

# SUMMARY OF RESEARCH ARTICLES BY JOHNNY'S AMBASSADORS

Excerpted from [johnnysambassadors.org/suicide](http://johnnysambassadors.org/suicide)

## IMPACT OF MARIJUANA ON ADOLESCENT SUICIDE

2021

[Are Marijuana Use and Suicide Linked?](#) April 2021. Correlation does not mean causation, but that is why we do research — to follow correlations in an effort to determine causation. Data linking marijuana use to people with suicidal ideation, attempts, and completed suicides are steadily increasing. A [study of 3,233 veterans](#) in a cross-sectional, multi-site study by the VA found that cannabis use disorder (CUD) was significantly associated with both current suicidal ideation and lifetime suicide attempts compared to veterans with no lifetime history of CUD.

[Association of Cannabis Use with Self-harm and Mortality Risk Among Youths with Mood Disorders](#) – Jan. 2021. This population-based cohort study of Medicaid-enrolled youths with mood disorders found that the presence of cannabis use disorder was significantly associated with an increased risk of nonfatal self-harm, all-cause mortality, and death by unintentional overdose and homicide. Cannabis use disorder is common among adolescents and young adults with mood disorders and is associated with an elevated risk of self-harm, overall mortality, and death by unintentional overdose and homicide in this already vulnerable population. Cannabis use disorder is a common comorbidity and risk marker for self-harm, all-cause mortality, and death by unintentional overdose and homicide among youths with mood disorders. These findings should be considered as states contemplate legalizing medical and recreational marijuana, both of which are associated with increased CUD.

[Associations of Suicidality Trends With Cannabis Use as a Function of Sex and Depression Status](#) – June 2021. In this study, cannabis use was associated with higher prevalence of suicidal ideation, plan, and attempt among US young adults with or without depression, and the risks were greater for women than men.

[Cannabis use may be associated with suicidality in young adults](#) – June 2021. A NATIONAL INSTITUTES OF HEALTH analysis of survey data from more than 280,000 young adults ages 18-35 showed that cannabis (marijuana) use was associated with increased risks of thoughts of suicide (suicidal ideation), suicide plan, and suicide attempt. These associations remained regardless of whether someone was also experiencing depression, and the risks were greater for women than for men.

[Demographic risk factors for co-occurring suicidality and cannabis use disorders: Findings from a nationally representative United States sample](#) – July 2021. Ever wonder why men who use marijuana seem have suicidal ideation more often than women? This study showed men, emerging adults, Black/African American, Native, and sexual minority groups had elevated risk of co-occurring suicidal ideation and CUD.

[Evaluation of State Cannabis Laws and Rates of Self-harm and Assault](#) – March 2021. Recreational cannabis legalization appears to be associated with relative increases in rates of claims for self-harm among male health plan beneficiaries younger than 40 years. There was no association between cannabis legalization and self-



harm or assault, for any other age and sex group or for medical cannabis. States that legalize but still constrain commercialization may be better positioned to protect younger male populations from unintended harms.

## 2020

[Applying the Bradford Hill Criteria for Causation to the Relationship Between Marijuana Use and Suicidal Behavior](#) – Christine L. Miller, Ph.D. Sept. 2020. As stated above: “Suicidal ideation was observed in one out of fourteen subjects administered a liquid form of pure  $\Delta 9$  – THC (20 mg doses) over a period of 3 days in a clinical setting. Subjects at already higher risk for suicide may similarly show a temporal relationship between suicidal ideation and administration of formulations containing  $\Delta 9$  – THC. Koppel et al. (2014) review reports of suicidal ideation following medical use of cannabinoids.”

[Cannabis use during adolescence and the occurrence of depression, suicidality and anxiety disorder across adulthood: Findings from a longitudinal cohort study over 30 years](#) – Jul. 2020. In this longitudinal cohort study over 30-years, cannabis use during adolescence was associated with depression and suicidality in adult life. Young age at first use and high frequency of use in adolescence may particularly increase the risk of depression in adulthood. All associations were independent of cannabis abuse and other substance abuse during adulthood.

[COVID-19 Is Likely to Lead to an Increase in Suicides](#) – Apr. 2020. We should be establishing mental health initiatives focusing on educating the public and health care workers on how to best deal with the immense pressure and anxiety; this may help minimize the psychosocial toll in these times of crisis. We should also implement targeted mental health surveillance of populations at risk, including patients with prior mental health diagnosis and the elderly, followed by effective interventions to minimize suicidal ideation. And we should proactively establish mental health programs specifically designed for the aftermath of this pandemic. The psychosocial needs of those affected will be unique and interventions for mental rehabilitation should be designed as such. Treatment should be crisis oriented.

[High-Potency Marijuana, Psychosis, and Suicide: Johnny Stack's Story](#) – October 2020 Epoch Times story. In an article, Laura Stack recounts the story of her son's death by suicide after struggling with marijuana addiction. She relates that even when her son Johnny was no longer doing marijuana, the psychosis never went away. In many cases with Cannabis-induced psychosis, even after the marijuana is withdrawn, the mental illness persists. The link between marijuana and suicide is evident. In Colorado, suicide was the leading cause of death among youth aged 10 to 18 between 2013 and 2017, according to the state's health department. The number of 15- to 19-year-olds in Colorado who committed suicide has increased from 48 in 2004 to 75 in 2017, according to statistics from the Colorado Department of Health. In 2017, 32 percent of the individuals in these cases had marijuana present in their bodies at the time of their suicide. Laura and John began [Johnny's Ambassadors](#) in April. Their mission is to educate parents and teens about the dangers of high-THC marijuana, adolescent brain development, and suicide.

[Highlands Ranch couple puts spotlight on marijuana after son's suicide](#) – Mar. 2020. Johnny Stack's parents said he was dabbing, or smoking marijuana with higher concentrations of THC, since he was about 15 years old. They consider dabbing to have caused his schizophrenic episodes. Health Expert Dr. Payal Kohli said teen substance abuse is “a huge, huge red flag for depression and for suicide.” Kohli said studies from the National Institutes of Health have shown marijuana can negatively impact a young person's brain. A fair amount of research shows marijuana can have negative effects for adolescents including changes to the brain's structure (including size and how areas are connected), lower quality of brain connections and less blood flow to parts of the brain.

[How Do You Cope When Your Child Commits Suicide? Our Story](#) – Mar. 2020. Laura Stack shares wisdom from the tragedy of losing her son to suicide. Some coping strategies she offers: Beware of negative self-talk, blame and guilt; go to your primary care physician and get medicine if you need it to help you sleep and take the edge off anxiety; turn to friends, your partner, and God. She also suggests turning loss into something positive and larger than yourself. She has led by example and has started a foundation to educate parents and students about the danger of dabbing. She has set up a url: <http://www.stopteensuicidebypot.org> and will soon have up a web site. She is accepting invitations to speak and share Johnny's story. This her new mission.

[How to talk to your teen about suicide](#) – Feb. 2020. As a parent, it's natural to find the issue of suicide very daunting and it can be difficult to start a conversation on the topic. This is also a difficult topic for a teenager to talk about and knowing that their parent or career can handle a discussion about it can be a big relief. Having someone to talk to might reassure them that they are being heard and understood and provides an opportunity to get more information. Encourage help-seeking by identifying together other people who might be able to help your teen. Let your teen know about the options that are available to them. They can make an appointment with their doctor, talk to a counsellor or other health professional.

[Increase Your Awareness of Understanding Suicide and Reduce Fear of Suicidal People](#) – Apr. 2020. Effective communication is an essential part of a comprehensive approach to workplace suicide prevention. When it comes to raising awareness, too often we have what we call a "state trooper effect" — we pay attention when the urgent matter is right in front of us, but as soon as it goes into our "rear view mirror," we go back to what we were doing before. For this reason, we challenge you to think creatively and "bake it in" rather than "bolt it on." "Baked in" means change is here to stay because it becomes assimilated into the organization's processes and culture. Effective communication is like a slow drip over time. Outreach efforts can raise awareness, share stories, promote resources and inspire action. Messages become "sticky" when they are: 1) simple, 2) repeated over time, 3) recognized and rewarded and 4) help guide decisions.

[Marijuana Use Is Associated with Suicidal Ideation and Behavior Among US Adolescents at Rates Similar to Tobacco and Alcohol](#) – August 2020. This study used data from the National Youth Risk Behavior Survey to examine the association between adolescent marijuana, tobacco, and alcohol use and suicidal ideation and attempts over a period of six years (2011-2017), as attitudes and laws became more permissive of marijuana use. We used logistic regression to control for possible confounders, estimate marginal prevalence ratios (PR's), and assess changes over time. Marijuana was more strongly associated with suicide attempts than ideation, and more frequent use was associated with significantly greater risk. The effect has not changed substantively since 2011, despite changing attitudes toward marijuana. Marijuana is broadly comparable to other substances: results for tobacco were similar, though frequent alcohol use had a significantly stronger association than other substances.

[Risk and protective factors for childhood suicidality: a US population-based study](#) – Apr. 2020. We identified risk and protective factors that show robust and generalizable associations with childhood suicidality. These factors provide actionable targets for optimizing prevention and intervention strategies, support the need to identify and treat psychopathology in school-age children, and underscore the importance of school and family interventions for childhood suicidality.

[7 Common Myths About Teen Suicide](#) – Feb. 2020. Teaching and modeling healthy habits for mental health is yet another way parents can help protect their teens from suicide. Do your best to talk openly about feelings, emotions, and challenges. This will help them understand that it's OK to struggle and that "life is messy and challenging for everyone," says the AFSP. If you're struggling with your own mental health, set a good example by practicing physical and mental self-care, managing stress in a healthful way, and seeking therapy. Doing your part to take away the stigma of mental illness treatment will go a long way toward dispelling any harmful myths and keeping your teen safe.

[Schizophrenia and Suicide](#) – Wed MD Jan. 2020. Whenever anyone has schizophrenia, it's important to pay close attention to feelings of hopelessness and suicidal thoughts and behaviors. This is especially true for people who start to realize how serious their condition is. Becoming more aware of their illness can prompt some people to take better care of themselves. But it can lead to suicidal thoughts in others. That's especially likely in younger people who used to have healthy lives and now recognize how much they've lost. Keep in mind that many antidepressants and antipsychotic drugs carry warnings of increased risk for suicidal thinking and behavior in young adults, adolescents, and children.

[Teen Suicide Warning Signs and Prevention](#) – Jun. 2020. Experts estimate that 20 to 25% of teens admit to thinking about suicide at some time in their lives and for every suicide, there are between 5 to 45 suicide attempts. That makes it even more important for parents, Pediatricians, and everyone else that is regularly around teenagers to understand how to try and prevent suicides. You should also make sure that your kids know that they can ask for help if they ever think about hurting themselves, including calling the National Suicide Prevention Lifeline, calling their doctor, calling 911, or going to a local crisis center or the emergency room.

[Their son ended his life, their research has led them to questions about marijuana](#) – Mar. 2020. Laura Stack recounts the personal story of her son's tragic death by suicide after struggling with marijuana addiction. Johnny suffered from cannabis-induced psychosis and paranoia. He would be clean and have relapses. When he committed suicide there was no trace of marijuana in his blood. The danger of marijuana is that it can permanently change the brain over time. So even when an individual chooses to stop using cannabis, the psychosis may continue past usage. Laura wishes others to understand more about the dangers of cannabis-usage and for Johnny's story to be heard.

[The Reality of COVID-19 Is Hitting Teens Especially Hard](#) – Apr. 2020. I'm trying to deal with the fact that my high school career is over," one student admits. "Losing track and field, prom, and graduation sucks. And there's no way to cope with it because I'm just never going to get to do those things. It feels like the last four years of hard work have been for nothing." The reality is that not only were teens ill-equipped for this crisis, but they're also actually in a much worse position than adults. There's science behind this idea, as Psychology Today writer Christine L. Carter notes: "Teenagers and college students have amplified innate, developmental motivations that make them hard to isolate at home. The hormonal changes that come with puberty conspire with adolescent social dynamics to make them highly attuned to social status and peer group."

[Video: Taylor's story of addiction and suicide](#) – Feb. 2020. Taylor was an individual who struggled with substance abuse after he was given painkillers for an athletic injury in high school. His family shares his story as a son and brother who was loved and admired. Many times, when Taylor's parents tried to find help him, the medical help available only focused on the substance abuse and not the underlying mental issues of depression and anxiety. His family shares their story to show 'stop the stigma' of individuals struggling with addiction. Addiction is not a moral failure or lack of will-power, it is a brain disease. And behind the disease is the person underneath who is wanting to be shown love and to find his place in this world.

[Why suicide risk may increase as we cope with COVID-19](#) – Apr. 2020. The global pandemic caused by the coronavirus has upended every aspect of people's lives. More than three-quarters of Americans say they are living in relative isolation, avoiding small gatherings and public places. Meanwhile, the economic impact of COVID-19 is staggering; more than 16 million U.S. workers filed for unemployment in just three weeks. Certain measures could help reduce suicide risk, including increased screening for mental health crises, tele-mental health treatments for patients experiencing suicidal thoughts, and a focus on physical distance instead of social distance. They urge people to maintain relationships and connections through telephone or video. That's particularly important for those who have numerous risk factors for suicide, like a family history of suicide,



alcohol or substance misuse, physical illness, unwillingness to seek help, and easy access to lethal means. The authors are optimistic about how key interventions can make a significant difference in terms of saving lives.

## 2019

[Alcohol and Marijuana Use as Daily Predictors of Suicide Ideation and Attempts Among Adolescents Prior to Psychiatric Hospitalization](#) – March 2019. Results from the random effect model indicated that alcohol use, marijuana use, hospitalization and sexual orientation were significant predictors of suicide attempts. Results from the mixed-effect model indicated that marijuana use, hospitalization, and sexual orientation were significant predictors of suicide ideation. Study findings extend current knowledge about the longitudinal and day-to-day relationship between alcohol and marijuana use and suicide ideation and attempts. Results underscore the importance of addressing alcohol and marijuana use in interventions with suicidal adolescents, recognizing that sexual minority youth may be at elevated risk for suicide ideation. There is also evidence that marijuana's effect can be more immediate from a recent study illustrating the likelihood of suicidal thoughts increased on the days when an adolescent uses marijuana.

[Association of Cannabis Use in Adolescence and Risk of Depression, Anxiety, and Suicidality in Young Adulthood](#) – Feb. 2019. Although individual-level risk remains moderate to low and results from this study should be confirmed in future adequately powered prospective studies, the high prevalence of adolescents consuming cannabis generates a large number of young people who could develop depression and suicidality attributable to cannabis. This is an important public health problem and concern, which should be properly addressed by health care policy.

[Marijuana use may increase teens' risk of depression and suicide, research review suggests](#) – Feb. 2019. The research published Wednesday in JAMA Psychiatry, reviewed data from nearly a dozen studies that included more than 23,000 people. It found that marijuana use in adolescence is linked with an increased risk of depression, as well as suicidal thoughts and attempts, before age 32. This doesn't mean marijuana causes mental illness, the researchers cautioned. The studies included in the analysis looked only at associations between the two, not cause and effect. "But if you put everything together — animal studies, brain imaging studies, these types of meta-analyses where you study association — we have an indication at least that adolescents should be aware not to smoke cannabis," said Gabriella Gobbi, a coauthor of the study and professor of psychiatry at McGill University in Montreal.

[SUICIDE AMONG YOUTH IN COLORADO, 2013-2017 AGES 10-18](#) – CO Dept. of Public Health and Environment 2019. In Colorado, suicide was the leading cause of death among youth ages 10-18 between 2013 and 2017 (10.1 per 100,000 population).<sup>7</sup> The 2017 Healthy Kids Colorado Survey (HKCS) indicated that 31.4% of Colorado high school students reported feeling sad or hopeless almost every day for two weeks or more in a row during the previous 12 months. Further, 17.0% reported considering suicide, and 7.0% reported making one or more suicide attempts in the previous twelve months.

[The Rate of Teen Suicide In Colorado Increased By 58% In 3 Years, Making It The Cause of 1 In 5 Adolescent Deaths](#) – Sept. 2019. In the past three years, teen suicide in Colorado rose from 12.9 to 20.4 deaths per 100,000 adolescents ages 15-19, according to the report. Overall, that rate put Colorado as the sixth worst state. Nationally, the teen suicide rate is up 25 percent. Colorado's 2019 rate is nearly double that nationwide, 20.4 compared to 10.5. Male teenagers in Colorado were more than twice as likely to complete suicide than female teens. Most deaths were by white victims. The report found that half of young people ages 3 to 17 in Colorado didn't get needed mental health counseling. Many factors could be helping to drive the trend, including a family history of depression and suicide, divorce, abuse, bullying and social isolation.

[Youth Suicide Rate Increased 56% in Decade, CDC Says](#) -Oct. 2019. Suicide and homicide rates have increased in recent years among young people in the U.S., according to a new federal report. The suicide rate among people ages 10 to 24 years old climbed 56% between 2007 and 2017, according to the report from the Centers for Disease Control and Prevention. The rate of homicide deaths decreased by 23% from 2007 to 2014 but then increased by 18% through 2017. Violent death, including homicide and suicide, is a major cause of premature death for the age group. Around 2010, the death rate of suicides among adolescents and young adults surpassed the rate of homicide deaths, according to the report. “The chances of a person in this age range dying by suicide is greater than homicide, when it used to be the reverse,” said Sally Curtin, a statistician at the CDC and an author of the report. “When a leading cause of death among our youth is increasing, it behooves all of us to pay attention and figure out what’s going on.”

[Youth Suicide Rates Reach Highest Level Since 2000—Why?](#) Jul. 2019. Mental health as it is currently practiced in the United States—making diagnoses based on symptom clusters with no biological information, then prescribing multiple medications where the mechanism in individual patients is unknown—does not have a prayer of fixing the epidemic problems of depression, suicide, and addictions. Most of the nation’s addiction treatment programs are missing the essential organ of intervention—the brain. Brain dysfunction is the number-one reason why people fall victim to addiction, why they can’t break the chains of addiction, and why they relapse. Brain imaging studies using a technology called SPECT show that opioids, Vicodin, methamphetamines, cocaine, marijuana, and alcohol all seriously impair brain function. Unless we heal the brain, there’s little chance of breaking free from addiction.

## 2018

[CDC Suicide Prevention Fact Sheet](#) – 2018. CDC developed a technical package that provides information on the best available evidence for suicide prevention. The technical package can be used to inform a comprehensive, multi-level and multi-sectoral approach within communities and states. It includes strategies to prevent suicide in the first place, by decreasing suicide risk factors and increasing protective factors. Strategies range from a focus on the whole population regardless of risk to strategies designed to support people at highest risk. Importantly, this technical package extends typical prevention strategies to approaches that go beyond individual behavior change to better address factors impacting communities and populations more broadly.

[Suicide rising across the US: More than a mental health concern](#) – Jun. 2018. Mental health conditions are often seen as the cause of suicide, but suicide is rarely caused by any single factor. In fact, many people who die by suicide are not known to have a diagnosed mental health condition at the time of death. Other problems often contribute to suicide, such as those related to relationships, substance use, physical health, and job, money, legal, or housing stress. Making sure government, public health, healthcare, employers, education, the media and community organizations are working together is important for preventing suicide. Public health departments can bring together these partners to focus on comprehensive state and community efforts with the greatest likelihood of preventing suicide.

## 2017 and later

[A literature review and meta-analyses of cannabis use and suicidality](#) – May 2016. The acute cannabis-suicidality literature mostly includes descriptive toxicology reports. In terms of death by suicide, the average positive cannabis rate was 9.50% for studies sampling from all suicides, with higher cannabis detection rates amongst suicide decedents by non-overdose methods. We found only 4 studies providing estimates for any chronic cannabis use and death by suicide. After deleting duplicates, we found 6 studies on any cannabis use and suicide ideation, 5 studies on heavy cannabis use and suicide ideation, 6 studies on any cannabis use and suicide attempt (OR=2.23 (1.24–4.00)) and 6 studies on heavy cannabis use and suicide attempt. We currently

lack evidence that acute cannabis use increases imminent risk for suicidality. The evidence tends to support that chronic cannabis use can predict suicidality, but the lack of homogeneity in the measurement of cannabis exposure and, in some instances, the lack of systematic control for known risk factors tempered this finding.

[Acute Risk of Suicide and Suicide Attempts Associated With Recent Diagnosis of Mental Disorders: A Population-Based, Propensity Score–Matched Analysis](#) – Oct. 2014. The risk of dying by suicide was particularly high within the first 90 days after initial diagnosis for many disorders, including depression, substance use disorders, and schizophrenia. Depression and anxiety disorders had elevated risk in the first year for suicide attempts. These data suggest that several mental disorders independently increase the risk of suicide attempts and death by suicide after controlling for all mental disorders and demographic risk factors. Clinicians should be aware of the heightened risk of suicide and suicidal behavior within the first 3 months after initial diagnosis. Part of the risk for suicide may be exerted through the mental disorders that marijuana triggers, particularly psychotic disorders and depression.

[Cannabis Use Disorder and Suicide Attempts in Iraq/Afghanistan-Era Veterans](#) – Jun. 2017. In sum, the findings from the present study suggest that CUD may be uniquely associated with suicide attempts in veterans, even after a wide array of relevant covariates are considered. This finding is highly significant given the high rate of suicidal behavior observed among veterans with mental health disorders as well as the increasing rate of CUD observed among veterans in recent years. Additional research aimed at understanding the complex relationship between CUD, other mental health problems, and suicidal behavior is needed at the present time.

[Marijuana and Suicide: a Growing Risk for Our Youth](#) – Mar. 2017. Not all suicide attempts are successful. But it is shocking and traumatizes a family when someone attempts suicide. Parents have written of these events and how it affects their families, [I wish We had Never Moved Here](#) and [My Son's Psychiatric Surprise](#). Another striking story of survival is on the [MomsStrong.org website](#). Part 2 will explain more about the [suicide risk with marijuana](#). Part 3 will have more specific information about marijuana victims Daniel Juarez, Levy Thamba, Andy Zorn and Shane Robinson.

[Marijuana Use Is Linked to Increased Suicide Risk](#) – Mar. 2017. Marijuana-related suicide is a controversial topic because other websites include commenters who claim marijuana saved their lives. Pot interferes with the reward center of the brain, just like cocaine, alcohol and heroin. So when someone dependent on the drug doesn't have it, their depression or anxiety becomes stronger than previously. After prolonged use, the brain eventually doesn't function as well. For this reason, it's much wiser to rely on yoga, counseling, walking, and other exercise for depression and anxiety. (Others will say that anti-depressants are safer, although we won't actually endorse them, and don't think they're always necessary.)

[Mortality Following Treatments for Cannabis Use Disorders – Predictors and Causes](#) – May 2012. The aim of the study was to determine excess mortality associated with cannabis use disorders. Individuals entering treatment for cannabis use disorders were followed by use of Danish registers and standardized mortality ratios (SMRs) estimated. Predictors of different causes of death were determined. A total of 6445 individuals were included and 142 deaths recorded during 26,584 person-years of follow-up. Mortality was predicted by age, comorbid use of opioids, and lifetime injection drug use. Even a meta-analysis of studies conducted when the strength of marijuana was low, came down on the side of an increased risk of suicide from marijuana use.

[National Institute of Mental Health answers questions about suicide](#). The Centers for Disease Control and Prevention reported that in 2014, suicide was the second leading cause of death for young people ages 10–24. Although these numbers may make suicide seem common, it is still a rare event. Suicidal thoughts or behaviors are more common than suicide deaths and are signs of extreme distress. Suicidal thoughts and behaviors are not harmless bids for attention and should not be ignored.

[The Impact of Adolescent Cannabis Use, Mood Disorder, and Lack of Education on Attempted Suicide in Young Adulthood](#) – Oct. 2014. There is evidence that substance use disorders in adulthood increase the risk of suicidal behaviours. Here we show that any use of cannabis in the early adolescent period is a strong independent predictor of attempted suicide in young adulthood. We know that significant brain maturation continues to occur during adolescence, particularly in limbic structures such as the hippocampus; and within the prefrontal cortex important processes such as synaptic pruning, myelination and programming of neurotrophic levels are occurring at this time. Regular cannabis use can lead to grey matter volume reduction in a range of brain areas, including the medial temporal cortex, the para-hippocampal gyrus, the insula and orbitofrontal regions. There is evidence of a linear association between the age at onset of cannabis use and both white matter integrity and grey matter volume, suggesting that the earlier the onset of use, the greater the toxic effects on the brain. Neuroimaging studies of people who have attempted suicide show structural and functional brain changes that are in keeping with those found in cannabis users. Among other factors, corrected for a prior history of mood disorders, including depression, risk of suicide attempt elevated 7.5-fold.

[U.S. Cannabis Legalization and Use of Vaping and Edible Products Among Youth](#) – Aug. 2017. Cannabis legalization promotes the creation and proliferation of alternative cannabis use products such as edibles and vaping devices. Access to such products may alter how cannabis is consumed by the close to two million adolescents and seven million young adults currently using and may impact age of onset of cannabis use. Edible products such as cannabis-infused baked goods, drinks, and candy, have become increasingly popular but are often inaccurately labeled and deliver variable doses of cannabis' primary psychoactive constituent, tetrahydrocannabinol (THC). Most of the edible cannabis products currently marketed lack empirically based safety standards and packaging regulations, and products continue to be marketed in ways that are attractive to youth. Although the rate of teen use has not increased that much in CO, the POTENCY of what is used by youth in states with legalized marijuana has increased markedly, and because of the dose-response expected from pharmacologic principles, the risk is greater for negative outcomes.

[Young Adult Sequelae of Adolescent Cannabis Use: an Integrative Analysis](#) – Lancet Sept. 2014. In a prospective study, over a thousand subjects, numerous demographic factors corrected for risk of suicide attempt elevated nearly 7-fold. Adverse sequelae of adolescent cannabis use are wide ranging and extend into young adulthood. Prevention or delay of cannabis use in adolescence is likely to have broad health and social benefits. Efforts to reform cannabis legislation should be carefully assessed to ensure they reduce adolescent cannabis use and prevent potentially adverse developmental effects.