

## UNIVERSITY STUDENT HEALTH SERVICES • Fact Sheet

## CANNABIS (MARIJUANA)

**CANNABIS & THC**

Cannabis is a mind-altering substance that comes from the plant *Cannabis sativa*. It contains over 500 compounds, including more than 60 cannabinoids.

- The primary psychoactive cannabinoid is delta-9-tetrahydrocannabinol (THC). THC is most concentrated in the dried buds of the female *Cannabis* plant. It acts on cannabinoid receptors in the brain and other parts of the body, producing a variety of physical and mind-altering effects.
- The amount of THC in cannabis has increased significantly over the past 20 years (from 4% in 1995 to over 20% now), making it a much more potent drug. This can increase the risk of unpredictable side effects and addiction.

**PHARMACOLOGY**

It is difficult to quantify how much THC is in cannabis products. Therefore, it is important for users to know how different forms of cannabis vary in THC concentration, onset of effects, and duration of action.

- **Dosage Forms:** Cannabis can be smoked, vaporized, or ingested as food or drink. THC can also be extracted using solvents, creating highly concentrated products, such as “waxes” and “dabs”, which can contain 50-95% THC!
- **Onset & Duration of Action:** How THC is consumed affects how quickly and how long its psychoactive effects are felt.
  - When inhaled, THC is rapidly absorbed into the bloodstream. Effects are felt almost immediately, lasting up to 4 hours.
  - When taken orally, absorption of THC is slower with a delayed onset of effects at 30 minutes to 3 hours. Effects also last longer, up to 12 hours.
- THC accumulates in the body's fat tissue before being slowly released and eliminated. It can be detectable in the body for 12-30 days after use.
- Chronic cannabis use downregulates cannabinoid receptors, leading to tolerance and increased use.

**THC vs CBD**

- Cannabidiol or CBD is another compound found in cannabis. It is federally legal to sell and consume CBD. Though it is not intoxicating like THC, CBD use is not risk-free.
- Potential side effects of use include drowsiness, decreased appetite, vomiting, diarrhea, and mood changes. Liver damage is another potential risk. The long-term effects of CBD use are also not known.

**UNREGULATED CANNABIS**

- Unregulated cannabis products are made without standard quality or safety controls. They have been found to be contaminated with harmful pesticides, heavy metals, molds, microbes, and mycotoxins.
- Labeling of unregulated cannabis can vary widely. A 2020 study found that labeling accuracy ranged from 17% to 89%.

**CANNABIS & THE LAW**

- By federal law, cannabis is a Schedule I controlled substance, meaning that it is a drug with increased potential for abuse and no known medical use.
- Despite this designation, many states, including Virginia, have legalized medical and recreational marijuana use to varying degrees.

- **What's legal in Virginia:**

- As of July 2021, adults ages 21 and older can legally:
  - Possess up to 1oz of cannabis for personal use.
  - Grow up to 4 cannabis plants per household.
  - Share or transfer up to 1oz of cannabis between people 21 years or older without exchanging anything else of value.
- Medical cannabis can also be sold by a licensed dispensing facility.

- **What's illegal in Virginia:**

- Possession, consumption or purchase of cannabis for those under 21 years of age.
- Distributing or selling cannabis (or possession with intent to distribute/sell).
- Growing more than 4 plants at home or growing plants visible to the public.
- Driving under the influence of cannabis.
- Carrying cannabis while providing transportation services, such as Lyft or Uber.
- Storing cannabis that's open and accessible to the passenger area of a vehicle.

- **At VCU:**

- Since cannabis is a federally controlled substance, possession on VCU property is prohibited and can result in a Student Code of Conduct violation.

**MEDICAL USES FOR CANNABIS**

There are very few known clinical uses for medical cannabis. In a 2020 study, over 30% of patients receiving medical cannabis did not have a condition that current evidence suggests would be improved by using medical cannabis.

- **Medical Marijuana:** While the FDA hasn't approved use of the marijuana plant as medicine, many states have legalized the sale of medical marijuana products by state-licensed dispensaries.
  - These products are available as oils, pills, liquids, nasal sprays, dried leaves/buds, and the plant itself.
  - Medical cannabis is often used to treat chronic pain, but there are not many well-designed studies supporting this.
  - Other uses include treatment of nausea/vomiting, loss of appetite and weight loss from medical conditions, muscle spasms, and epilepsy.
- **Cannabis Medications:** The FDA has approved the use of 4 cannabis medications, 3 of which are synthetic, for the treatment of chemotherapy-induced nausea and rare childhood forms of epilepsy.

**POTENTIAL PROS AND CONS OF CANNABIS USE**

- **What Users Like:** Many cannabis users consider these effects to be positive:
  - A sense of euphoria.
  - Heightened sensory perception (eg. music may sound better, eating may be more pleasurable, etc.).
  - Reduced anxiety (though anxiety is increased in some).
- **What Users Don't Like:** Top 10 dislikes identified in one study included eating too much, sleep problems, issues with productivity and motivation, problems with cognition and attention, memory problems, coughing or lung problems, antisocial tendencies or social awkwardness, physical difficulties not related to the lungs/mouth/throat (eg. feeling sick, dizzy, uncoordinated, etc.), not getting things done, and spending too much money.

## **CANNABIS & YOUR BODY**

Because cannabinoid receptors are located throughout the body, cannabis use can cause a variety of physical effects. In addition to the symptoms listed in the top 10 dislikes on the previous page, other effects include:

- **Cardiac:**
  - Increased heart rate and blood pressure. The increase in heart rate (from 20-100%) can last up to 3 hours after smoking and can lead to palpitations and irregular heart beats. This can also contribute to increased anxiety.
  - Increased risk for stroke and heart disease.
- **Pulmonary:**
  - Increased respiratory rate, which can cause breathing problems.
  - Increased risk for chronic cough, bronchitis, and pneumonia in frequent smokers. This is because cannabis smoke contains many of the same toxins as tobacco smoke. Cannabis aerosol from vaping can also contain harmful chemicals.
  - Worsening asthma.
- Increased insulin and leptin resistance, which can contribute to diabetes and obesity.
- Red eyes, dry mouth.
- Tremors, headaches.
- Nausea, vomiting, and abdominal pain after long-term heavy use. Possible risk for acid reflux, stomach ulcers, or pancreatitis.
- Possible association with certain cancers.

## **CANNABIS & YOUR BRAIN**

Cannabinoid receptors in the brain are concentrated in areas that influence pleasure, memory, thinking, concentration, sensory and time perception, and coordinated movement.

- In small quantities, users find cannabis both relaxing and stimulating. Some may notice increased sociability, but others may feel depressed or anxious. After the initial euphoria, users often feel sleepy.
- In larger quantities (or with stronger strains), users may experience mild hallucinations, anxiety, panic, or paranoia.
- Cannabis use slows reaction time and impacts attention, concentration, and risk assessment. Because THC accumulates in fat tissue, psychomotor impairment can last for 12-24 hours, long after the “high” is gone.
- Like alcohol, cannabis can impair driving because of negative effects on judgement and reaction time.
- Taking cannabis with other drugs, including alcohol, can amplify the effects of both and increase the risk of harm.

### **■ Cannabis & Cognitive Function**

Research suggests that regular cannabis use can have long-lasting negative effects on brain development and impair cognitive function.

- Studies have shown that problems with attention, memory, and learning can last days to weeks after using cannabis.
- When cannabis use starts in adolescence, problems with memory and learning may persist for years. One study showed that heavy users in their teens were unable to recover their lost IQ points after quitting as adults.
- In addition to age at first use, other factors that determine the impact of cannabis on the brain include frequency of use, the amount of THC in cannabis, and whether other substances, such as tobacco or alcohol, are used at the same time.

### **■ Cannabis & Mental Health**

A number of studies have shown an association between chronic cannabis use and mental illness.

- Cannabis use can worsen depression and lead to anxiety. It is associated with suicidal thoughts in adolescents and personality changes, including loss of interest in school, work, and relationships.

- High doses of cannabis can lead to temporary psychotic reactions involving hallucinations and paranoia.
- Studies have also shown an association between cannabis use and schizophrenia in vulnerable individuals. This link is higher in those who start in adolescence (especially males) and use high amounts.
- Research also indicates that cannabis has the potential to cause or worsen problems in a user's daily life. Heavy users often report poorer mental and physical health, as well as lower life satisfaction (in relationships, academics, career goals, etc.).

## **TIPS FOR SAFER USE**

- **Start low and go slow.** Avoid using too much too quickly. Start with a small amount, and wait to feel effects before using more. Because edibles have a delayed effect, it is especially important to remember to dose and not snack!
- **Avoid mixing cannabis with other drugs, including alcohol.** Mixing drugs can lead to unpredictable side effects. Avoid smoking cannabis mixed with tobacco due to the additional health risks of tobacco smoke.
- **Avoid using cannabis before or while driving.** Driving under the influence is illegal and unsafe.
- **Avoid regular use of cannabis.** Using cannabis more than 3 times a week increases the risk of long-term negative consequences.

## **SIGNS YOU SHOULD CUT BACK OR QUIT**

- According to 2023 rates, the highest prevalence of cannabis use disorder (addiction) was among those ages 18-25. Frequency of use was the primary risk factor.
- Cannabis use disorder is characterized by 2 or more of the following, occurring within a 12-month period:
  - Using in larger amounts or for longer than intended.
  - Inability to cut back on use even when desired.
  - Spending a lot of time obtaining cannabis, getting high, or recovering from being high.
  - Craving or strong urge to use cannabis.
  - Failure to fulfill major obligations at work, school, or home.
  - Continued use despite social or relationship issues.
  - Giving up hobbies or activities with friends and family.
  - Using cannabis in situations with risk of physical injury.
  - Using cannabis even when it causes worsening mental or physical problems.
  - Developing a “tolerance”, requiring higher doses to get the same effects.
  - Experiencing withdrawal symptoms when stopping use. The most common symptoms are trouble sleeping, irritability or anger, anxiety, headache, and depressed mood. Other symptoms include decreased appetite, nausea, abdominal pain, tremors, and sweating.

## **WHERE TO GET HELP**

**University Student Health Services, University Counseling Services ([counseling.vcu.edu](https://counseling.vcu.edu)), and Rams in Recovery** can assist students with concerns about cannabis use, whether they are interested in harm reduction, moderation, or quitting. Staff is committed to offering help in a non-judgmental and compassionate manner.

- **Rams in Recovery** offers a wide variety of support, including individual coaching with a Peer Recovery Specialist, recovery meeting options, as well as ways to connect with from the larger recovery community. Call 804-828-1360, email [recovery@vcu.edu](mailto:recovery@vcu.edu), or schedule online at [recovery.vcu.edu](https://recovery.vcu.edu).
- **Other resources** include [www.marijuana-anonymous.org](https://www.marijuana-anonymous.org), [drugfree.org](https://www.drugfree.org), [smartrecovery.org](https://www.smartrecovery.org), [www.samhsa.gov](https://www.samhsa.gov), and [University of Vermont's T-Break Guide](https://www.vermont.edu/health-services/vermont-t-break-guide).