

Effects and risks of taking 7-hydroxymitragynine (7-OH) once a week

What is 7-OH?

7-hydroxymitragynine (7-OH or 7-HMG) is a minor alkaloid that occurs naturally in kratom leaves at very low concentrations (typically <2 %). Modern manufacturing concentrates this compound or even synthesizes it, producing gummies, tablets and shots that can contain 7-OH at much higher concentrations (up to 98 %) [446689859730499†L286-L329] . The World Health Organization’s pre-review report notes that 7-OH is a partial agonist at the mu-opioid receptor with **5–23 times greater binding affinity and 5–20 times more intrinsic activity than mitragynine**, the principal kratom alkaloid [911360903854248†L324-L337] . Experimental data show that morphine has roughly **8–10 times higher binding affinity** than 7-OH but **only three times the intrinsic activity**, illustrating that 7-OH is a potent opioid-like compound [911360903854248†L324-L332] .

Because of this potency, government agencies treat concentrated 7-OH products as **strong unapproved opioids**. The U.S. Food and Drug Administration (FDA) states that 7-OH products “are potent opioids not proven safe or effective” and that no form of 7-OH has been approved as a drug or dietary supplement [415024451285954†L118-L155] . The Texas Department of State Health Services warns that 7-OH has “**up to 13 times the potency of morphine**” and can cause nausea, vomiting, agitation, confusion, rapid heart rate, high blood pressure, breathing problems, sleepiness, loss of consciousness, seizures and respiratory depression [368091677662979†L295-L350] . The Kansas Department of Health and Environment notes that mixing 7-OH with alcohol or sedatives increases the risk of life-threatening respiratory depression and death [400298371389418†L31-L60] .

Immediate effects of a single dose

At low doses, 7-OH binds to mu-opioid receptors and produces **strong analgesia, sedation and mood elevation**. Treatment-center sources describe onset within 10–45 minutes depending on the form (liquids act faster than tablets) and effects such as **euphoria, relaxation and pain relief** [664331645950618†L170-L286] . The WHO report notes that in animal studies 7-OH and related alkaloids slow gastrointestinal transit and behave like opioids [911360903854248†L352-L358] . High doses produce typical opioid side-effects—**nausea, vomiting, constipation, miosis, pruritus and respiratory depression** [480203547542382†L126-L137] . Poison-control data show that users often experience agitation, confusion, sweating, rapid heart rate and high blood pressure [260317078175138†L150-L185] . Because 7-OH has **no medical oversight and products vary widely in strength**, there is a real risk of accidental overdose even from a single dose.

Pharmacokinetics and how long it stays in the body

Only a few pharmacokinetic studies exist. The WHO report summarises animal data, showing that isolated 7-OH has a **half-life of 3.3–9.4 hours** when given intravenously or orally in dogs; oral bioavailability ranges from **3 % to 17 %** 【911360903854248†L288-L315】 . In human studies with kratom decoctions and teas, the mean elimination half-life of mitragynine (the precursor to 7-OH) is around **23 ± 16 hours** 【911360903854248†L304-L307】 , but there are no controlled human data on 7-OH pharmacokinetics 【911360903854248†L304-L309】 . Treatment-center blogs extrapolate from these data, suggesting that small doses taken once a week may be cleared from the body after a few days, whereas heavier or daily use results in accumulation over a week or more 【79568162846776†L158-L165】 . Nevertheless, because 7-OH's half-life is measured in hours and its metabolic precursor persists for about a day, **weekly use will not accumulate continuously**, but it also means that the substance leaves the system quickly, potentially leading to craving and redosing.

Tolerance, dependence and addiction

Rapid tolerance and dependence

7-OH's potency at mu-opioid receptors means that tolerance and dependence develop quickly. The WHO report notes that repeated daily dosing for **4–5 days** produces tolerance to opioid-like effects and cross-tolerance with other opioids 【911360903854248†L366-L368】 . A treatment-center article warns that **early tolerance and withdrawal symptoms can appear within the first 1–4 weeks** of use, progressing to established dependence by 1–3 months and full-blown addiction thereafter 【420218659780595†L460-L480】 . The same article explains that opioids like 7-OH change the brain's reward system, so **addiction can develop in as little as a few weeks**, especially with regular use 【420218659780595†L543-L545】 . Because 7-OH products are concentrated, these timelines may be even shorter 【420218659780595†L480-L481】 .

Escalation of use despite starting once a week

A 2024 study analysing posts on Reddit documented how users who began by taking **one 7-OH extract shot once a week** quickly escalated to heavy daily use. One poster wrote that after starting with weekly 7-OH shots, he soon developed a \$20-per-day habit and needed rehabilitation 【842992216929832†L525-L552】 . Another described starting with one shot every other day and “**within a year I'm spending \$1,000 a week**” 【842992216929832†L552-L606】 . These anecdotal accounts highlight that initial infrequent use can rapidly become compulsive because tolerance drives users to increase both dose and frequency.

Withdrawal symptoms

Stopping 7-OH after repeated use triggers opioid-like withdrawal. The UVA ToxTalks bulletin states that regular use causes dependence and withdrawal with **anxiety, muscle aches, rhinorrhea, yawning and gastrointestinal distress** [480203547542382†L152-L160] .

Treatment centers describe a four-phase withdrawal timeline: early symptoms (restlessness, anxiety) begin **6–24 hours** after the last dose; peak symptoms (severe muscle pain, vomiting, diarrhea, intense fatigue and mood crashes) occur at **1–3 days**; sub-acute symptoms (depression, insomnia, low energy) last **4–7 days**; and psychological symptoms (cravings, depression, anxiety) can persist for **weeks to months** [983272233433287†L313-L345] . This timeline indicates that even weekly dosing can leave some users in a continuous cycle of mild withdrawal and craving between doses.

Case report of severe dependence

A recent medical case report illustrates how potent 7-OH extracts promote rapid dependence. A 39-year-old man initially used kratom daily for pain but switched to concentrated 7-OH eight months before hospital presentation. He quickly escalated to **10 tablets of 80 mg** (≈800 mg/day) and was spending **US\$150 per day**; he reported that his body “starts shaking as soon as it starts to wear off” and that he “tried quitting on [his] own, but nothing has worked” [628594767631294†L683-L699] . The authors note that natural kratom contains low levels of 7-OH, whereas commercial extracts are enriched or semi-synthetic, giving much greater mu-opioid receptor potency and **higher dependence risk and more severe withdrawal** [628594767631294†L619-L623] .

Health risks of using 7-OH once a week

1. **Respiratory depression and overdose.** At high doses or when combined with other depressants (alcohol, benzodiazepines), 7-OH can cause life-threatening respiratory depression, loss of consciousness and death [400298371389418†L31-L60] . The FDA notes that 7-OH has been linked to emergency-room visits and deaths and that its potency can exceed that of morphine [884924888747970†L60-L117] .
2. **Unpredictable potency and contamination.** Because 7-OH products are unregulated, the amount of active ingredient varies widely. The FDA warns that some products contain up to **98 % 7-OH** [446689859730499†L286-L329] , while others may have less. Without quality control, users cannot accurately dose themselves, increasing the risk of overdose even with infrequent use. Contaminants (e.g., heavy metals, adulterants) have also been found in kratom products [967682516743968†L336-L360] .
3. **Rapid tolerance leading to increased use.** Early tolerance develops within weeks [420218659780595†L460-L480] . Users who start with once-a-week use often find that the same dose becomes less effective, prompting them to take larger or more frequent doses, as seen in anecdotal reports [842992216929832†L525-L552] .
4. **Physical dependence and withdrawal.** Even intermittent use can lead to physical

dependence. Withdrawal symptoms—restlessness, sweating, cramps, diarrhea, depression—occur within a day of the last dose and can persist for weeks

【983272233433287†L313-L345】 . For some individuals, the discomfort during the interval between weekly doses encourages increased frequency.

5. **Potential for addiction and compulsive use.** Because 7-OH strongly activates the brain’s reward pathways, addiction can develop in **a few weeks**

【420218659780595†L543-L545】 . A treatment-center article warns that for concentrated 7-OH extracts this timeline may be even shorter 【420218659780595†L480-L481】 . Case reports show that users often progress from occasional use to severe dependence and financial hardship 【628594767631294†L683-L699】 .

6. **Long-term health problems.** Chronic 7-OH use is associated with liver toxicity, seizures, cardiac issues, gastrointestinal problems and psychological disorders such as anxiety and depression 【967682516743968†L336-L360】 【368091677662979†L295-L350】 .

Claims that weekly use prevents tolerance

The Pain News Network interviewed a 7-OH manufacturer who claimed that users can avoid tolerance by **taking small doses and skipping the product for at least one day a week**

【759086276059019†L97-L100】 . However, this advice is not backed by scientific studies. In the same article, other users cautioned that 7-OH is highly addictive and that they “**can’t stop taking them**” and suffer digestive problems and high costs 【759086276059019†L115-L120】 . Health agencies do **not recommend any regimen for safe use**; instead they advise avoiding 7-OH products entirely because of their potential for addiction and harm 【368091677662979†L295-L350】 【415024451285954†L118-L155】 .

Summary and guidance

Taking a dose of 7-OH once a week may initially produce pain relief and sedation, but because 7-OH is a potent opioid-like compound, **even infrequent use can lead to rapid tolerance, physical dependence and escalation of use.** Government health agencies warn that 7-OH products have no approved medical use, vary widely in strength and can cause **respiratory depression, seizures, addiction and death** 【400298371389418†L31-L60】

【415024451285954†L118-L155】 . The World Health Organization reports that 7-OH has 5–23 times greater mu-opioid receptor affinity than mitragynine and that repeated dosing quickly produces tolerance and cross-tolerance 【911360903854248†L324-L337】

【911360903854248†L366-L368】 . Anecdotal evidence shows that users who start with once-a-week extracts often progress to heavy daily use because tolerance and withdrawal develop so rapidly 【842992216929832†L525-L552】 . In other words, **there is no evidence that “weekly” dosing prevents addiction or health risks.** People seeking pain relief or mood improvement should consult a healthcare professional and avoid unregulated 7-OH products.

Disclaimer: This report summarizes information from scientific literature and public health advisories. It is not medical advice. If you or someone you know is using 7-OH or kratom and is experiencing adverse effects or withdrawal symptoms, contact a medical professional or a poison control center.