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Microdosing of obesity medications: A Perspective Statement from the Access and Policy Working Group

Microdosing is a marketing term used to describe the administration of very small, often subtherapeutic amounts of obesity medications - at levels far below the Food and Drug Administration approved and commercially available doses.

Microdosing should not be confused with the clinically accepted practice of patient-centered prescribing of lower, FDA-approved doses of obesity medications. Clinicians often employ strategies such as more gradual dose escalation or the use of submaximal doses to reduce adverse effects. In obesity medicine, clinicians may also prescribe doses below the FDA- approved range - not as a standard starting point - but as an adjustment for patients who either cannot tolerate full doses or who are "high responders" (i.e., those who achieve clinically meaningful weight reduction at reduced drug exposure). In contrast, marketing campaigns that promote "microdosing" and initiate all patients at very small, non-FDA-approved doses, often represent a commercial tactic rather than an evidence-based, clinical approach. Unlike these marketing approaches, clinician-directed dose modifications are best individualized, with patient-centered decisions aimed at balancing safety with efficacy.

This Perspective Statement from the Access and Policy Working Group outlines key considerations across ten categories relevant to clinicians, patients, and policymakers. In short, the Working Group recognizes the growing interest in "microdosing" obesity medications, particularly the use of Glucagon-like peptide-1 receptor agonists (GLP -1 RA) - based therapies. While this practice may reflect efforts to improve tolerability and affordability, it raises potential concerns regarding safety, efficacy, and regulatory oversight.

1. FDA approval status

Microdosing of GLP-1 receptor agonists (GLP-1 RAs) is not FDA-approved and does not align with established regulatory standards. GLP-1 RA therapies and their doses are approved based on rigorously conducted clinical trials that support their efficacy not only for weight reduction but also for the management of obesity-related complications such as type 2 diabetes, reduction of cardiovascular risk, treatment of metabolic dysfunction-associated steatohepatitis with moderate to advanced liver fibrosis, and improvement of obstructive sleep apnea.

Patient Tip: Ask your clinician whether your obesity medication and dose are FDA-approved and supported by reputable clinical trials.

2. Clinical evidence

Little to no peer-reviewed evidence supports the safety or efficacy of microdosed regimens for treatment of obesity. Beyond weight reduction, evidence supporting the health outcomes benefits of GLP-1 RA are at the doses that were evaluated in clinical trials. Evidenced-based FDA approved doses are not reflected by initiating treatment at substantially lower ("micro") doses or by payer mandates that require the cycling of several months on obesity medications, followed by months off therapy.

Patient Tip: Valid clinical reasons exist for prescribing lower-than-approved doses of obesity medications, such as tailoring treatment for patients who are highly responsive or who cannot tolerate full doses. However, when it comes to "microdosing," you should discuss with your clinician the evidence supporting the effectiveness of the prescribed dose - or at minimum - the rationale behind it. If you are initially prescribed an obesity medication at a dose much lower than FDA-approved, if this dose lacks evidence for safety or efficacy, and if you are not provided a compelling rationale for health benefits, then these are factors that may help guide your treatment decisions.

3. Tolerability

Starting at lower-than-approved doses may reduce initial side effects such as nausea or gastrointestinal discomfort. However, initiating treatment with doses substantially lower than approved doses may not result in clinically meaningful health benefits.

Patient Tip: While lower doses may have fewer side effects, the low doses often prescribed with microdosing may have no proven health benefits.

4. Cost considerations

The lower doses of obesity medications typical of microdosing may have a lower monetary cost. However, this may come at the expense of a higher human health cost if doses of GLP-1 RA therapies are not utilized at doses proven to improve health outcomes.

Patient Tip: You should balance potential monetary cost reductions against the potential loss of health outcomes benefits.

5. Compounding pharmacy use

Microdosed formulations are often supplied by compounding pharmacies, which are not subject to the same manufacturing standards as FDA-approved products. The OMA has issued Position Statements on compounded peptides and online prescribing of obesity medications.

- Compounded peptides: An Obesity Medicine Association Position Statement

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- Frequently asked questions to the 2023 Obesity Medicine Association Position Statement on Compounded Peptides: A call for action
- Obesity Medicine Association statement regarding online pharmacologic management of obesity

Patient Tip: If your "microdose" obesity medication comes from a compounding pharmacy, then you should ask your clinician if it was supplied by an FDA-registered manufacturer. You should also ask your clinician to detail the risks and benefits of compounded medications.

6. Device access

Although certain GLP-1 receptor agonists (GLP-1 RAs) can be administered by syringe, they are most commonly provided in manufacturer-supplied injector pens. These devices, validated through clinical trial evaluation and regulatory approval, are designed to enhance dosing accuracy and patient convenience. Insufficient training in proper use of syringes may lead to dosing errors, with the potential for adverse health outcomes.

Patient Tip: Microdosing typically does not involve administration by a pen device. Using a syringe instead of a pen requires clear instructions and dosing support.

7. Risk of use inconsistent with the prescribing information ("off label")

Microdosing may increase the risk of medication use for non-medical or cosmetic reasons, especially when cost and access barriers are lowered.

Patient Tip: Be honest with your clinician about your goals; medical treatment should align with health outcomes, not appearance alone.

8. Dosing precision

Subtherapeutic dosing may lead to inconsistent results and unpredictable pharmacodynamics.

Patient Tip: If your dose seems unusually low or ineffective, then ask whether it aligns with clinical guidelines.

9. Ethical prescribing

Clinicians must balance patient preferences with ethical standards, evidence-based care, and regulatory compliance. Clinicians who engage in microdosing should confirm that patients have completed an informed consent process and ensure the practice is pursued solely to promote patient health, rather than solely for the clinician's financial benefit.

Patient Tip: Engage your clinician through a explanation of risks and benefits - even if it results in saying "no" to unproven approaches.

10. Long-term outcomes

No data exists on the long-term health impact of microdosed obesity medications, including weight maintenance, metabolic health, or safety.

Patient Tip: Ask about long-term goals and how your treatment plan supports sustained health - not just short-term weight reduction.

11. Conclusion

The Access and Policy Working Group acknowledges that valid clinical circumstances exist in prescribing lower-than-approved doses of obesity medications, especially where patients have demonstrated heightened responsiveness or experience intolerance at higher doses. Patient-centered care rightly values flexibility and affordability; however, such adaptations must always be anchored in safety, efficacy, and ethical standards. Clinicians play a critical role in educating patients about approved obesity medication dosing regimens and in advocating for expanded access to evidence-based obesity treatments, ensuring that individualized care remains both responsible and scientifically grounded.

12. Takeaway messages

- Microdosing is a marketing term used to describe the administration of very small, often subtherapeutic amounts of obesity medications, which differs from clinically guided dose personalization.
- FDA-approved dosing ensures safety, consistency, and access to manufacturer-supported delivery systems.
- Microdosing efficacy has not been validated through controlled clinical trials, nor is it supported by regulatory review.
- Clinicians and patients should focus on prescribing strategies that prioritize health benefits and refrain from the initiation of unvalidated, subtherapeutic doses of obesity medications driven purely by marketing or financial incentives.

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