with a broad brush.
- Many misguided by their own experiences.
- Math can be tricky.

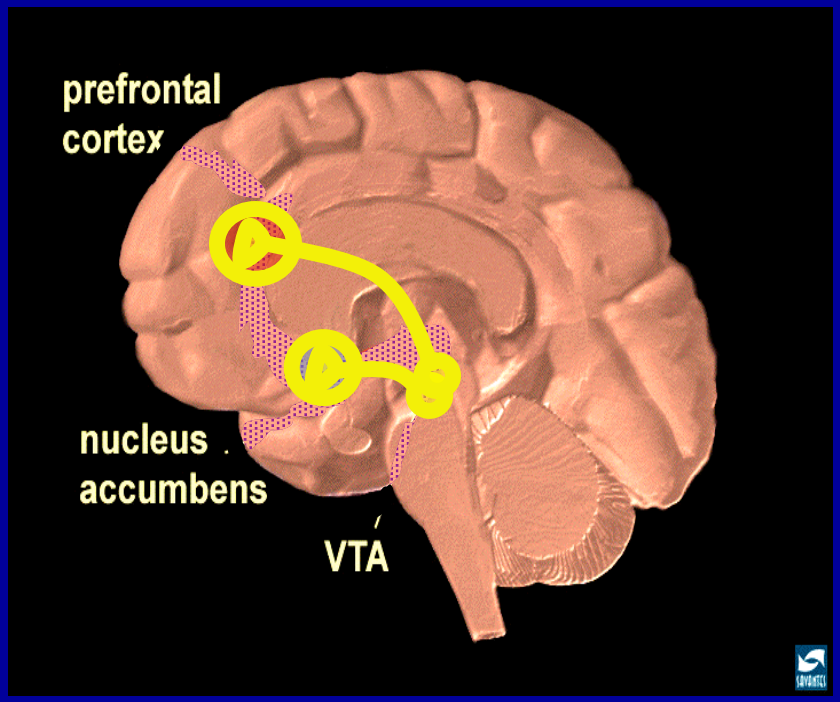
Marijuana Myths

- Not harmful
- Not addictive
- No withdrawal

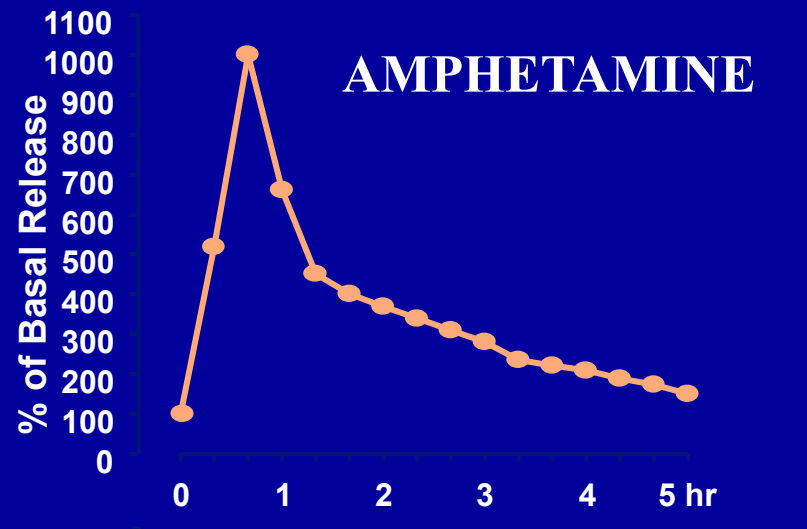
IT IS HARMFUL!

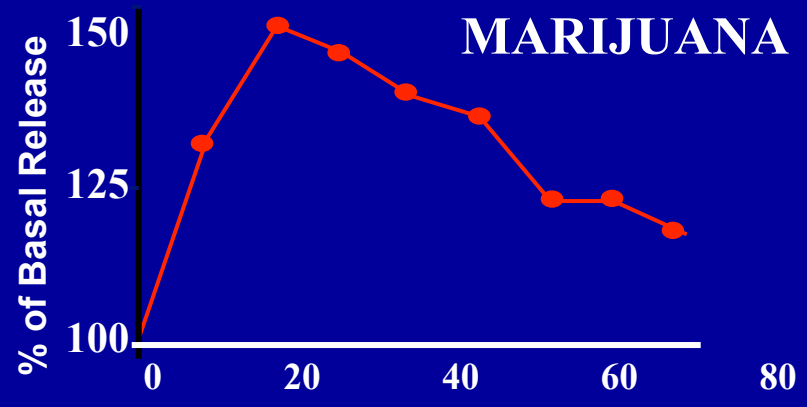
- Early onset → poor cognitive function, IQ decline (Pope 2003, Gruber 2011, Meier 2012)
- ↑ anxiety (Crippa 2009)
- ↑ depression (Degenhardt 2003)
- ↑ risk of psychosis (Kuepper 2011, Large 2011, Di Forti 2015)

IT IS ADDICTIVE!

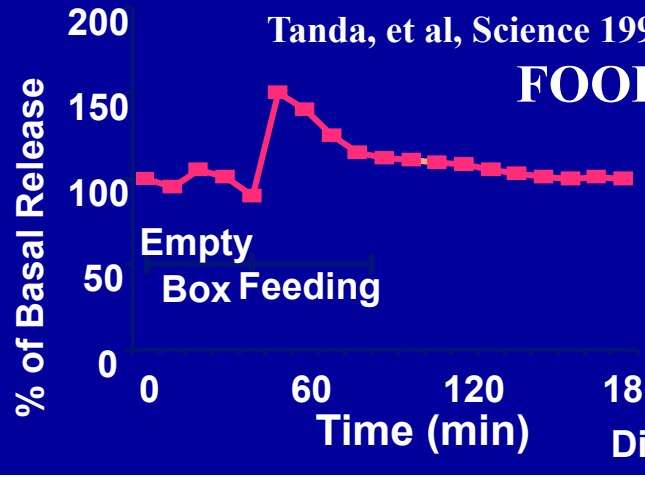


Drugs of abuse increase DA in the Nucleus Accumbens….triggers the neuroadaptions that result in addiction?





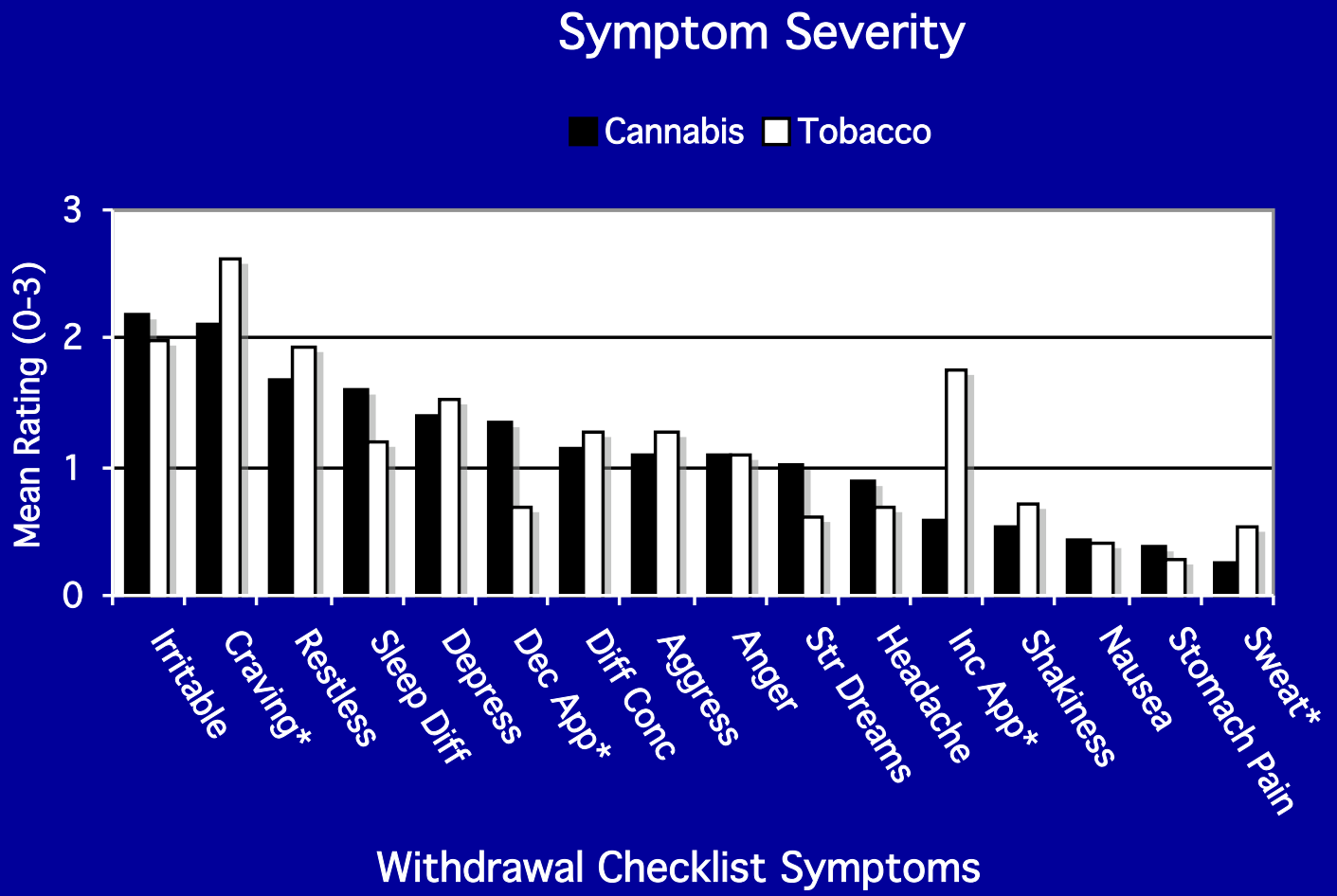
Tanda, et al, Science 1997.



Di Chiara et al.

There is Withdrawal!

(Vandrey et al., 2005; Vandrey et al. 2008, Budney et al., 2009)



The NEW ENGLAND JOURNAL of MEDICINE

REVIEW ARTICLE

Dan L. Longo, M.D., *Editor*

Adverse Health Effects of Marijuana Use

Nora D. Volkow, M.D., Ruben D. Baler, Ph.D., Wilson M. Compton, M.D., and Susan R.B. Weiss, Ph.D.

Synthetic Marijuana

- K2, Spice, etc.
- Unpredictable, “hot spots”
- Logistics and drug tests.

Butane Hash Oil

- Wax, shatter- used in “dabbing.”
- Distillation process using butane.
- 80-90% THC.
- Problems associated with chronic marijuana use magnified.

Edibles

- Baked goods, candies.
- Use by children.
- Takes longer to feel the effects.
- More likely to have nonfatal overdose.

E-Cigs

- Can be used for more than tobacco.
- Easy to find.
- Easier to conceal.

State of the Science: Treatment

What does treatment look like?

- Medical detox is not necessary.
- 30 days of “rehab” is unlikely.
- Get prospective patient to talk to somebody.
- Readiness/alliance work.

Treatment Access and Utilization

- Only 6% of those seeking substance abuse treatment sought treatment for cannabis dependence.
- Most people do not think cannabis use may require treatment.
- No generally accepted treatments.

Case: “Chris”

- *Chris, a 16-year-old sophomore, not “his normal self” in past few months. Didn’t play soccer this fall, despite having played the sport since he was 7, and his grades continued to drift downward. At home, he was much more isolated than usual, spending most of his time locked in his room playing video games and listening to music. Chris seemed to spend less time with his childhood friends, including those who still went to the same school he did, and, when he did spend time with others, it was a new group of friends that he chose to hang out with.*

Case: “Chris”

- *His parents and younger sister noticed this change and were worried about it. Attempts to talk to Chris about his change in behavior, however, were met with a stance that was at times defensive or, at other times, evasive. This troubling pattern continued for months until his mother, while trying to address the growing piles of clothes in Chris’s room—one thing that hadn’t changed – found a small bag of marijuana in a pair of pants. With a sense of dread and panic, Chris’ mother called her husband and they thought frantically together about what to do next.*

What to Look for

- Social problems caused by or worsened by MJ.
- Gives up important activities.
- Use in dangerous situations.
- Use despite obvious physical, psychological problems.

How to have “the Conversation”

- Preparation.
- Conversation.
- Evaluation.
- Referral.

Step 1: Preparation

- Previous relationship.
- Idea of what you want to say.
- Plan: yes/no.

Step 2: Conversation

- Preservation of “tangible” things.
- I am concerned and I think an evaluation is necessary.

Step 3: Evaluation

- Never worry alone.
- Someone who knows addiction.
- Thorough assessment.

Thorough Evaluation

- Motivational interviewing.
- Careful history.
- Alliance.
- Recommendations.

Step 4: Referral

- Residential.
- Structured outpatient programs.
- Outpatient therapy.
- Groups.

Ongoing treatment

- Talk Therapy- individual/group, different modalities.
- Family support.
- Medications in some cases.

Behavioral Interventions for Cannabis Dependence

Current Treatment Options in Psychiatry
DOI 10.1007/s40501-014-0013-6

Substance Use Disorders (RD Weiss and HS Connery, Section Editors)

Behavioral Interventions and Pharmacotherapies for Cannabis Use Disorder

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Medications for Cannabis Dependence

No FDA-Approved Medications (yet)

- Meds plus therapy paradigm.
- NAC, gabapentin.
- What would happen to these patients if there was an effective medication available?

Nabilone: Novel Medication

- FDA-approved for nausea and vomiting for cancer chemotherapy.
- FDA-approved for anorexia in AIDs patients.
- Possible agonist pharmacotherapy for cannabis dependence (not unlike methadone or buprenorphine for heroin and nicotine patch for tobacco).

Clinical Advantages

- May reduce craving and withdrawal symptoms from cannabis.
- Not cross-reactive with THC urine assays.
- Safe and well-tolerated.

Nabilone for Cannabis Dependence

- 60 cannabis-dependent, treatment seeking 18-45 year-olds.
- 10 weeks of nabilone titrated to 1 mg twice daily or placebo.
- All participants receive medical management.

Critical Period

- Science relative to youth is clear, but the rest is complicated.
- Policy ahead of the science.
- We may be able to shape policy, and it starts with being educated on the topic.

Acknowledgments

- Max Hurley-Welljams-Dorof

Questions?
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ATTC

Addiction Technology Transfer Center Network

Funded by Substance Abuse and Mental Health Services Administration

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Nationally recognized expert and leading researcher on marijuana, Dr. Kevin Hill, answers your questions in the Network of Practice forum until July 18.

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