

CHALLENGING TRENDS IN SUBSTANCE USE: VAPING AND CANNABIS LEGALIZATION

The battle for the hearts and minds of
our youth

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FOUR GUIDING PRINCIPLES

1. Teens have **incredible potential and opportunities**, but are also **vulnerable**
2. Teen drug and alcohol use carries **inherent risks** because of their unique developmental context
3. Public policy must reflect this fact or our youth will suffer the consequences
4. **Preventing, delaying, and reducing harms** from early drug and alcohol use should be our greatest concern

TODAY'S TALK

1. Focus on Vaping as a rapidly growing trend among youth with real risks
2. Some surprising facts on the impact of legalization of cannabis on youth
3. Scientific information and practical advice

ROAD MAP FOR UNDERSTANDING VAPING AND ITS IMPLICATIONS

- What is vaping?
- What is in vape juice?
- Marketing to youth!
- Unprecedented growth of nicotine use in youth!
- Why we should care!
- What can we do?

WHAT IS VAPING?

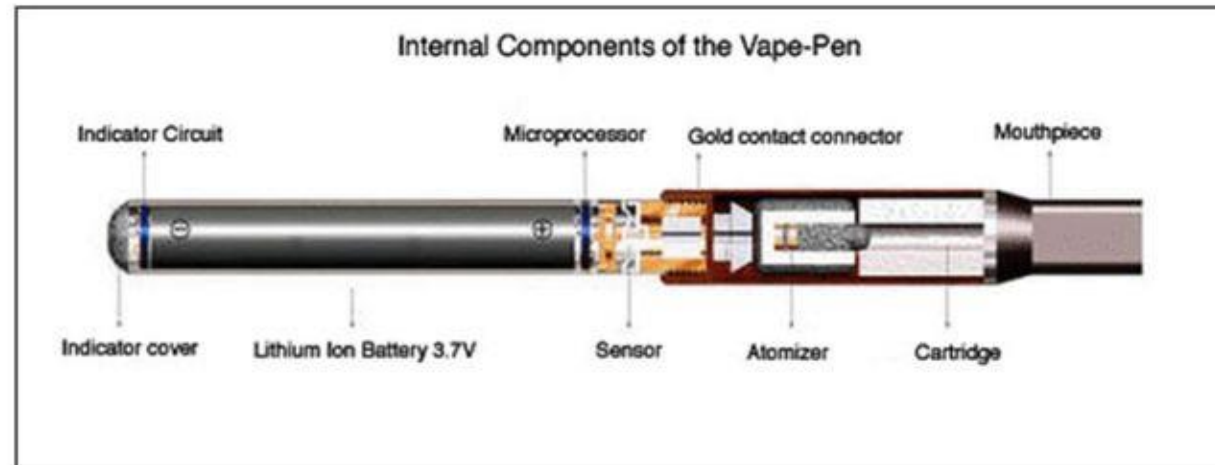
- Vaping is an inhalation drug delivery system
- Heated vapours are used instead of burning
- Drug delivery is either free base nicotine or nicotine salts
- Methods of vaping
 - E-cigarettes
 - JUULS
- JUULS are most popular now and deliver nicotine in larger amounts with less irritation



VAPING COMPONENTS

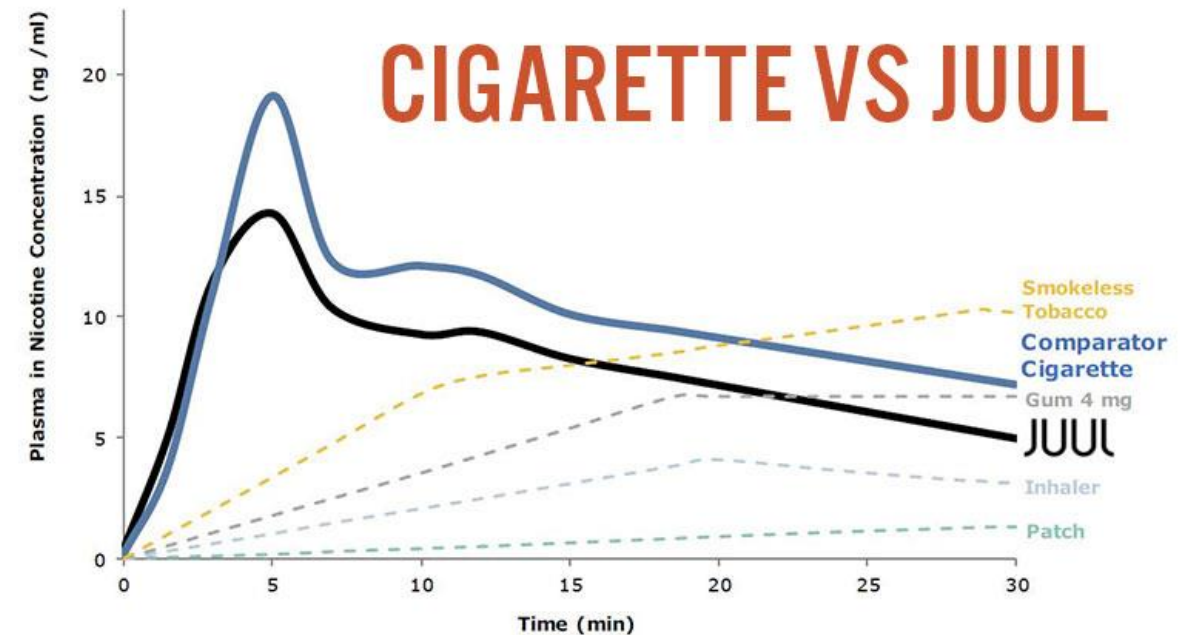
Vaping Devices:

- Electronic cigarette: smokeless, battery operated device used to deliver nicotine with flavorings or other chemicals to the lungs.
- Vaporizer pen or vape pen: a device ranging in size from a standard pen to a large cigar used to generate an inhalable vapor from a solid, semi-solid, or liquid substance.
- Three components: A liquid cartridge used to produce the vapor. A heating element known as the atomizer and a rechargeable battery to power the atomizer.



JUULS: HIGH TECH AND HIGH LEVELS OF NICOTINE

- Smart tech look
=> appeals to youth
- Nicotine levels as high as a package of cigarettes
=> Increased addictive properties



WHAT IS IN VAPE JUICE?

- Chemicals
 - Propylene glycol
 - Vegetable glycerin
- Food flavours
- Nicotine
- Cannabis
- Cocaine, fentanyl etc.????

What is **E-JUICE** / **VAPE JUICE**?

E-juice or vape juice is the fluid used in vaporizers to create vapor.

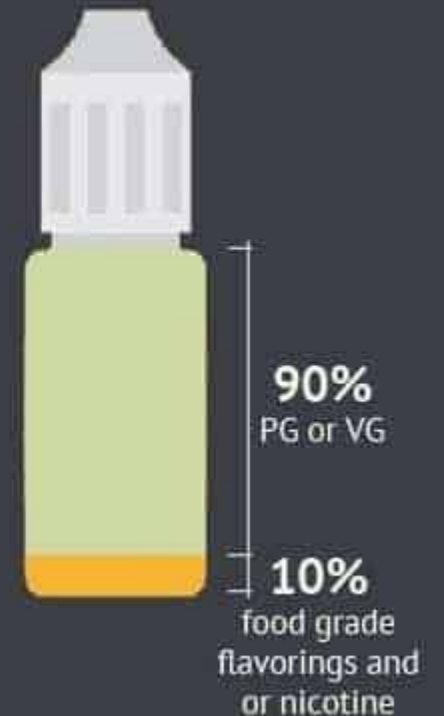
E-juice or vape juice comes in a variety of flavors and nicotine levels. Including zero nicotine options.

E-juice or vape juice is made of propylene glycol (PG) or vegetable glycerin (VG), food flavoring, water and comes with or without nicotine.

The food grade flavoring is the same as flavorings used in products like ketchup, ice cream and salad dressings.

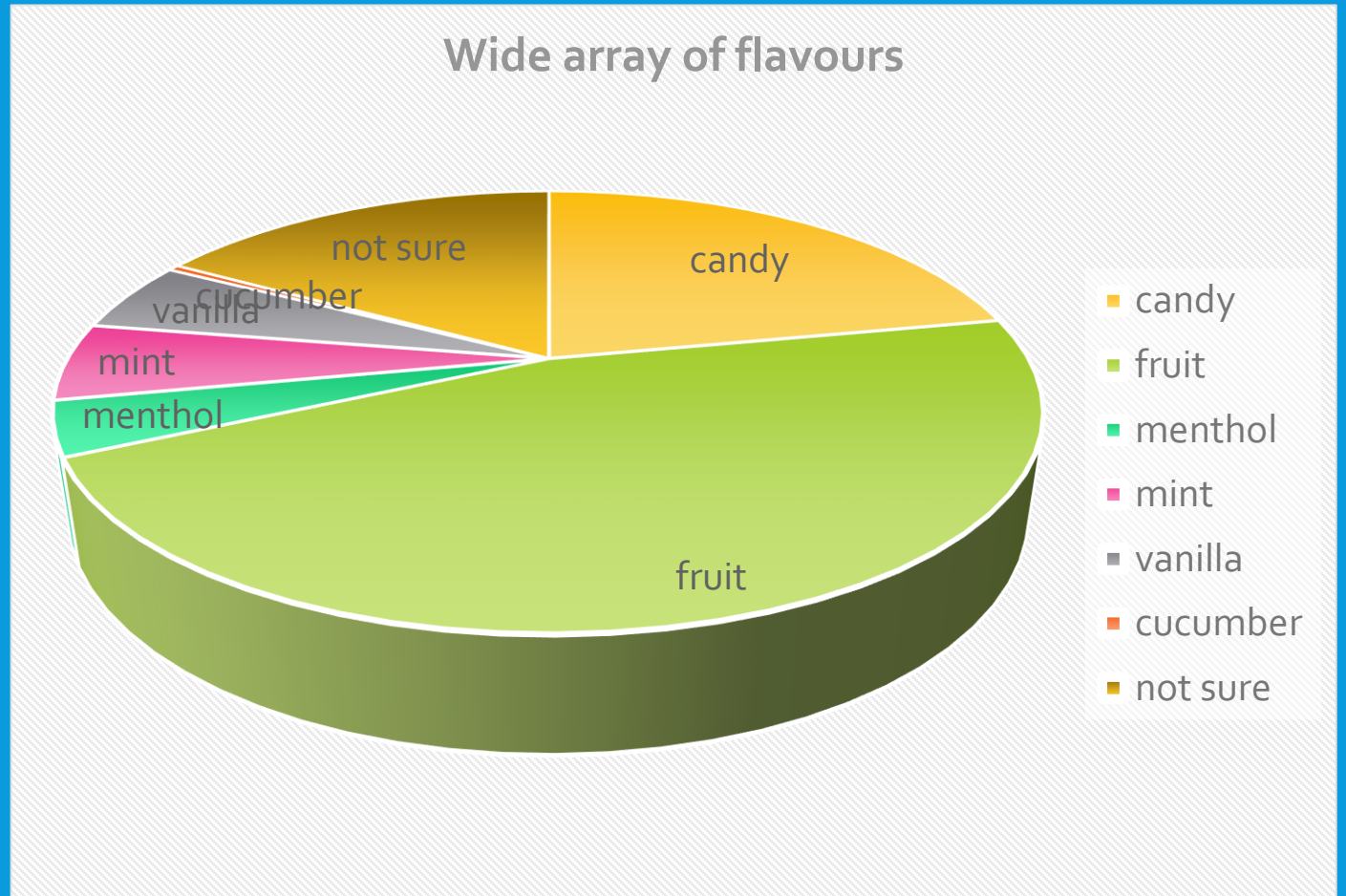
Propylene glycol (PG) and vegetable glycerin (VG) are used to help distribute the flavor and nicotine throughout the liquid.

E-juice and vape juice is primarily...

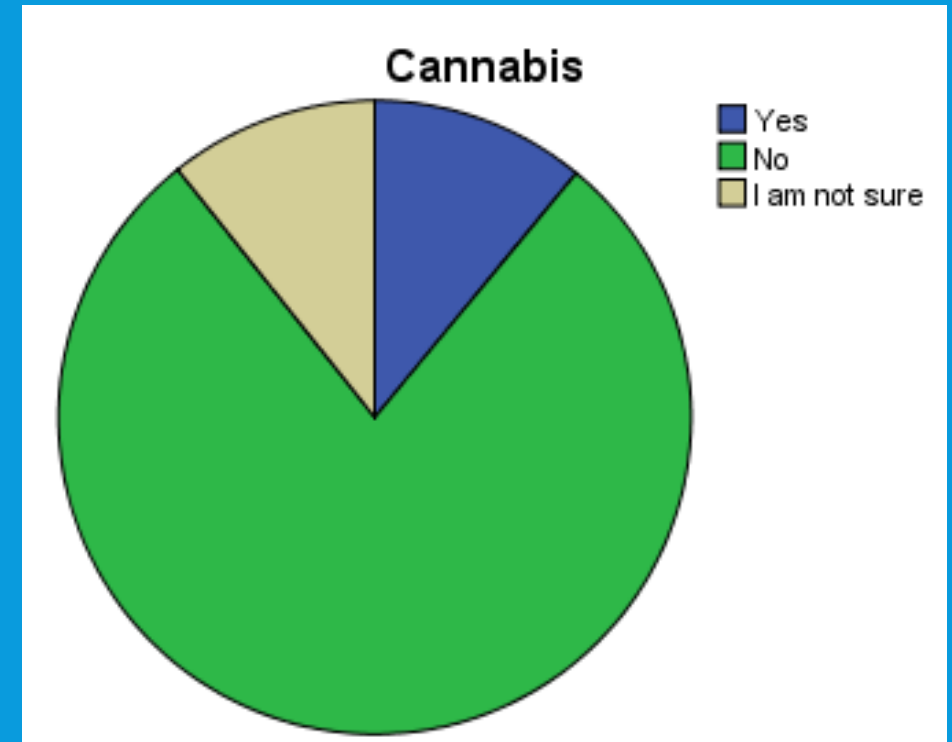
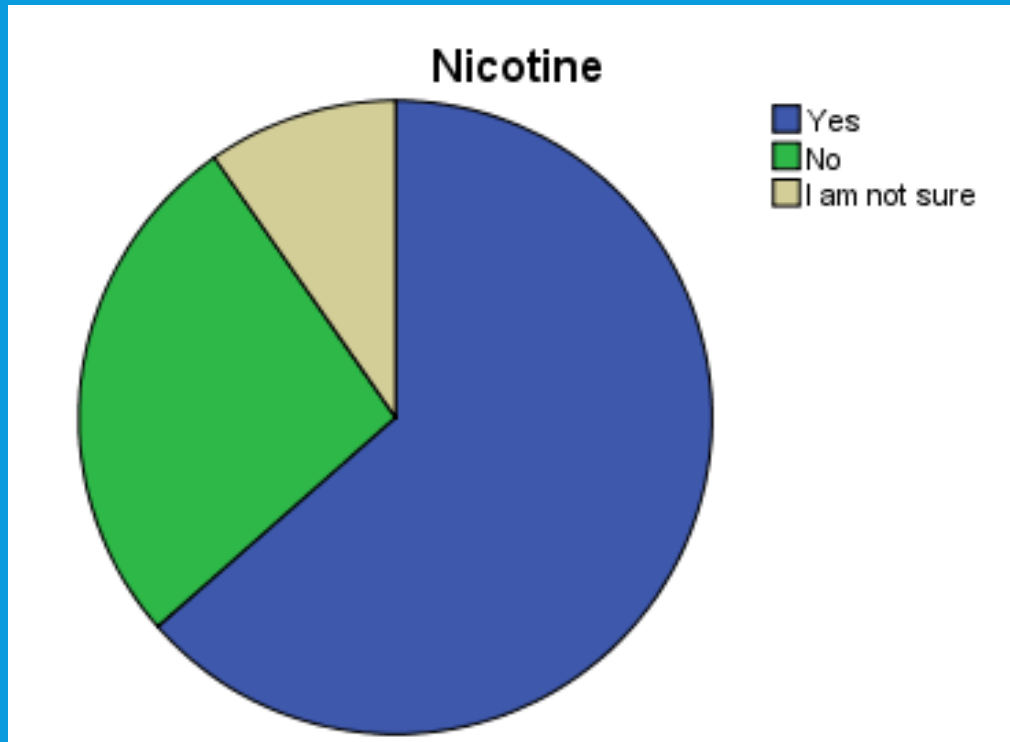


FOOD ADDITIVE FLAVOURS

- These are the flavours reported by grade 8, 9, and 10 students in SD22
- Food flavour additives that have been approved for eating
- Not approved for inhalation
- Designed to appeal to youth



NICOTINE AND CANNABIS CONTENT



Reported by SD22 students in Grades 8, 9, and 10

Note underestimation of nicotine content is common when actual contents are measured.

MARKETING TO YOUTH!

WHO DO THESE FLAVOURS APPEAL TO?



GENERAL MYTHS AND MISINFORMATION ABOUT DRUG USE

For example, the following statement is **untrue!**

Myth: Lower risk equals no risk!

Fact: All drugs have negative effects that are more likely in youth



MISINFORMATION AND THE “INFORMATION” AGE

You can get anything you want!

Myths work both ways

Both of these are wrong



Jeff Sessions insists that marijuana is “*only slightly less awful*” than heroin. You know, the way **being super hungry** is *only slightly less awful* than **your central nervous system shutting down**.



BIASED THINKING: THINKING ERRORS

- **Overgeneralization** - to draw a conclusion or make a statement about (something) that is more general than is justified by the available evidence.

Observe that some people are talking about smoking pot

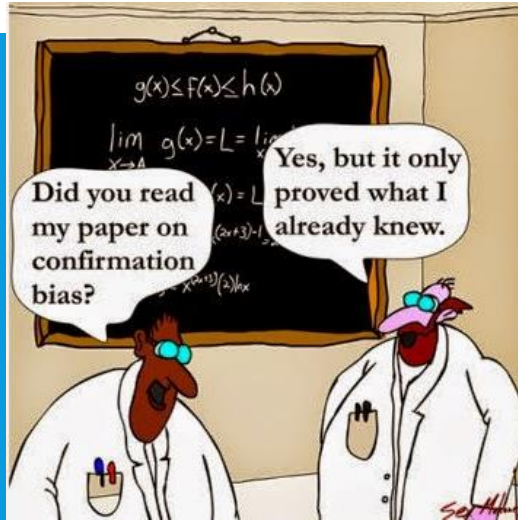
=> Conclude: everyone is smoking pot

- **Extreme thinking** – thinking things are either “black-or-white” — all or nothing. We have to be perfect or we’re a complete and abject failure — there is no middle ground.

“If I don’t do something fun and be part of the group, I’ll die.”

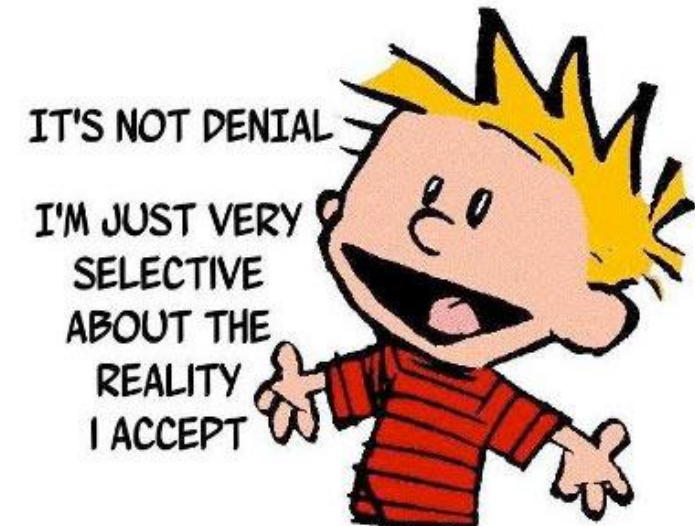
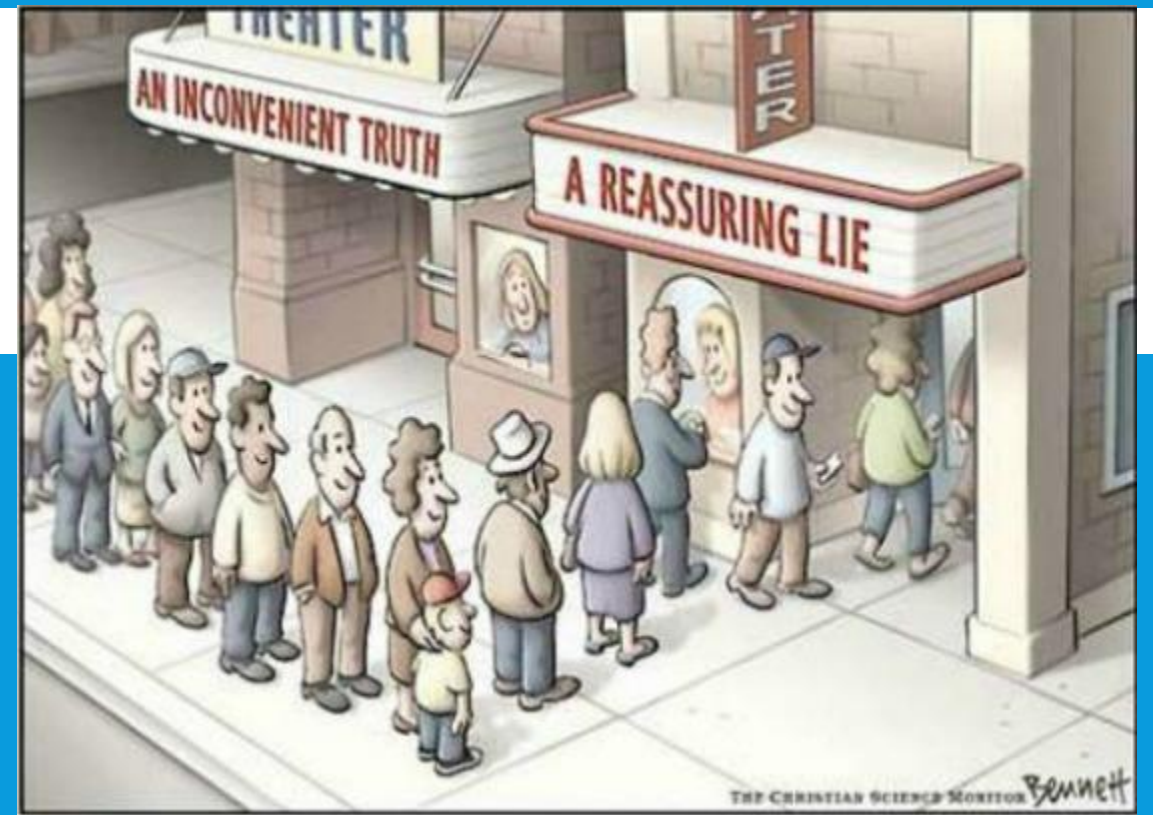


FILTERING TRUTH: CONFIRMATION BIAS AND SELF-AFFIRMATION

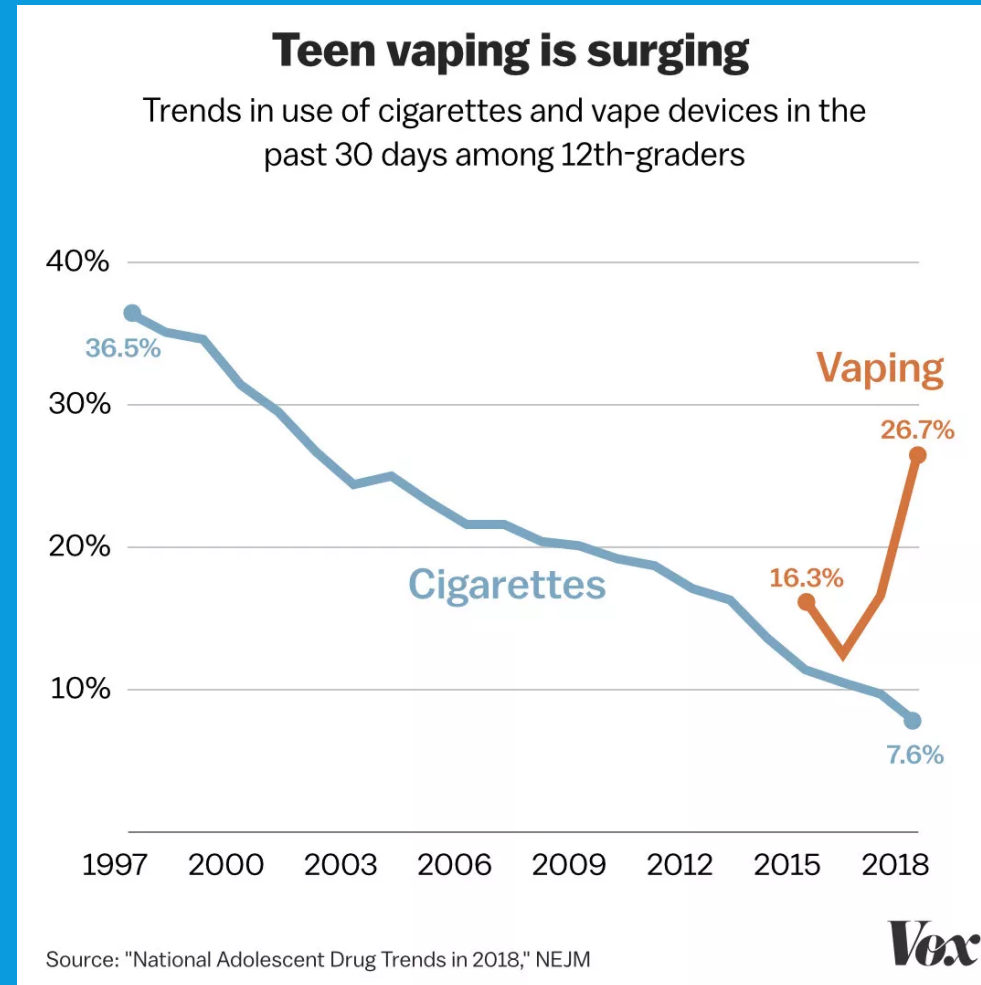


- **Confirmation bias** is the tendency to accept information that is consistent with pre-existing beliefs as true and reject contrary information.
- **Self-affirmation** is the tendency to respond in ways that protect the individual's self-worth, integrity, and image.

Who is most likely to be prone to biased ways of thinking about drugs ?



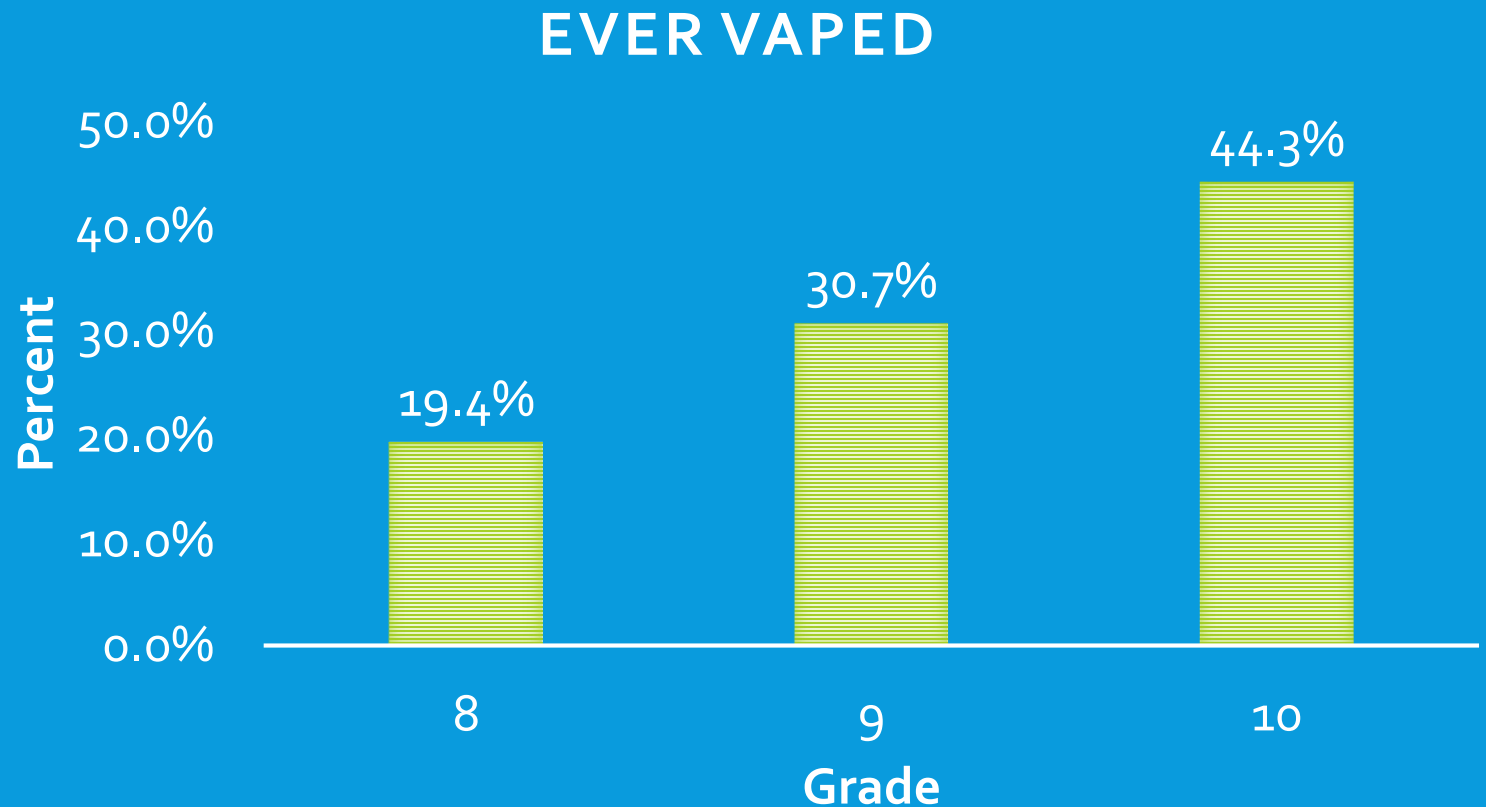
THE RESULTS: UNPRECEDENTED GROWTH OF NICOTINE USE IN YOUTH!



USE IN VERNON (1209 STUDENTS IN SD 22, NOVEMBER 2018)

Grade nine use in
November 2017 was
20%

⇒ 50% growth rate



WHY WE SHOULD CARE!

TODAY WE ARE IN A NEW REGULATORY ENVIRONMENT

My focus is on teens and concerns about the impact of alcohol, nicotine, and cannabis use in this critical developmental time

How does what we know inform us going forward



WHAT ARE THE FACTS ABOUT TEEN CANNABIS USE?

Adverse effects of teen heavy cannabis use on life trajectories are well established

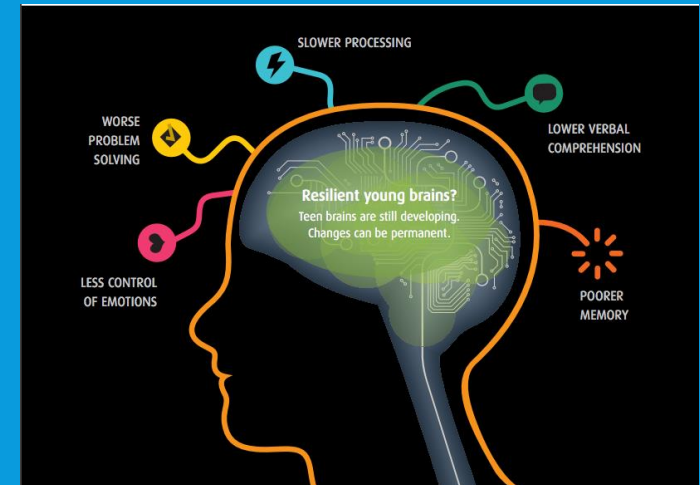
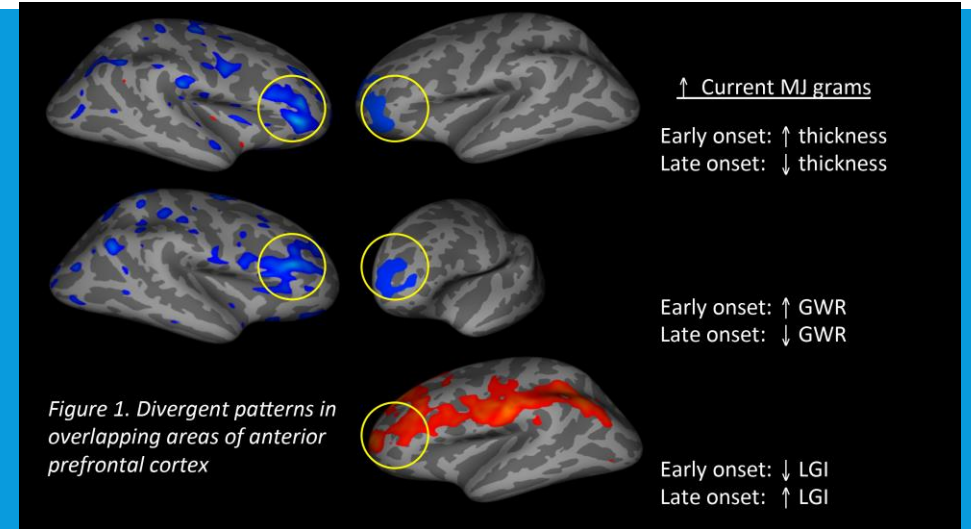
- Early use is associated with more heavy use and greater onset of cannabis and alcohol use disorders
- Early use is related to many adverse cognitive, social, educational, and health outcomes
- Although cannabis is in the limelight today, it's not new to teens and teen alcohol use remains a serious problem



DEVELOPMENTAL CONTEXT INCREASES THE RISK FROM EARLY CANNABIS USE:

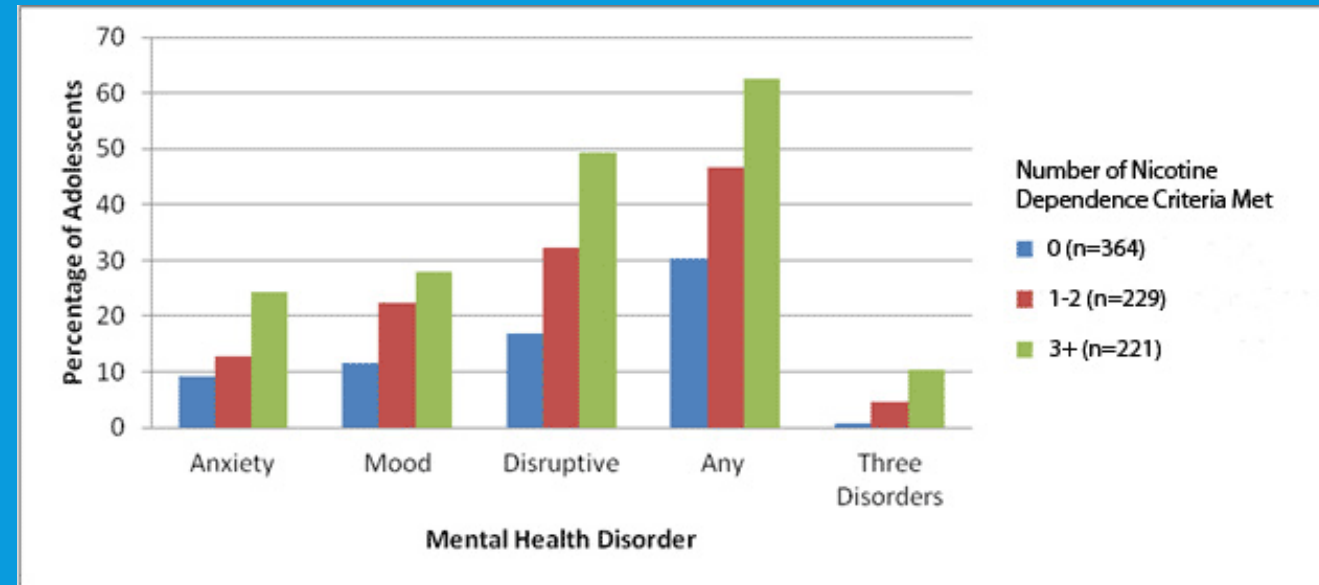
Youth are more susceptible to serious side effects from cannabis use

- More negative acute effects of cannabis intoxication
- More impact on brain development
- Slowing the development of cognitive skills



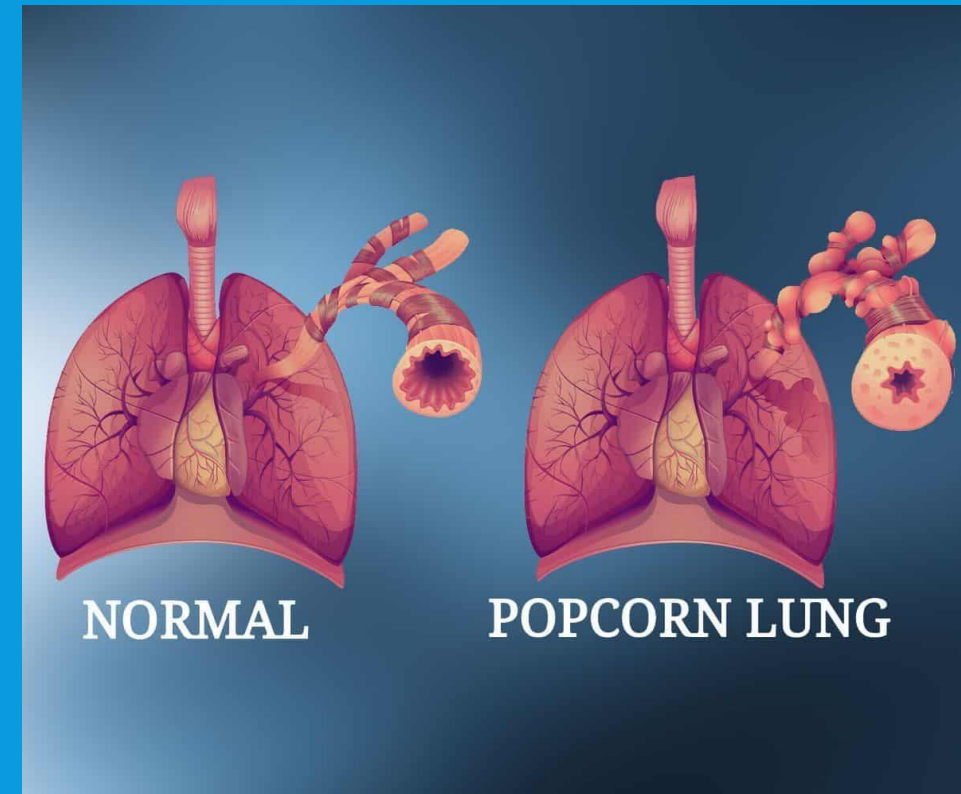
WHAT ARE THE FACTS ABOUT VAPING

- Vaping Is Less Harmful Than Traditional Smoking, but
- Vaping Is Still Bad for Your Physical and Mental Health
- E-Cigarettes and JUULs Are Just as Addictive as Traditional Ones.
- E-Cigarettes Won't help you quit smoking. In fact,
- A New Generation Is Getting Hooked on Nicotine

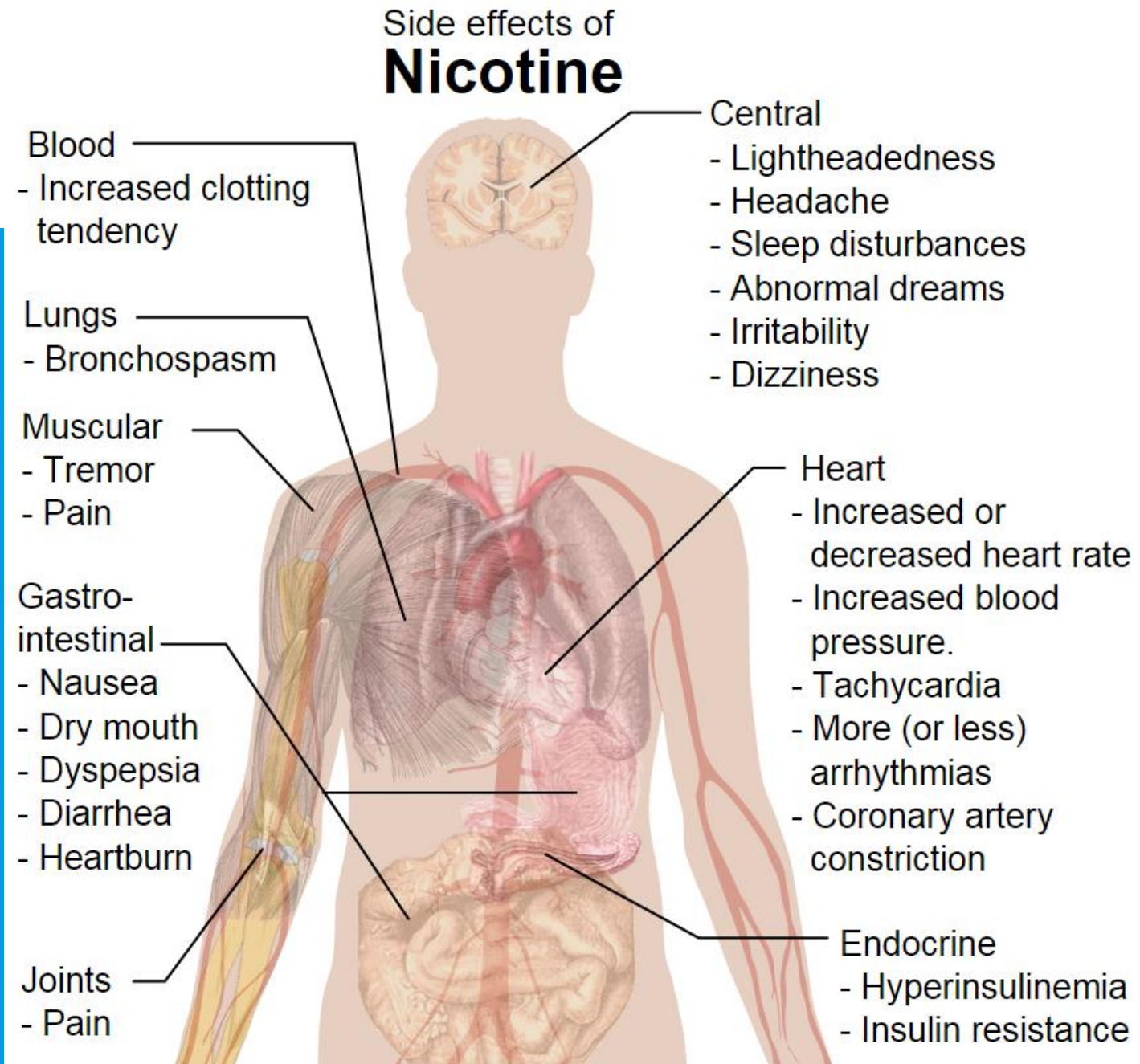


WHAT IS HARMFUL IN VAPING

- No long-term studies have been done, but we know:
 1. Nicotine is as addictive as cocaine and heroin and has significant side effects
 2. Some of the chemicals are harmful
- A 2015 study of flavored e-cigarettes by Havard found that 39 out of 51 tested brands contained diacetyl, acetoin and 2,3 pentanedione.
- Each is toxic, but
- Diacetyl causes **popcorn lung**



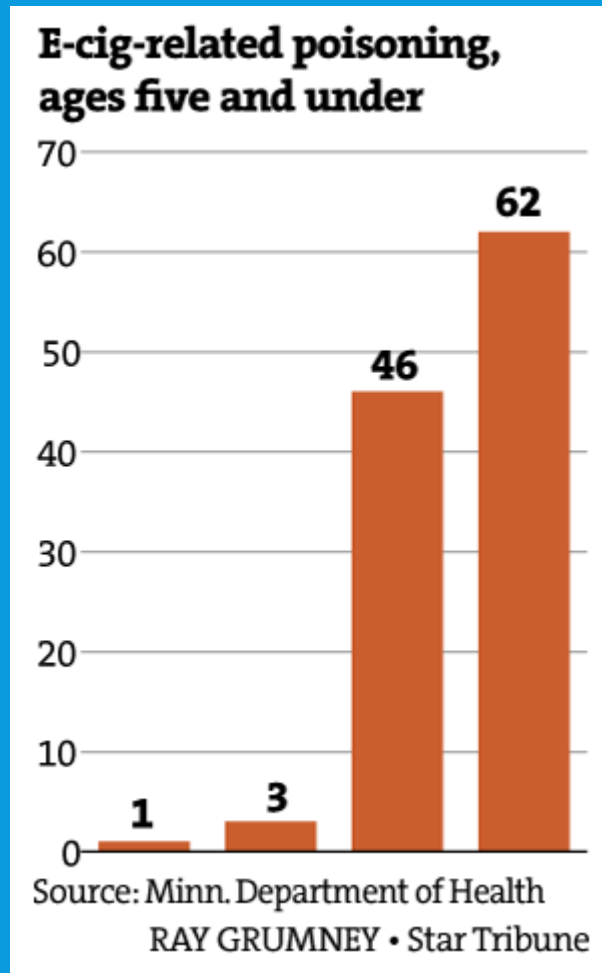
NICOTINE SIDE EFFECTS



HEALTH RISKS OF NICOTINE

- Increased risk of heart disease (17%) and stroke (28%) among users compared with non-users.
- Risk for acute problems in users with previous heart or lung disease
- Adolescent brain development is impacted
 - Connectivity - learning
 - Cholinergic systems - learning and attention
 - Catecholamine system – emotions and reward processing

NICOTINE POISONING



- Nicotine poisoning results from too much nicotine in the body.
- Vaping and liquid nicotine are the most common forms to cause nicotine poisoning in adults.
- Eating cigarettes or consuming liquid nicotine is the most common method of poisoning in children.
- The instances of nicotine poisoning have risen steadily as alternative forms of consuming it gain popularity.

NICOTINE ADDICTION RESURGENCE

- A December 2017 study by the University of Pittsburgh Schools of the Health Sciences, published in the American Journal of Medicine, found that
- young adults who use e-cigarettes are more than four times more likely to begin smoking tobacco cigarettes within 18 months as their peers who do not vape.



LONG-TERM EFFECTS OF NICOTINE

- Smoking carries significant health risks
- Some are caused by chemicals in smoke
- Some are caused by nicotine
 - Cardiovascular effects
 - Premature aging
 - Brain development
 - Mental health effects
- At this point we don't know much about vaping,
but the past suggests caution



CANNABIS LEGALIZATION: IMPACT ON YOUTH

- We measured use, social norms, associations, and expectations about cannabis use
 - Before legalization: November 2017
 - After legalization: November 2018

Surprisingly, no increase in
Use

Social norms

Associations

Small increase in positive outcome expectancies

DON'T PANIC, BUT REMAIN VIGILANT

Cannabis use in Canada and the Okanagan was high before legalization

Cannabis, especially heavy and early use, has many adverse consequences

Teens are much more susceptible to harms in social, physical, and mental development

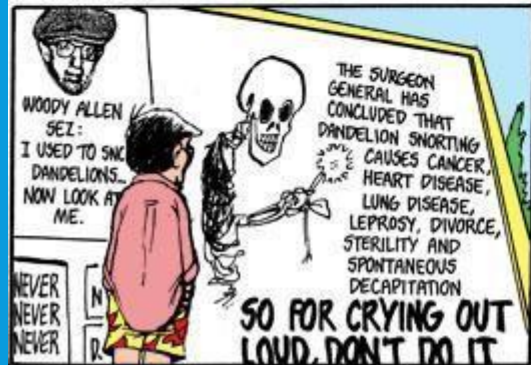
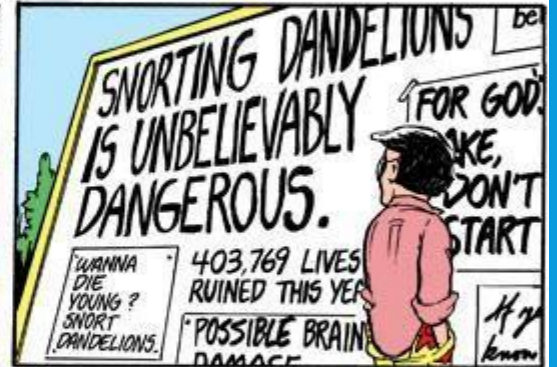


WHAT CAN WE DO?

- Policy
- Prevention
- Parents

WHAT NOT TO DO

- Scare tactics do not seem to work on higher risk kids
- What works is changing how they think about drugs



JUST NO TO JUST SAY KNOW?

Well meaning, but is accurate information the answer?

Safe use or low risk guidelines?

Reasons why youth use?

Safer strains

Healthy cannabis use

What's wrong with this approach?



There are strict laws in place to protect children. Get the facts.

WHAT TO DO TO REDUCE THE RISKS: PREVENTION

- **Prevention** pertains broadly to the avoidance or lessening of problems associated with substance use.

General policies:

- Access (pricing and age restrictions)
- Advertising restrictions

Effective prevention programs



ADVERTISING AND PROMOTION: ADVOCATE REDUCED PROMOTION OF VAPING AND CANNABIS USE

Is there a right strain for
everything?

Edibles?

Advertising



POLICY IMPLICATIONS

Policy should be directed at **delaying, reducing, and preventing** youth use

Research should inform this practice

- Designed from understanding the **etiology of drug use**
- Builds knowledge and skills that **promote protective** and **reduce risk** factors
- Uses **cognitive methods, skill training, and message content** that promotes healthy learning

Talking Pot with youth: A Cannabis communication guide for youth allies.

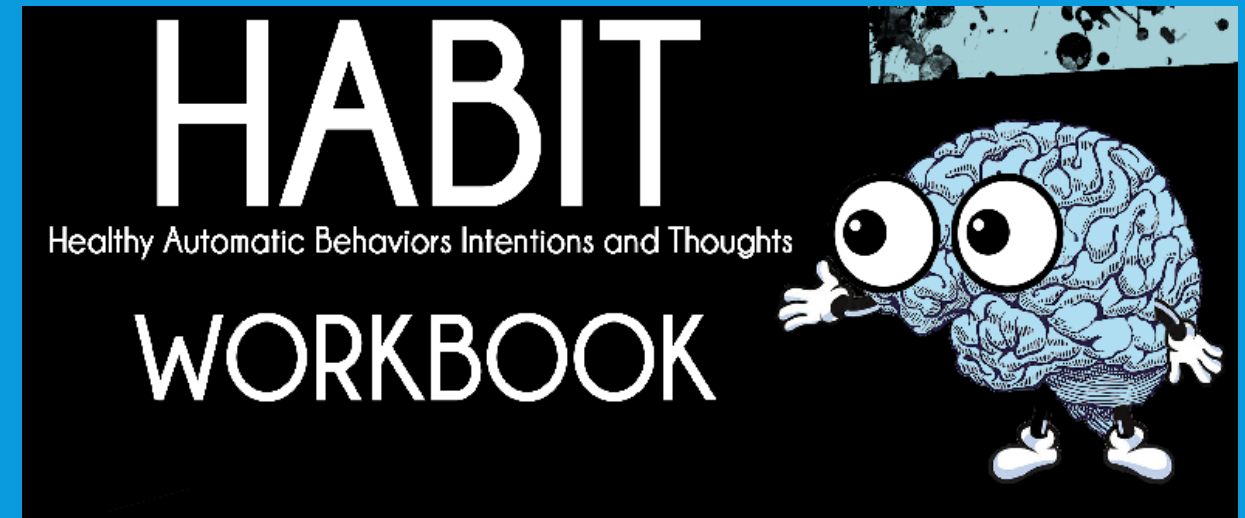
<http://www.ccdus.ca/Resource%20Library/CCSA-Cannabis-Communication-Guide-2018-en.pdf>



PREVENTION APPROACHES THAT WORK

Two approaches that use effective principles of change

- Preventure
- HABIT



PARENT SUGGESTIONS: USE MEANINGFUL AND PERSUASIVE MESSAGES

Lessons

- Listen first
- Ask open-ended questions
- Be persistent, but not argumentative; roll with resistance
- Give time for thought
- Be empathetic

Advice for the ages

"People are generally better persuaded by the reasons which they have themselves discovered than by those which have come into the mind of others. "

Pascal (*Penses*, 1662)



PARENT SUGGESTIONS: WHAT TO SAY AND DO: SEVEN SIMPLE RULES

1. Model low risk use
2. Set clear no substance use expectations
3. Monitor: Ask about where they are going, who they are going with, and what they are going to do.
4. Be supportive; listen and empathize
5. Ask questions about the risks
6. Encourage healthy alternatives
7. Accept mistakes as learning experiences

CONCLUSION

- The real war on drugs is the battle for the hearts and minds of our youth
- We don't want to prevent them from taking the journey, but we do want them prepared for challenges along the way.

