

Cannabis Related Symptoms

THC locks onto brain receivers called CB1 receptors and changes how neurons talk to each other, which shifts mood, memory, hunger, and the body's alarm system.

THE ONE-LINE TRUTH

Today's cannabis contains 20–30% THC (the chemical in cannabis that changes how your brain works), which is 5–10 times stronger than cannabis from 30 years ago.

The chain — how it unfolds

1. THC floods CB1 receptors across the brain, jamming the brake pedal on neurotransmitter release in circuits that control mood, memory, fear, coordination, and appetite. — why: Unlike your natural endocannabinoids—which work for seconds in one tiny spot—THC stays bound for hours and hits millions of receptors at once, so the careful moment-to-moment tuning is lost.
2. Within minutes, dopamine signaling shifts in the ventral tegmental area and nucleus accumbens (the brain's reward highway), GABA (the brain's main calming messenger) release drops in the amygdala, and glutamate (the brain's main excite messenger) weakens in the hippocampus and prefrontal cortex. — why: This causes the acute high: euphoria or giggly mood (dopamine surge), anxiety or paranoia (amygdala freed from GABA brakes), red eyes and fast heart (sympathetic nervous system freed from normal brakes, causing blood vessels to widen and heart rate to jump), trouble forming new memories (hippocampus disrupted), slowed thinking and reaction time (prefrontal cortex and cerebellum jammed), and intense hunger—often called 'the munchies'—because the hypothalamus hunger signal is turned way up.
3. With repeated use over days and weeks, neurons pull CB1 receptors off the surface and disconnect the remaining ones from G-proteins (downregulation and desensitization). — why: The brain is trying to protect itself from constant overstimulation, but now you need more THC to feel anything (tolerance), and your natural endocannabinoid tone—which keeps mood, sleep, and appetite steady—is weakened even when you are not high.

4. If you stop using after weeks or months of heavy use, withdrawal kicks in within 1–3 days: irritability, anxiety, insomnia, loss of appetite, sweating, and restlessness. — why: CB1 receptors are still downregulated, so the brake pedal is too weak—your brain is stuck without its artificial crutch (THC) or its natural balance (endocannabinoids that have not fully recovered yet). Symptoms usually peak around day 3–6 and fade over 1–2 weeks as receptors slowly return to the cell surface.
5. In a subset of chronic, heavy users—especially daily users over months to years—cannabinoid hyperemesis syndrome (CHS) develops: severe, cyclic nausea and vomiting that only improves with hot showers and stopping cannabis. — why: Prolonged CB1 dysregulation in the brainstem's area postrema (the vomiting control center) and the enteric nervous system (the gut's own network of neurons) flips the anti-nausea effect of cannabinoids into a pro-nausea state (the exact mechanism is still being studied, but receptor desensitization and paradoxical signaling are central). Hot water activates TRPV1 heat receptors that temporarily override the nausea, so patients compulsively bathe—but the only real fix is stopping cannabis completely and waiting days to weeks for CB1 tone to reset.
6. Over months to years, especially in adolescents, chronic CB1 interference in the hippocampus and prefrontal cortex impairs memory consolidation, attention, planning, and motivation. — why: The brain circuits that build new memories and control impulses are still maturing until the mid-20s, so repeated THC exposure during this window can cause lasting changes in CB1 density and white-matter connectivity (the brain's information highways)—resulting in poorer school or work performance, trouble with complex tasks, and low drive (amotivational syndrome).
7. In individuals with genetic vulnerability or high doses of THC, acute psychosis can emerge: hallucinations (seeing or hearing things that are not there), paranoia, and disorganized thinking. — why: THC-induced dopamine surges in the mesolimbic pathway and weakened prefrontal control mimic the circuit changes seen in schizophrenia; adolescents and people with a family history of psychotic disorders are at highest risk, and heavy use before age 18 approximately doubles the lifetime risk of developing a psychotic disorder.
8. Once dependence and habit loops are entrenched in the basal ganglia, the person feels trapped: using cannabis no longer brings much pleasure (tolerance), but stopping brings intense discomfort (withdrawal) and the loss of a coping tool the brain now believes it needs to sleep, eat, or calm down. — why: The reward circuitry has been hijacked—cannabis becomes the default solution for stress, boredom, or insomnia—and breaking the cycle requires both time (for CB1 receptors to recover) and new behavioral tools (sleep hygiene, stress management, social support) to replace the old habit. With abstinence, CB1 receptor density and sensitivity begin to recover within days to weeks, withdrawal fades, cognitive function improves, and most people regain normal mood, memory, and motivation—but the process requires patience and often benefits from counseling or medical support.

Spot it — what you see, and why

- Severe nausea and vomiting that comes in waves or cycles: THC (the main active chemical in cannabis) builds up in fat tissue over time with heavy, regular use. When blood levels of THC rise or swing, it triggers the area postrema (the brain's vomit center at the base of the brain) and disrupts normal signals in the gut, causing intense nausea and vomiting that comes in episodes—often lasting hours to days—then calms down, then comes back again.
- Relief from very hot showers or baths (compulsive bathing): Hot water activates TRPV1 receptors (heat-sensing nerve endings in the skin) that send competing signals up to the brain and spinal cord, temporarily overriding the nausea signals. This short-term relief is so specific to cannabis hyperemesis that many people spend hours in scalding showers—and doctors use this behavior as a key diagnostic clue.
- Belly pain in the upper stomach area (epigastric pain): Cannabis slows the normal squeezing motion of the stomach (called delayed gastric emptying) by acting on cannabinoid receptors in the nerves that control digestion. Food sits too long in the stomach, causing cramping, pressure, and discomfort in the upper belly.
- Anxiety, restlessness, or feeling on edge: Cannabis affects cannabinoid receptors in the amygdala (the brain's alarm center) and the hippocampus (memory and emotion center). With chronic use, the brain adapts by turning down its own natural calming signals; stopping or erratic dosing then causes rebound anxiety as the brain struggles to regain balance, and stress hormones like cortisol become dysregulated.
- Memory problems or trouble focusing (short-term memory loss): THC binds to CB1 receptors in the hippocampus (the brain's memory-forming center) and the prefrontal cortex (the front part of the brain that plans and focuses). This slows the electrical signals neurons use to form and retrieve memories, making it hard to remember what just happened or stay on task.
- Increased appetite or intense hunger ('the munchies'): THC activates CB1 receptors in the hypothalamus (the brain's hunger control center) and releases extra ghrelin (the body's main hunger hormone). This makes you feel very hungry even when your body has enough food, and it heightens the reward feeling from eating, especially sweet or fatty foods.

Red flags — act now

- Severe dehydration from non-stop vomiting—dry mouth, dizziness when standing, very dark urine, confusion, or fainting—because this can lead to kidney injury or dangerous salt imbalances in the blood
- New hallucinations, delusions, or paranoia—especially in teenagers or young adults—because cannabis can trigger lasting psychosis in at-risk people, and early treatment improves outcomes

- Chest pain, pressure, or fast, irregular heartbeat, since cannabis raises heart rate and can rarely cause heart attacks, arrhythmias, or strokes, particularly in people with existing heart disease
- Thoughts of self-harm, suicide, or harming others, which can happen during severe anxiety, withdrawal, or psychotic episodes and require immediate safety evaluation
- Severe or unusual belly pain that does not fit the typical upper-stomach cramping pattern, because other emergencies—such as appendicitis, pancreatitis, or bowel obstruction—must be ruled out

Treat it — in this order

1. Stop all cannabis use immediately and remove access to cannabis products → Removes the chemical (THC) that is overloading CB1 receptors in the brain. Within hours to days, the brain's stress circuits (amygdala and locus coeruleus), memory pathways (hippocampus), and movement control (cerebellum and basal ganglia) start working normally again. Prevents new episodes of panic, psychosis, or severe intoxication.
2. Reassurance, calm environment, and time (supportive care for acute intoxication) → Reduces fear and panic by letting the person know they are safe and that symptoms will pass as THC clears from the body (usually 4 to 6 hours for acute effects of smoked or vaped cannabis, up to 12 hours for edibles). A quiet room, dim lights, and gentle talk calm the overactive stress circuits (amygdala and sympathetic nervous system—the fight-or-flight system).
3. Short-acting benzodiazepine (e.g., lorazepam 0.5 to 1 mg by mouth or sublingual) for severe panic or agitation that does not improve with reassurance → Activates GABA-A receptors, which are the brain's main 'calm-down' switches. GABA (gamma-aminobutyric acid, the brain's main quieting chemical) opens channels that let chloride ions flood into neurons, stopping them from firing panic signals. This directly breaks the panic loop and slows the racing heart. Works within 20 to 30 minutes and lasts 4 to 6 hours.
4. Antipsychotic medication (e.g., risperidone 1 to 2 mg or olanzapine 5 to 10 mg by mouth once daily) if psychosis (hallucinations, delusions, paranoia) lasts more than 48 hours or is severe → Blocks dopamine D2 receptors in the mesolimbic pathway (the brain circuit running from the ventral tegmental area deep in the midbrain to the nucleus accumbens in the front) that generates false beliefs and strange perceptions when overactive. Stops the psychosis from becoming permanent or triggering a full schizophrenia-spectrum illness in someone with genetic vulnerability.

5. Motivational interviewing or cognitive-behavioral therapy (CBT) focused on cannabis use disorder → Helps the person understand why they use cannabis (boredom, stress, peer pressure, sleep problems, escape from painful feelings) and builds skills to handle those triggers without the drug. Retrains the brain's reward system (ventral striatum and prefrontal cortex) to find satisfaction in other activities—exercise, hobbies, social connection. Reduces relapse rates by 30 to 40 percent compared to no therapy, per meta-analyses and American Psychological Association guidelines.

Your top priorities at the bedside

1. Place the patient in a quiet, low-stimulus room with dim lighting and minimal noise, and assign one consistent caregiver — why: THC overstimulates cannabinoid receptors (brain cell docking stations) in the amygdala (fear center), causing sensory overload and paranoia; reducing stimulation prevents escalation of anxiety and agitation and decreases the need for sedating medications
2. Establish IV access and give normal saline bolus 500–1000 mL over 1 hour if the patient shows signs of dehydration—dry mucous membranes, a fast heart rate (tachycardia) (heart rate over 100), or orthostatic low blood pressure (hypotension) (blood pressure drop when standing) — why: Cannabis causes vasodilation, which lowers blood pressure, and hyperemesis causes fluid loss; dehydration reduces kidney blood flow (perfusion) (blood flow to kidneys), leading to acute kidney injury and electrolyte disturbances like low potassium (hypokalemia) (low potassium) from vomiting
3. Monitor continuous pulse oximetry, blood pressure every 15 minutes, and cardiac rhythm if the patient reports chest pain or has heart rate over 120 beats per minute — why: THC activates sympathetic nervous system (fight-or-flight response), increasing myocardial oxygen demand (how much oxygen the heart muscle needs); in patients with underlying coronary artery disease or cocaine co-use, this can cause heart attack (myocardial infarction) (heart attack) or arrhythmias (irregular heart rhythms)