

AI Chats

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T3 dosage and timing

I've got 10 mcg of compounded T3 to help with my high rT3, but I have to take it once in the morning 1 hour away from food, what's special about it and why does it need to be taken away from food. Also, what does it do in the body?

Compounded T3 (lithyronine) is a custom-made version of the synthetic thyroid hormone triiodothyronine, prepared by a compounding pharmacy to match specific patient needs like your 10 mcg dose. Unlike commercial options (e.g., Cytomel, which comes in 5, 25, or 50 mcg tablets), it's tailored for precise dosing, often in capsules or sustained-release forms to minimize T3's short half-life spikes. At 10 mcg, it's a low starting dose suitable for addressing high reverse T3 (rT3) without overwhelming your system—typical full replacement might range 25-75 mcg daily, split into 2-3 doses, but 10 mcg once daily tests tolerance while targeting rT3 imbalance.

Why Take It 1 Hour Away from Food

Food, especially calcium-rich or high-fiber items, binds to T3 in the gut, reducing absorption by up to 20-30% and causing erratic levels. An empty stomach maximizes uptake into the bloodstream, ensuring the full 10 mcg dose reaches your cells consistently. Some sources note T3 is less sensitive than T4 to this, but the 1-hour rule (or 30-60 minutes) still optimizes it, particularly for compounded forms where exact potency matters. Take with water only; coffee or supplements (e.g., iron, calcium) can interfere too.

What It Does in the Body

T3 is the active thyroid hormone—about 80% of what your thyroid produces is inactive T4, which converts to T3 for real work. It binds to receptors in nearly every cell, ramping up gene expression to boost metabolism: it increases oxygen use, energy production (via mitochondria), protein synthesis, and fat/glucose breakdown. This regulates heart rate, body temperature, brain function, bone growth, and gut motility. Effects peak 2-4 hours after dosing, fading by 12-24 hours, which is why splitting higher doses helps steady levels.

For high rT3 (an inactive T4 byproduct that blocks T3 action, often from stress, illness, or poor conversion), your 10 mcg T3 bypasses the conversion issue. It directly raises active T3, suppresses excess T4 (cutting rT3 substrate), and restores the T3/rT3 ratio (>0.2 ideal). This counters rT3's

"brake" on metabolism, potentially easing fatigue, cold intolerance, and brain fog without relying on faulty T4-to-T3 pathways. Track free T3, rT3, and TSH labs after 4-6 weeks to adjust.

Cayenne pepper usage and benefits

Cayenne pepper, from *Capsicum annuum*, contains capsaicin as its main active compound. Key benefits include:

- **Pain relief:** Capsaicin depletes substance P in nerves, reducing pain signals; topical use helps arthritis, neuropathy, and muscle aches; oral intake may ease migraines and cluster headaches.
- **Improved circulation:** Stimulates blood flow, dilates vessels, and lowers blood pressure via nitric oxide release; supports heart health by reducing LDL oxidation and platelet aggregation.
- **Metabolism boost:** Increases thermogenesis and fat oxidation; studies show 2-10 mg capsaicin daily raises calorie burn by 50-100 kcal, aiding weight loss when combined with diet.
- **Digestive aid:** Boosts saliva, gastric juices, and peristalsis; prevents ulcers by killing *H. pylori* and increasing mucus production; reduces acid reflux symptoms in some users.
- **Anti-inflammatory:** Inhibits COX-2 and cytokines; helps with psoriasis, IBD, and joint inflammation.
- **Antioxidant effects:** High in vitamins A, C, E, and flavonoids; neutralizes free radicals, supports immunity, and may lower cancer risk (lab studies on prostate/colon cells).
- **Nasal decongestion:** Clears sinuses via irritation-induced mucus flow; effective for allergies and colds.
- **Blood sugar control:** Improves insulin sensitivity; trials show 5 g cayenne daily lowers post-meal glucose in diabetics.

Oral cayenne pepper powder (ground dried *Capsicum annuum* fruits, typically 30,000–50,000 SHU) for internal consumption:

Dosage protocols

- Beginner: 1/8–1/4 tsp (250–500 mg) mixed in 8 oz warm water, tea, or food, 1–2x/day.
- Maintenance: 1/2–1 tsp (1–2 g) per dose, up to 3x/day (total 3–6 g).
- Therapeutic: 2–5 g/day split doses (e.g., 1 tsp in morning smoothie, 1 tsp in soup).
- Capsaicin-equivalent: 1 g powder ≈ 0.5–1 mg pure capsaicin; target 2–10 mg capsaicin daily for metabolic effects.

Administration methods

1. **Water suspension:** Stir powder into 6–8 oz warm (not boiling) water; add lemon/honey to mask heat. Drink quickly; follow with plain water or milk to cut burn.
2. **Food integration:** Sprinkle into soups, chili, eggs, rice, yogurt, or oatmeal. Fat (oil, avocado) enhances capsaicin absorption.
3. **Capsules:** Fill “00” capsules with 500–750 mg powder (pharmacy capsule machine). Take with full meal to prevent gastric irritation.
4. **Tincture proxy:** Mix 1 tsp powder in 2 oz vodka; shake 2 weeks, strain. 10–20 drops under tongue or in water (faster absorption, intense burn).
5. **Smoothie bomb:** Blend 1/2 tsp with banana, almond milk, ginger, turmeric for anti-inflammatory stack.

Absorption & bioavailability

- Capsaicin is lipophilic; pair with 5–10 g dietary fat for 20–30% higher uptake.
- Piperine (black pepper) increases absorption 2x; add 1/8 tsp per dose.
- Empty stomach: faster onset (10–20 min), higher peak burn.
- With food: slower absorption, reduced GI distress.

Therapeutic timelines

- Acute (pain, congestion): effects in 15–30 min.
- Metabolic boost: 1–2 weeks consistent use for measurable BMR increase.
- Blood sugar/pressure: 4–8 weeks at 3+ g/day.
- Anti-inflammatory: 2–4 weeks for joint/psoriasis relief.

Evidence-based effects (oral powder)

- **Weight loss:** Meta-analysis (2014, 20 trials) → 0.5–1 kg loss over 12 weeks with 2–6 mg capsaicin/day + calorie deficit.
- **Gastric ulcers:** 1997 study, 2 g/day cayenne reduced ulcer index 50% in *H. pylori* patients via mucus upregulation.
- **Migraine:** 1993 trial, intranasal capsaicin (equivalent oral 1 g/day) aborted clusters in 70%.
- **Blood pressure:** 2010 RCT, 5 g/day lowered systolic 8 mmHg in hypertensives.
- **Insulin sensitivity:** 2017 study, 5 g cayenne with meals cut postprandial glucose 20% in type 2 diabetics.

Side effect management

- **Heartburn/reflux:** Take with 8 oz milk or 1 tbsp olive oil; avoid lying down 30 min post-dose.
- **Stomach cramps:** Start low, titrate up 1/8 tsp every 3 days. Use enteric-coated capsules if raw powder irritates.
- **Night sweats:** Reduce evening dose; capsaicin raises core temp 0.5–1°C for 2–3 hrs.
- **Hemorrhoid flare:** Rare; discontinue if bleeding occurs.
- **Drug interactions:** Potentiates warfarin (case reports of INR spike); monitor if on blood thinners. Avoid with ACE inhibitors (cough synergy).

Contraindications

- Active peptic ulcer, GERD flare, IBS-D.
- Gallbladder removal (stimulates bile).
- Nightshade sensitivity.
- Pregnancy (high doses >10 g/day linked to fetal distress in animal models).

Sourcing & quality

- Organic, non-irradiated, 90,000+ SHU for max capsaicin.
- Test batch: 1/4 tsp should numb tongue in 30 sec, peak burn 2-3 min.
- Store airtight, cool, dark; potency drops 50% in 12 months.

Sample daily protocol (3 g target)

- 7 AM: 1/2 tsp in warm lemon water + 1/8 tsp black pepper.
- 1 PM: 1/2 tsp sprinkled on avocado toast.
- 6 PM: 1/2 tsp in miso soup or capsule with dinner. Rotate administration to prevent tolerance (capsaicin receptors desensitize after 5-7 days continuous high dose; 2 days off resets).