



SUPPLEMENTAL MARIJUANA HANDBOOK

Introduction

This is intended to be used as supplemental material for the AAFP’s Tar Wars program. This handbook contains activities to help students learn about marijuana, some potential answers to student questions about marijuana, an overview of the current literature on marijuana’s health effects, and a summary of the laws in Colorado. PowerPoint slides are included but don’t be afraid to present without them – some schools may not have the ability to use them. All of the questions asked in the PowerPoint slides are meant to be posed to the group to keep the students actively involved in the discussion.

Four out of five high school students do not use marijuana.

In 2013, 19.7 percent of Colorado high school students used marijuana in the last 30 days.⁽¹⁾

It is easier for youth to say no to peer pressure if they do not think “everyone” is doing it.



Madelyn—Nevada 2011 Tar WarsPoster

MARIJUANA 101 FOR PRESENTERS



Visit GoodtoKnowColorado.org to find out more

Other Concerns

Edibles are not regulated by the FDA because marijuana is still illegal at the federal level. This means that the concentration of the drug may not be uniform throughout a product so a person might consume more or less than intended.

Calls to poison control centers regarding children under 9 who consumed marijuana products went up 30% in states that legalized marijuana.⁽⁴⁾

Chronic Effects

1. Cognitive⁽²⁾

- Teens that used cannabis more than once a week had worse cognitive function performance *while sober* than their peers.
 - Specific areas included attention, spatial working memory and learning
- Cannabis dependent teens showed significant deficits on short term auditory and visual memory tests compared to non-using and previously using peers.
 - The same group showed improvement after 6 weeks of abstinence but significant deficits persisted.

2. Respiratory

- Cannabis smoking causes large airway disease leading to airflow obstruction, hyperinflation and chronic bronchitis⁽³⁾
- Macroscopic emphysema is rare amongst chronic cannabis smokers, while common amongst cigarette smokers⁽³⁾
- A single marijuana joint causes the same degree of airway obstruction as 2.5-5 cigarettes⁽³⁾
- Compared to smoking tobacco, smoking marijuana leads to:⁽⁴⁾
 - 5x higher levels of blood carboxyhemoglobin
 - 3x increase in the amount of tar inhaled
 - One third more tar retained in the respiratory tract
- Lung function is better in cigarette smokers than marijuana smokers⁽¹⁾
 - Non-smokers > cigarette smokers > marijuana smokers > those who smoke cigarettes and marijuana
- Dependence⁽³⁾
 - Approximately one in ten people that ever experiment with cannabis will become dependent
 - For comparison other drugs of abuse have the following risk of dependence:
 - Alcohol – 15%
 - Nicotine – 32%
 - Opioids – 23%

1. Carcinogenicity⁽³⁾

- Link between cannabis smoking and cancer has not been proven, however:
 - Lungs of cannabis smokers show histopathological changes that precede lung cancer.
 - Heavy using young adults have been reported to have aerodigestive tract cancers.

Acute Affects of Marijuana

Acute effects of marijuana intoxication include ⁽⁸⁾:

- Euphoria & relaxation
- Perceptual alterations, time distortion and intensified everyday experiences
- Impaired short term memory, attention, motor skills and skilled activities
- Anxiety and panic reactions
- Heart rate increases by 25-50% within 15 minutes

Psychomotor effects on driving are debated – studies have shown. ⁽⁸⁾

- In simulated laboratory setting, effects equivalent to BAC of 0.07%-0.10% have been reported
- Under more realistic driving conditions these effects are less pronounced
- Cannabis users are more aware of impairment than alcohol users and less likely to take risks

Large doses of marijuana can cause hallucinations and delusions in rare cases ⁽⁸⁾



Photo Caption

A Summary of Colorado's Marijuana Laws

- The new Colorado law allows Colorado residents over 21 to buy and possess up to an ounce at a time. ⁽⁵⁾
- Marijuana consumption is not legal in public places or where it is visible from a public place. ⁽⁵⁾
- Selling or providing marijuana to those under 21 is illegal. ⁽⁵⁾
- The consequences for breaking the new laws are still fines or even jail time depending on the infraction. ⁽⁵⁾
- Schools & employers may enforce stricter rules regarding marijuana use ⁽⁵⁾
- Driving under the influence (DUI) of marijuana is illegal and can result in fines, jail time or a revoked license. A driver with 5 or more nanograms of THC per milliliter of blood while driving can be arrested for a DUI. ⁽⁵⁾
- The Colorado constitution currently allows marijuana to be prescribed for cancer, glaucoma, and HIV or AIDS patients. It may also be prescribed for a chronic or debilitating disease that produces cachexia, muscle spasms, seizures, severe nausea or severe pain, that is judged by a physician to be able to be alleviated by marijuana ⁽⁶⁾

ACTIVITIES

SUPPLEMENTAL MARIJUANA HANDBOOK

How is marijuana different from cigarettes? (15 minutes)

- Marijuana not only has effects on the lungs but also on your brain.
- Marijuana has different effects on the lungs – it causes different kinds of lung problems and may not cause lung cancer.

Discussion: *Do you know what carbon monoxide is?*

- Produced by fires and found in car exhaust
- Carbon monoxide detectors are the alarms put around your homes to detect CO because it is so poisonous
- People who smoke marijuana have 5x the amount of CO in their blood as cigarette smokers!

Discussion: *What is tar used for?*

- People who smoke marijuana breathe in 3x the amount of tar as cigarette smokers!
- Lung function is actually better in cigarette smokers than in marijuana smokers
- Marijuana affects your brain – How?
 - When using it, people may act differently than they normally do
 - They may have a harder time paying attention and remembering things
 - In some ways it's like their brains are working in slow motion especially when coordination is important.
 - Some people feel nervous or anxious
 - We know that in adults, some of the effects on the brain are permanent. From what we know right now, these permanent effects may be even worse in children and teens because their brains are still growing.
 - *If students mention hallucinations you can tell them that while hallucinations are rare, they do happen to some people when using marijuana.*

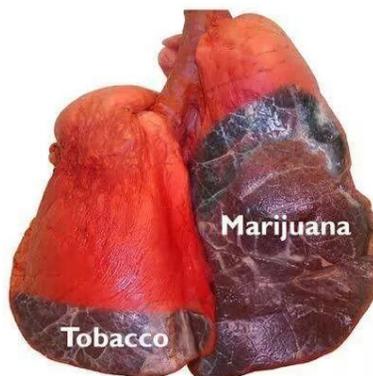
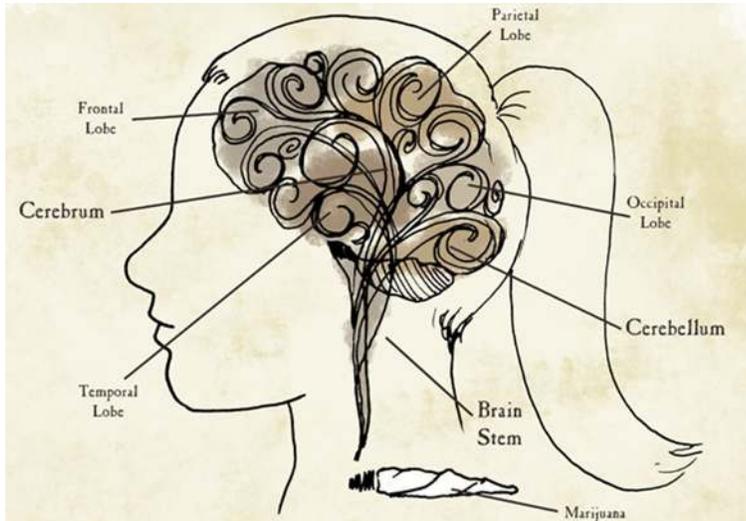


Photo Caption

“If you have not done the straw activity yet this is a great opportunity. If you have, you may remind students how that felt.”

For a summary of the acute and chronic effects of marijuana, see “Marijuana 101 for Presenters” in the in the previous pages of the handbook



Find more resources at www.colorado.gov/cdphe/RetailMarijuanaTA

Talking Tip for Adults

Listen carefully and stay positive. Keep the conversation open so youth can come to you with questions. Knowing they can ask questions helps youth make good choices.

Talking with youth about their dreams helps them feel more connected to caring adults.

How old will you be when your brain stops growing? (5 minutes or less)

- About 22
 - Who do you know that is 22?
 - Teachers, coaches, family friends
- How many more years until you are 22?
 - 14-16 years for most groups
 - Your brain will be growing for that much longer!
- *By growing we actually mean developing – but “growing” is a little easier for kids to wrap their brains around*

What makes you nervous? (5 minutes or less)

- *Sample answers might be: tests, musical performances, athletic games, etc.*
- Do you like the way that feels?
- One of the most immediate effects of marijuana on some people is to make them feel nervous or anxious.

What do you want to be when you grow up? (5-10 minutes)

- *Sample answers: professional athlete, astronaut, teacher, doctor/veterinarian, firefighter*
- Could you still do those things if your ability to think or move the way you're used to was affected?
 - Ask other students to point out why using marijuana may be dangerous or detrimental to that profession
- *Examples of industries that drug test: health care providers, oil fields, professional athletes, media (newspapers & magazines)*

Consider This

Should we put things in our bodies because they are “natural” or “organic”? What can you think of that is natural but still bad for you?

Ex: Poisonous mushrooms, tobacco

Think about what you see when you go on a hike or for a walk... would you eat those things?

Do you think it's true that marijuana is better for you because it is natural?

Other names for marijuana include weed, pot, roach, skunk, ashes.

How appetizing do those sound?



Photo Caption

Edible products (5 minutes)

- These look like regular candies and baked goods but they should have a warning on the packaging if you take a moment to look
 - *There are examples shown in the Powerpoint slides*
- Even though these don't have the same effects on the lungs that smoking marijuana does, they still have all of the same effects on your brain
- These can be particularly dangerous because you don't know how much of the drug you are eating at one time
 - Takes longer to take effect – people may have already consumed too much before they begin to feel effects
 - Because marijuana is still illegal at a federal level, these products are not regulated
 - The drug may be more concentrated in some areas of the candy or baked good
- As of March 2015 there have been 3 deaths linked to edible marijuana products
- If you want a treat have a regular one - without marijuana!

Advertising (15 minutes)

- *Pull examples from the local newspapers or the internet, or use the examples provided*
- Themes:
 - Safer than alcohol or tobacco – is this true based on what we talked about?
 - Flavors
 - Natural or organic
 - Medicinal
 - Coupons



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I prefer **marijuana** over alcohol because **it doesn't make me rowdy or reckless.**



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Is marijuana medicine?

- Marijuana is used as medicine for patients that are very sick and in many cases will die from their illness.
- Like most medications, what is good for one person can be very dangerous for someone else .
- You should only take medicines that are prescribed for *you* by your doctor.
- Did you know that for many years we used alcohol as medication?
 - We don't do that anymore because we learned that alcohol has a lot of bad effects on your health.
- Many of the diseases that marijuana is advertised to help have not been proven to have a benefit from marijuana.
- Even today, people are trying to invent forms of marijuana that have less of the bad health effects and more of the helpful health effects.
- *The Colorado constitution currently allows marijuana to be prescribed for cancer, glaucoma, and HIV or AIDS patients. It may also be prescribed for a chronic or debilitating disease that produces cachexia, muscle spasms, seizures, severe nausea or severe pain, that is judged by a physician to be able to be alleviated by marijuana.*⁽⁶⁾

Talking Tip for Adults

Be honest. Explain how staying out of trouble and doing well in school can help them reach their goals.

Youth who think marijuana is risky are much less likely to use marijuana regularly.⁽⁹⁾



Answers to Frequently Asked Questions

1. Is smoking marijuana safer than smoking cigarettes?

While we can't say for certain which one is safer, there are many different and dangerous health effects associated with marijuana, especially in youth and adolescent populations.

Lung function is actually better in cigarette smokers than marijuana smokers.⁽⁸⁾

Marijuana has detrimental effects on adolescent brains that may be irreversible.⁽²⁾

2. What about medical marijuana?

See activity above

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