

# NSSS ADVOCACY BULLETIN

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## You Can't Deny Marijuana Is Dangerous For Developing Minds

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I have many patients with psychotic illnesses, including bipolar disorder and schizophrenia. Many were vulnerable because of their family history, but some share another important life experience: they smoked pot from an early age.

Physicians have not effectively confronted pot-related myths, nor have we adequately educated our patients. When I tell parents about marijuana's risks, they often express shock. Many believe it's like oregano... a safe "natural product" that adds a little spice to life.

But pot is not benign and there's a mountain of scientific evidence, compiled over nearly 30 years, to prove it poses serious risks, particularly for developing brains.

Tetrahydrocannabinol (THC) produces marijuana's "high", but it's not your parent's pot anymore. Over the last 50 years, street pot has been [selectively bred](#) to heighten its potency, from one to four per cent THC to [12 to 40 per cent](#), making pot more impairing, more addictive and more dangerous.

### Myth: Marijuana is safe because it's a "natural product."

Another "natural product," tobacco, causes cancer from mouth to anus and everywhere in between, yet it took decades for people to believe cigarettes were dangerous. Smoking pot also produces toxins that cause cancer and chronic lung disease, but beyond the smoking risk, pot use has been associated with lowering IQ, neurotoxicity (brain cell damage), mental illness, motor vehicle accidents (MVA) and much more.

### Myth: [Pot doesn't impair drivers](#) .

Any mind-altering substance impacts driving. While nearly 80 per cent of us believe alcohol impairs drivers, only 30 per cent believe pot causes impairment. Yet like alcohol, pot affects brain functions required for safe driving (judgment, attention, vision, reaction time, motor coordination), rendering pot-impaired drivers less

able to adapt to sudden changes while driving.

There is a direct correlation between impaired driving and [blood THC levels](#). Pot smoking doubles the risk of causing a MVA. The argument that pot-impaired drivers "compensate" by driving more slowly is ridiculous.

A [2014 study](#) found that since legalization in Colorado, there has been an increase in marijuana-positive drivers involved in fatal MVAs. Because many drivers don't believe pot is impairing, they're more likely to [drive high](#).

A [2013 study](#) found that if drivers feel confident they won't be harshly judged by their peers, this sharply increases the likelihood they'll drive high, especially if they don't believe pot impairs their [driving](#).

### Myth: Alcohol is worse for teens than pot.

Comparing favourably to alcohol -- a substance associated with massive medical and social problems, isn't much to crow about -- but is pot a safer alternative? There's a pot store on every corner in Vancouver and its sale is largely unregulated, so it's more difficult for a teen to get alcohol than pot. Because it's easily accessible and socially acceptable, teens think it's safe and their parents often agree.

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The impact of THC on a developing brain can be profound and life-altering. Adolescence is a time of massive brain remodeling, when brain cells (neurons) are pruned and critical connections are made. Most mental illnesses first present during this remodeling phase.

A [2016 study](#) reviewed 31 scientific papers and reported compelling evidence that high THC levels found in street pot alters brain structure, size and function, especially for frequent, heavy users. Neurons in brain areas that are rich in cannabinoid 1 (THC) receptors are damaged or destroyed by THC. This includes neurons in the prefrontal cortex (PFC), hippocampus and amygdala.

The PFC is necessary for mature adult behaviour. It's the brain's executive, responsible for organizing, planning, forward thinking and critical thinking. If you have a teenager, you know their PFC isn't fully developed; for most people that happens by age 25.

THC is a neurotoxin -- it damages neurons in critical brain areas like the PFC -- and the amount of damage is directly correlated with smoking frequency and the age when pot use begins.

**Fact: [Early](#) and frequent pot use is linked to psychotic illnesses like schizophrenia.**

THC is more neurotoxic when it's used during the time of [critical brain remodeling during adolescence](#). The onset of psychotic symptoms is up to six years earlier in those who start smoking pot before age 15.

Greater emotional and social development before the onset of symptoms is associated with less illness-related functional impairment, which is why age at illness onset is so critical.

[If avoiding pot](#) delays the onset of schizophrenia by several years, this has a tremendous impact on educational attainment, developing relationships, independence and engagement in treatment.

**Myth: Pot improves cognitive functioning in schizophrenia.**

Previous studies have been of poor quality, but a well-designed [2013 study](#) found no cognitive benefits associated with marijuana use.

**Myth: Pro-pot crusaders don't have an agenda.**

There must be an agenda behind those who argue that mountains of scientific research is wrong. Perhaps it's to bolster confidence in their personal use of pot, whether employed for pleasure or as treatment. Perhaps it's for financial gain, since teens are the largest pot market.

There is simply no evidence-based, cogent argument for pot's social good, especially for teens. No one should tell a parent that pot is safe for their child.

I look forward to getting pot out of the hands of organized crime. We need to tax it to pay for all the physical and mental illness it causes, increase public awareness regarding its risks and regulate its availability.

**Fact: Marijuana is dangerous for a developing brain.**

Some brains are more vulnerable than others. Trouble is, we don't always know who has a vulnerable brain. As an adult, using pot is a personal decision, but when advising our children, we must consider what they stand to lose and what the pot-seller/user has to gain by attempting to discredit the science. It's a no-brainer: the evidence overwhelmingly supports the need to protect developing brains.

For part two please log onto:

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[Sept. 2016 Bulletin – Part 2](#)