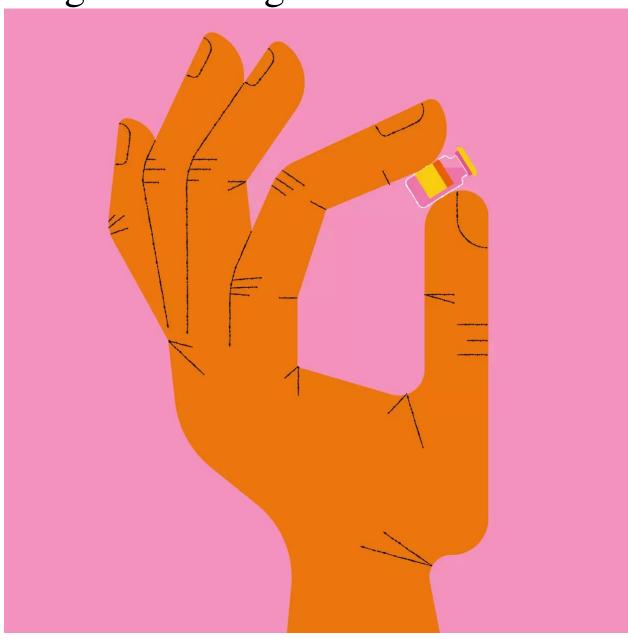
Microdosing Ozempic? Why some people are playing doctor with weight-loss drugs



(Patrick Hruby / Los Angeles Times)

By Jackie Snow

Nov. 5, 2024 3 AM PT

- Some patients are using lower-than-recommended dosages of generic weight-loss drugs to slim down while saving money.
- Despite the disapproval of pharmaceutical companies, doctors and plastic surgeons are experimenting with these treatments to aid patients with gradual weight loss.

Shauna Bookless never imagined she'd become her own pharmacist. But after gaining more than 20 pounds during undergraduate and graduate school and feeling unhappy with her weight, the Hollywood resident found herself mixing vials in her kitchen to create her own doses of a popular weight-loss drug.

"I'm playing doctor," Bookless said, describing her foray into the world of do-it-yourself GLP-1 medication, injections developed to control diabetes and now also used for weight loss.

Her journey began conventionally enough. She'd first heard of Wegovy, a GLP-1 made by Novo Nordisk, from a friend's success story. Bookless then talked to her own doctor, who told her it wasn't medically necessary and insurance wouldn't pay for it because her body mass index wasn't high enough to qualify her for coverage (without insurance, the cost can be \$1,300 a month). So Bookless took matters into her own hands. And it led her to the fringes of a booming weight-loss drug market.

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First, she considered her alternatives. She could go to a med-spa, but that would cost about \$1,000 a month, still too much for the new therapist. Then, another friend at work told her about getting it directly from a laboratory that produces the product. Bookless wasn't sure about this method — it meant having no doctor to turn to if she had questions — but a friend of hers assured her it was a legitimate, and a much cheaper route. She put her order in, paid \$130, and two days later, in August, a package with a vial of white powder, sterile water, and needles arrived in the mail. It was semaglutide, a drug sold under the brand names Ozempic (for diabetes) and Wegovy (for weight loss).

Following instructions provided in the packaging, she mixed the powder and water and put it in the fridge, taking out one-fourth to one-half a milligram to inject herself in the stomach once a week.

Instead of consistently stepping up the dose to a target dose of 2.4 mg as the manufacturer's instructions and FDA's guidance recommend, she's been sticking close to the amount she started with. Even at these lower-than-recommended levels, her appetite soon winnowed and she began to shed weight. Bookless has used two months' worth of the semaglutide over three months of jabbing herself weekly.

Twenty-three pounds of weight loss later, she's figuring out how low of a dose she can use.

"I don't want to lose any more weight," she said. "But I also don't want to gain the weight back. It's going to be an experiment to go off of it."

As demand for popular weight-loss drugs like Wegovy and Zepbound skyrockets, Bookless' DIY approach highlights the lengths some are willing to go to slim down while saving money. Some patients, with or without the help of doctors, are experimenting with "microdosing" weight loss drugs — using smaller-than-recommended amounts — in order to stretch limited supplies, reduce costs and even potentially curb side effects.

Meanwhile, medical experts are raising concerns, saying that there are not enough data about the effects of such weight loss drugs on those with lower BMIs and that the consequences of such off-label use remain largely unknown.

"We don't have any clearly identified risks of people using it if they don't meet criteria," said Dr. Alyssa Dominguez, a specialist in endocrinology, diabetes and metabolism at the USC Keck School of Medicine. "But we don't know because we haven't been looking at those people in the scientific way."

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When the semaglutide medication Wegovy first hit the market in 2021, it became the first weight-loss drug to get FDA approval since 2014 and immediately became the go-to weight-loss treatment. At the heart of these medications are two key hormones, depending on the drug: GLP-1 (glucagon-like peptide-1) and GIP (glucose-dependent insulinotropic polypeptide). These naturally occurring hormones play crucial roles in regulating insulin, appetite and metabolism.

At first, these medications were used to treat diabetes. But when the FDA finally gave pharmaceutical companies approval to use these same drugs for weight loss, demand for them skyrocketed.

The enthusiasm wasn't just about dropping pounds. A <u>landmark study</u> in 2023 found that semaglutide reduced major cardiovascular events by 20%, even in patients without diabetes. Perhaps most striking was a 19% lower death rate from any cause. With more than 70% of American adults affected by obesity or overweight — conditions that increase risk for heart attack, stroke and premature death — these findings suggested that injecting oneself with Ozempic, or any number of the other brands semaglutide are sold under, could offer significant long-term health benefits.

The popularity led to sky-high prices, supply shortages and, in some cases, desperate measures by those seeking to lose weight.

"No one size fits all."

— Dr. Vijaya Surampudi, associate director of the UCLA Medical Weight Management Clinic, on microdosing weight-loss drugs.

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No matter the drug, microdosing is an inexact art. The weight-loss drug users and doctors whom The Times spoke to for this story all had slightly different takes: staying closer to the starting dose of 0.25 milligrams, cutting down to as low as 0.1 milligrams or simply refraining from injecting the medication every seven days as recommended. While "microdosing Ozempic" joins the lexicon on gentler-sounding

beauty terms like "<u>baby Botox</u>" and "<u>mini face lift</u>" that make procedures seem more approachable, the reality is that some people do see benefits from lower doses.

Even as this approach gains popularity, pharmaceutical companies advise patients against adjusting dosages.

"We do not condone these practices and it's important to understand that for Ozempic, only the marked doses on the pens (0.25, 0.5, 1.0 and 2.0 mg) are approved for use (with 0.25 mg only approved for initiation and not maintenance)," a Novo Nordisk spokesperson said in an email. "The approved doses are the only dose strengths that have been studied as maintenance doses in our phase 3 clinical development program."

"The products are not interchangeable and should not be used outside of their approved indications," the spokesperson added.

Dr. Vijaya Surampudi, associate director of the UCLA Medical Weight Management Clinic, works with patients who want to stay at lower doses. She emphasizes that patient responses to these medications vary widely and the need for higher doses doesn't necessarily correlate with how much weight someone needs to lose. Instead, she carefully monitors each person's reaction to the medication, tailoring the approach based on their body's unique response.

"No one size fits all," she said.

But there are practical limitations in microdosing weight-loss medications, she said. Brand-name GLP-1 medications come in fixed-dose pen injectors, making personalized dose adjustments impossible.

Bookless found a way around this roadblock by acquiring a compounded version of the medication, a copy of brand-name medicines. Federal law normally bans pharmacies from making copycat versions of commercially available drugs. But when medications are in short supply, regulators don't consider them "commercially available" — opening the door for pharmacies to create and sell similar products.

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Aug. 14, 2024

Dr. Tasneen Bhatia, better known as Dr. Taz, an integrative medicine physician and wellness expert, offers compounded GLP-1 to clients at <u>her Los Angeles office</u>, where she estimates about 10% to 20% of clients are microdosing the medication.

Bhatia sees microdosing as an option for clients who come to her office with the goal of losing 20 pounds or less or patients who have proved to be sensitive to the side effects of GLP-1, which include nausea, constipation, lack of energy and diarrhea.

Because <u>early research</u> shows many patients regain weight once they cease use of GLP-1, Bhatia says many doctors expect patients to use these medications for the rest of their lives. Bhatia, however, sees a future where people microdose the drug on and off as needed, something she acknowledges is not yet conventional wisdom.

"I think by switching it up, you're challenging the metabolism a little bit, and so using it more, maybe once a quarter, to get back on track," she said. "The goal should never be that someone has to be on something forever."

Dr. Suzanne Trott, a Beverly Hills board-certified plastic surgeon, started a microdosing clinic after her patients had used the medication to reach their goal weight and hoped to maintain it. She works only with tirzepatide — the drug behind Zepbound that uses both GIP and GLP-1 — which, in her experience, has fewer side effects. She sources the drug from a compounding company that has facilities in Southern California. Trott said she works with her patients to figure out the amount and schedules injections as needed.

"Not all of medicine is science; some of it is an art."

— Dr. Suzanne Trott, Beverly Hills-based plastic surgeon

"They can try to microdose however they want it," she said. "Not all of medicine is science; some of it is an art."

The microdosing works so effectively that she said it's cutting into the plastic surgery side of her business. She recommends it as a safer alternative to liposuction for some patients.

No matter how effective doctors and patients say microdosing weight-loss drugs are, this form of medical experimentation may be short-lived. Once shortages ease, companies peddling these alternatives could face a crackdown. Last week, the Food and Drug Administration announced that the shortage of Eli Lilly's Zepbound was over, though Wegovy remains scarce. Eli Lilly then sent cease-and-desist letters to many companies offering compounded versions of tirzepatide.

Shortly after being sued by the Outsourcing Facilities Assn., a compounding trade group, the FDA <u>reversed its decision</u> and said it would allow pharmacists to continue making compounded versions of the drug while it reexamines the shortage.

Semaglutide compounders could be next: Novo Nordisk <u>has asked the FDA</u> to bar compounding pharmacies from making compounds of its weight loss and diabetes drugs, arguing the medication is too complex for it to be manufactured by others safely.

<u>It's survival of the fittest for brands trying to get in on the Ozempic weight-loss industry</u>

July 18, 2024

With the compounded versions still available (for now), Trott said her clinic is almost at capacity, with a couple dozen patients. She remains optimistic about the widespread appeal of these treatments.

"It's something that's become a part of a lot of regular people's lives," she said. "Kind of like the way plastic surgery used to be just something that celebrities did, and now this is something that is accessible to everyone."