

THC & THE DEVELOPING BRAIN

What the science actually says — for ages 16–20

Your brain is still actively building itself until around age 25 — and THC interacts directly with the system guiding that construction. Here's what research shows about the things that matter most to you.

EMOTIONAL REGULATION

- **THC temporarily boosts mood**, but regular use is linked to **blunted emotional responses** over time — making highs and lows feel flatter.
- A 2021 *JAMA Psychiatry* study found weekly teen cannabis users were **2x more likely to develop anxiety or depression** by their early 20s.
- The prefrontal cortex — your **emotional brake pedal** — is still forming. THC can slow its development, making stress harder to regulate.

HORMONES & PHYSICAL HEALTH

- THC can suppress **LH (luteinizing hormone)**, disrupting testosterone and estrogen — affecting energy, mood, and reproductive health.
- Regular use is linked to **lower testosterone in males** and irregular cycles in some females; effects vary by frequency and potency.
- Smoked cannabis delivers many of the same **lung irritants as cigarettes**. Vaping high-potency concentrates is linked to serious lung inflammation (EVALI).
- THC may help you fall asleep faster but **reduces REM sleep** — the cycle most critical for memory, mood, and hormonal balance.

MEMORY, FOCUS & LEARNING

- The hippocampus (memory hub) has **dense cannabinoid receptors**. Regular adolescent THC use is associated with measurable drops in short-term memory and processing speed.
- A major NZ longitudinal study found frequent teen users showed an average **IQ reduction of ~8 points** by age 38 — effects were smaller in adult-onset users.
- Many effects **improve after stopping**. Research shows significant recovery in attention and working memory after 30+ days of abstinence.

POTENCY, DEPENDENCY & RISK

- Today's cannabis averages **15–25% THC** — 3–5x stronger than a decade ago. Concentrates reach 80–90%. Higher potency means faster tolerance and stronger effects.
- About **1 in 6 teens** who use cannabis will develop dependency (vs. 1 in 11 adults). The younger you start, the higher the risk.
- Research shows THC can cause **epigenetic changes** in developing brains — altering how genes are expressed and raising the risk of **psychosis, schizophrenia, and bipolar disorder**, particularly in those with a genetic predisposition.

RELATIONSHIPS & SOCIAL LIFE

- Heavy use is linked to **motivational decline** — less interest in goals, hobbies, and social connection — though this often reverses when use decreases.
- THC affects the **brain's reward system**, which can make everyday activities feel less satisfying than being high.
- Teens who use cannabis heavily report **more conflict in friendships and family** and lower overall life satisfaction scores.

CAREER & EARNING POTENTIAL

- A landmark study of **50,000+ people** (Agerbo et al.; replicated in U.S. data) found that regular cannabis use before age 21 was associated with **wages 10–20% lower** in the mid-career years.
- Early heavy use predicts **lower educational attainment** — a key driver of lifetime earnings. Each year of added education raises average lifetime income by ~10%.
- The good news: these outcomes are **not fixed**. Reducing use during adolescence significantly narrows the gap in both educational and career outcomes.

Your brain is your most valuable asset.

Every choice is just that — a choice. If you're curious about your own use, the free **CRAFFT screener** online gives you a personal picture in minutes.

Need support?

SAMHSA Helpline: 1-800-662-4357 (free, confidential, 24/7)
teens.drugabuse.gov