



WHAT IS MARIJUANA?

Marijuana (cannabis) contains chemical compounds called cannabinoids. The main compounds are:

THC

(tetrahydrocannabinol)

- Produces the "high"
- Increases heart rate
- Can cause anxiety and impaired judgment

CBD

(cannabidiol)

- Does not cause a high
- May cause sedation
- Can interact with medications

Available as smoked, vaped, edible, oil, or concentrate products. Modern products often contain much higher THC levels than in the past.

EFFECTS ON THE CARDIOVASCULAR SYSTEM

- Increases heart rate (tachycardia) and palpitations
- Can cause blood pressure fluctuations and orthostatic hypotension
- May trigger abnormal heart rhythms (arrhythmias)
- Can affect blood vessel function and may contribute to heart attack or stroke

OTHER HEALTH CONCERNS

- BRAIN & MENTAL HEALTH**
 - Impaired attention, memory, and learning
 - Higher risk of anxiety, depression, and psychosis (especially with high THC)
 - Greater risk in adolescents and young adults
- RESPIRATORY SYSTEM**
 - Chronic cough, wheezing, and bronchitis with smoking
 - Vaping can still cause serious lung injury
- GASTROINTESTINAL**
 - Can cause cannabis hyperemesis syndrome (CHS) with severe, recurrent vomiting
- PREGNANCY & BREASTFEEDING**
 - THC crosses the placenta and enters breast milk
 - Associated with adverse fetal and neonatal outcomes
 - Avoid marijuana during pregnancy and breastfeeding
- MEDICATION INTERACTIONS**
 - Can interact with blood thinners, seizure medications, and other drugs

WHAT DOES RESEARCH SHOW?

In a large 2024 study of **434,104** U.S. adults, daily cannabis use was associated with:

25%
higher odds
of heart attack

42%
higher odds
of stroke

These are adjusted relative odds, not absolute probabilities and do not prove causation. (Journal of the American Heart Association, 2024)

CONCERNS FOR CHILDREN, ADOLESCENTS, AND YOUNG ADULTS

- The developing brain is more vulnerable
- Can affect attention, memory, and school performance
- Higher risk of cannabis use disorder
- May provoke anxiety, panic, or psychotic symptoms
- Can be dangerous for young people with heart conditions
- Impairs coordination and judgment (including sports)

SPECIAL CONSIDERATIONS FOR HEART PATIENTS

- May worsen tachycardia, palpitations, or arrhythmias
- Can increase risk of heart attack or stroke
- May not be well tolerated in congenital heart disease
- Patients with POTS or dysautonomia may have worsening dizziness, tachycardia, or fainting
- Avoid in inherited arrhythmia syndromes (e.g., long QT syndrome, CPVT)
- No established benefit for treating POTS, arrhythmias, or heart failure

POTS AND DYSAUTONOMIA

THC may worsen common POTS symptoms:

- Higher heart rate
- Increased dizziness or lightheadedness
- More palpitations
- Greater fatigue and brain fog
- Increased risk of fainting

Clinical recommendation:
Patients with POTS or symptomatic dysautonomia should generally avoid THC-containing products.

IMPORTANT SAFETY PEARLS

- Avoid recreational THC**, especially if you have a heart condition, arrhythmia, or POTS.
- Do not assume edibles or vaping are harmless.** They can still cause significant cardiovascular effects.
- Stay hydrated.** Cannabis can cause orthostatic hypotension and increase risk of fainting.
- Know your product.** Potency is often much higher than in the past and can lead to unintended overconsumption.
- Talk openly with your doctor** about any cannabis use, including type, amount, and frequency.

WHEN TO SEEK EMERGENCY CARE

Call 911 for any of the following after cannabis exposure:

- Chest pain or pressure (possible heart attack)
- Fainting with chest pain or severe palpitations
- Sudden weakness, facial drooping, or trouble speaking (possible stroke)
- Severe shortness of breath
- Seizures, unresponsiveness, or severe confusion

KEY TAKEAWAYS

- ✓ Marijuana is not cardiovascularly benign.
- ✓ THC can increase heart rate, affect blood pressure, and may trigger arrhythmias, heart attack, or stroke.
- ✓ Avoid recreational THC, especially if you have a heart condition, POTS/dysautonomia, or are an adolescent.
- ✓ There is no established benefit for marijuana in treating heart disease or POTS.
- ✓ Make informed, healthier choices for a safer future.

