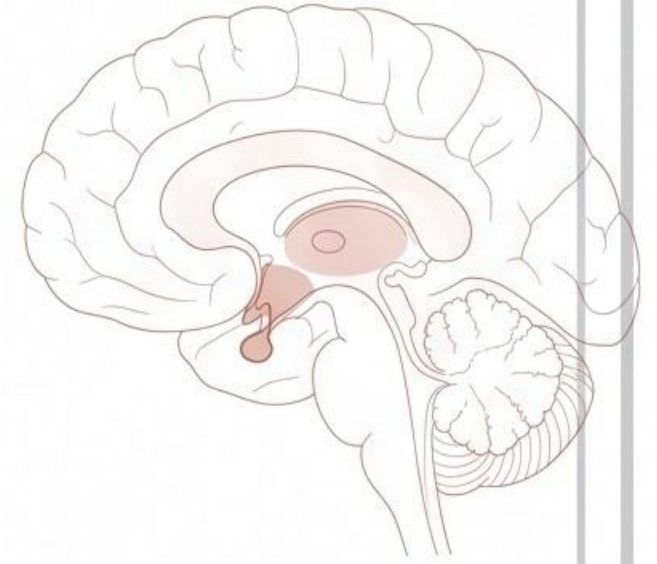




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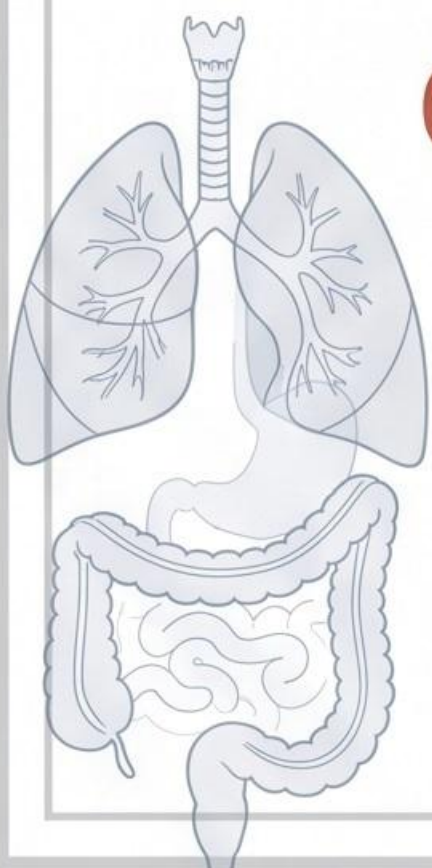
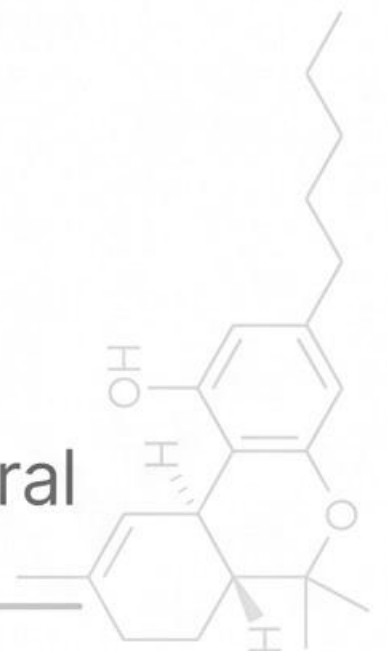


THC *Pharmacokinetics* for Clinicians

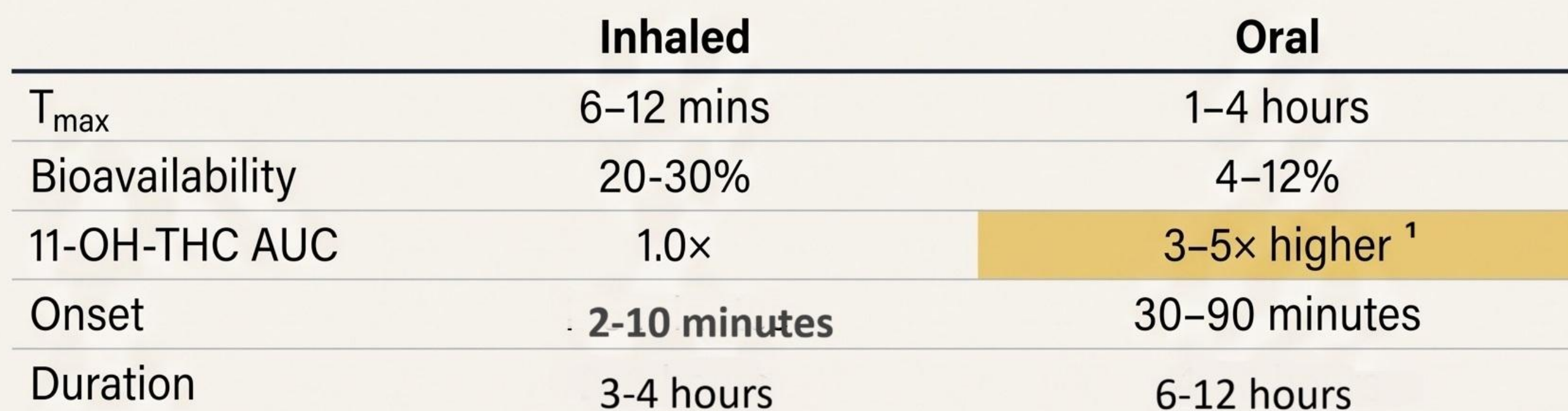
From absorption to elimination.
Why the route changes everything.

Inside this series

- | | | |
|----|-----------------------------------|----------------------|
| 01 | The pharmacokinetic arc | Inhalation vs. oral |
| 02 | The abortive profile | Rescue indications |
| 03 | The maintenance profile | Chronic dosing |
| 04 | The universal dose formula | Calculate any flower |



SWIPE TO READ THE SERIES →



01

The Abortive Profile for Acute or Episodic Problems

When rapid CNS penetration and titratability matter more than duration.

~10 min

$T_{\max}$ for inhaled THC. Bypasses first-pass metabolism, limiting 11-OH-THC formation.
Therapeutic window: 3–4 hours.

Rescue Indications

- **Migraine & cluster headache** — trigeminovascular modulation. 2–10 min onset interrupts the cascade before central sensitization. Oral dosing is too slow.²
- **Breakthrough pain & spasticity** — CB1-mediated nociceptive signaling. Low-dose vaporized THC (3.56%) reduces neuropathic breakthrough pain (NNT ~3.5). Self-titration during unpredictable flares.³
- **Nausea, panic & sleep onset** — bypasses GI tract for chemo-induced nausea; rapid limbic dampening for panic (low-dose essential); **short duration** limits next-day hangover for insomnia.^{4,5}

Clinical Pearl

The steep dose-response curve of inhaled THC is not a bug. It is a clinical feature. A patient can take one inhalation, assess effect at ten minutes, and decide whether to escalate. The real-time feedback loop is impossible with oral dosing, where 60-minute time to onset forces a commitment to a dose the patient cannot undo. Think about inhaled THC as you would an Albuterol MDI.



The Maintenance Profile

When steady-state coverage and prolonged duration outweigh the need for speed.

**60-90
min**

$T_{\max}$ for oral cannabis extract. Sustained plasma levels, prolonged half-life. Therapeutic window: 8–12 hours — covers most patients on BID dosing.

Maintenance Indications

- **Chronic neuropathic pain** — Cannabis extract (2.5 mg THC + 1.25 mg CBD) reduced spasticity and pain by 61% vs. 46% placebo (CAMS).⁶
- **Sleep maintenance** — Oral THC/CBD oil: 60% of chronic insomnia patients no longer met diagnostic criteria after 2 weeks. Slow onset, long duration — ideal for overnight coverage without midday dosing.⁷
- **Chronic anxiety & PTSD** — Real-world data in 269 PTSD patients (18-month follow-up) showed sustained improvements in symptoms, anxiety, sleep, and quality of life.⁸
- **Appetite, cachexia & seizures** — Oral cannabis extract (2.5 mg THC + 1 mg CBD) improved appetite in cachexia trials.⁹

Clinical Pearl

BID covers the day. Most patients stabilize on morning + evening dosing alone. Food increases and delays absorption, so dose consistently with meals.



The Universal Dose Formula

A simplified inhalation prescribing protocol using standardized ~20% THC flower.

The Formula

$(\text{mg loaded} \times \text{THC\%}) \div \text{puffs to clear} = \text{mg THC per puff}$

Example: $250 \text{ mg} \times 0.20 \div 10 \text{ puffs} = 5 \text{ mg THC per puff}$

Prescribing Protocol

Step 1: Standardize Strain Potency

— instruct the patient to routinely select flower testing at approximately 20% THC; variation between 18–22% does not produce clinically meaningful differences.

Step 2: Prescribe by Puff Count

— tell the patient exactly how many puffs to take, just as with a metered-dose inhaler; each puff from a standard 250 mg bowl of ~20% flower delivers approximately 5 mg THC.

Dosing Reference — 20% THC, 250 mg Bowl

1

puff/puffs
≈ 5 mg

2

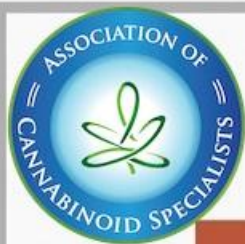
puff/puffs
≈ 10 mg

3

puff/puffs
≈ 15 mg

4

puff/puffs
≈ 20 mg



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