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WHITE PAPER

GLP-1s are Changing Americans' Bodies—But Not the Way You Think

Demand for GLP-1 agonists has been steadily climbing. From 2019 to 2023, the number of patients without diabetes who started GLP-1 treatment for obesity rose 700%; and demand for these 'miracle' weight loss drugs isn't letting up. J.P. Morgan predicts that the U.S. market will exceed $100B and 30 million users by 2030. And while it seems like there's a new research article coming out about GLP-1s every week, there's still a lot we need to learn. One topic of particular interest is the medication class' effect on muscle mass and the implications of that loss on overall health and long-term weight maintenance.

"It's pretty clear from the evidence that you see loss of muscle mass with GLP-1s," Todd Norwood, Omada's Senior Director of Clinical Services, said. "When we look at scientific literature today, it looks as though it's more severe than if you were losing weight without a GLP-1."

However, this subject is more complex than the quantity of muscle lost. Weight reduction with GLP-1s comes with additional challenges and benefits that require the right education and support.

Muscle Mass is only Part of the Story

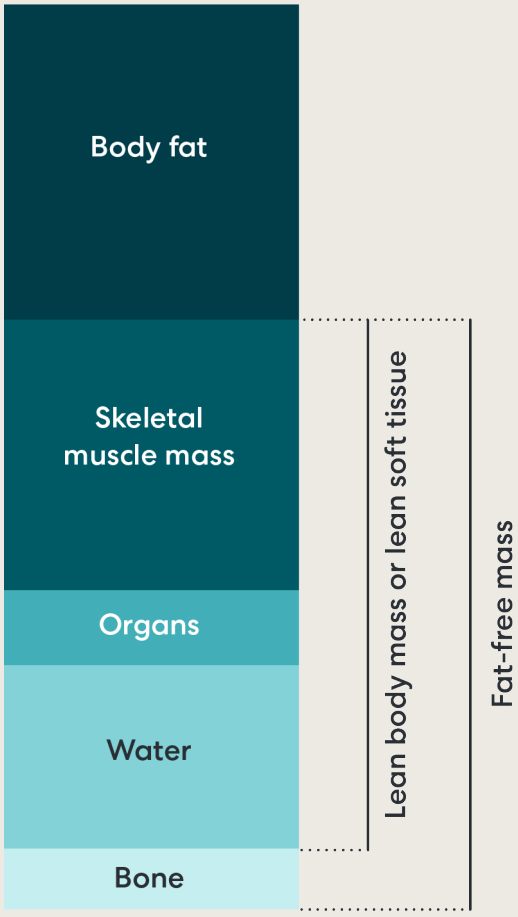
Despite what some headlines may have you believe, GLP-1s do not directly cause muscle loss, but rather, it's a known result of weight loss. Like other weight loss interventions, GLP-1s lead to weight loss via a caloric deficit, resulting in a reduction of both fat mass and lean mass, which includes organs, bones and muscles. While this may sound alarming, it makes sense when you think about the body as a connected system.

Let's start with the simple phrase "mass moves mass." In relation to weight health, this phrase reminds us that on average, people who are heavier (i.e. have more mass) tend to have more muscle, because they need more muscle to move a heavier body. Now, when people lose weight, the same theory comes into play and they will lose both fat and muscle mass. Additionally, there are other parts of the body, like your **heart, liver, and kidneys**, that also get smaller now that they are powering a smaller body.

With general weight loss, it's normal for **one-fourth of that reduction** to come from lean mass. However, the magnitude of lean body mass loss via GLP-1s is **typically greater** than the lean mass lost when people lose weight from lifestyle interventions alone. In the **SURMOUNT-1** study (tirzepatide, also known as Zepbound®) the average weight loss was 21%, with 26% of that coming from lean mass. With the **STEP-1** (semaglutide, also known as Ozempic® and Wegovy®) study we saw a larger proportion of lean mass loss, where 45% of the 15% weight loss came from lean mass. While these numbers are beyond the normal **one-fourth-fat-free mass rule**, the overall body composition (lower body fat percentage) was still favorable at the end of the study.

Lean Mass vs. Muscle Mass

It's important to note that while **lean mass** is often used as a surrogate for muscle mass, they are not the same thing. Most research studies measure lean mass, which refers to everything in the body that isn't fat, and includes muscle, organs, water, and bones, all of which can be impacted during weight loss. Keep this in mind when you're looking at studies that talk about changes in body composition with weight loss. For example, **in this study**, researchers found that 26% of the weight loss came from lean mass loss, which is not the same as saying a quarter of the weight loss was muscle.



A Focus on Physical Function

When discussing muscle health, we often get caught up in how much muscle is lost and forget about the purpose of our muscles, which is to move our bodies (among other things). It seems logical that less muscle mass means less strength and movement, but in the context of GLP-1s, people have shed a significant amount of mass (i.e. weight to move), which can lead to improved physical function, i.e. bodily movement.

In the **SURMOUNT-1 study** mentioned above where a quarter of the weight loss was attributed to lean mass, researchers found an improvement in patient-reported physical function. This is in line with other physical function research outcomes that have shown improvements in **walking test scores** and preservation of **sit-stand scores** despite the loss of lean body mass seen with GLP-1s.

Does Preserving Muscle Mass Still Matter?

If loss of lean body mass is expected and physical function is preserved or sometimes improved, do we really need to focus on preserving muscle? The short answer is yes, and here's why:

There is a risk of sarcopenia, a medical condition where people experience age-related muscle loss. And while sarcopenia can happen in the absence of weight loss, there's concern that GLP-1 therapy may **increase the risk** of sarcopenia, especially in high-risk individuals such as older adults. Fortunately, physical activity, especially resistance training—which we'll talk more about later—is an effective form of treatment and prevention of sarcopenia.

Additionally, preserving and increasing muscle mass can help maintain weight loss during and after GLP-1 use. The amount of muscle mass a person has directly impacts the speed of their metabolism, and preserving it maintains metabolic function. Most patients who take GLP-1s eventually **discontinue the medications**, and on average, they regain **two-thirds** of weight they lost in just one year after stopping the medication.

"Muscle is like a furnace for burning calories," Norwood said. "The more muscle mass you have, the higher your resting metabolic rate is, so the higher amount of calories you're going to burn just at rest. And as you move, you're going to burn more calories too, and that's important for the long run, maintaining the weight loss that you achieve with a GLP-1."

That's why maintaining muscle mass, or even increasing it, while losing weight on GLP-1s, can help offset the slower metabolism that can occur during rapid weight loss. It can also help preserve other hard-fought GLP-1 benefits like blood sugar control.

Exercise to Optimize GLP-1 Outcomes

Consistent exercise is a major part of preserving muscle mass while taking a GLP-1. However, not all exercise is created equal. For example, cardio or any low-intensity steady-state (LISS) workouts like certain yoga practices, are not particularly helpful for stimulating muscle activity. On the other hand, **resistance training** offers unique benefits to help preserve muscle mass.

"One of the great benefits of resistance training is that it stimulates the muscles, and that action helps to maintain the muscle and preserve the muscle mass," Norwood said.

Resistance training is the **only non-pharmacological intervention** consistently known to improve muscle mass, strength and power. Resistance training (also known as strength training) generally entails upper and lower-body exercises using free weights (i.e. dumbbells, kettlebells, or barbells), weight machines, resistance bands, or even just body weight. The stress that this type of physical activity puts on muscles **helps increase muscle strength and improve muscle function**, and can even delay **aging-related processes**.

Resistance training might conjure up visions of bodybuilders and intense gym sessions, but in fact, resistance training comes in a variety of forms. Research indicates that **minimal-dose approaches** to resistance training are highly effective in a population health context.

We know it's not easy or accessible for everyone to rely on expensive gym memberships, so we often recommend a type of minimal dose resistance training referred to as resistance "**exercise snacks**," where there's a high volume of reps with minimal to no equipment. In our program, we provide members with examples of short bursts of body weight exercises for as short as five minutes that fit seamlessly into daily routines.

"Meeting people where they are is at the crux of supporting people on their GLP-1 journey," Jade McGill, an Omada health coach who works directly with members on GLP-1s, said. "Many of our members will say they don't have time for strength training. And I get to show them, they're strength training every day without thinking about it. They often think it's all about heavy barbells and throwing things up in the air. It seems a lot more intimidating than it really is."

NO EQUIPMENT EXERCISE SNACKS

Counter push-ups in the kitchen while waiting for your food to heat up in the microwave

Bicep curls with a water bottle in between meetings

30 seconds of calf raises at your standing desk

Hand kneading dough rather than using a mixer

Wall sits while brushing your teeth

Lunges in place, moving forward, sideways, and backwards

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I think we're definitely becoming a source of fact-checking for our members.

—

Jade McGill

Omada Health Coach

GLP-1 Patients Deserve Reliable Health Education

It’s hard to address a health issue without fully understanding it. In the U.S., nearly **9 out 10** adults struggle with health literacy, or the ability to obtain, understand, and use pertinent information to make informed health decisions. Limited health literacy and patient education can worsen outcomes—and the arena of GLP-1 treatment is no exception. It doesn’t help matters that **more than half of Americans** turn to social media networks—a hotbed for fast-spreading health misinformation—for their health guidance.

“The scale has become so important to people over the years, as society has drilled that into them,” Ralph Calzadilla, another Omada health coach who works directly with members on GLP-1s, said. “But they don't see the other piece of it, as far as how exercise can help them from a metabolism standpoint, from a strength standpoint, from a capability standpoint, such as being able to pick up their kids, play with their kids, being strong and capable as they age. All of those other practical things, they haven't completely emotionalized them.”

McGill and Calzadilla are part of a team of Omada Exercise Specialists—health coaches with additional credentials, i.e. Certified Personal Trainer (CPT) or Certified Strength and Conditioning Specialist (CSCS). Eligible members who are receiving GLP-1-specific support and who are safe to exercise have access to a dedicated exercise specialist like McGill or Calzadilla. Through their work supporting the exercise regimens of **members on GLP-1s**, McGill and Calzadilla said they’ve become trusted partners and important sources of health information. “I think we're definitely becoming a source of fact-checking for our members,” McGill said. “I’ll have members tell me, ‘I heard this thing on **#SkinnyTok**! Is it true?’ And then I'm like, ‘I'm so glad you asked. Here's what I can tell you about this.’”

Strong Coach-Member Relationships are Key to Success

Studies show that developing a rapport with patients is an integral part of changing health behaviors and achieving better long-term health outcomes. Omada's team of Exercise Specialists know that relationships help lay a foundation to promote behavior change among the **100,000 members** who are taking, or have taken GLP-1s.

"You have to really develop relationships," Calzadilla said. "It's that building of trust, that building of rapport, that's so important. It's what makes members want to ask you questions, want to contact you about concerns and things that are on their mind."

Helping members steadily and sustainably build new health behaviors has always been at the core of Omada's care delivery. That's no different when it comes to encouraging resistance training for members taking GLP-1s. Omada Exercise Specialists help members reframe resistance training as attainable and approachable, and try out accountability practices for good measure.

"An effective strategy can be gently calling out a member," McGill said. "We talk about, let's be really honest about where the time is going, and what if we just swapped out even 10 of those minutes to pick up cans of beans out of the cupboard and do some overhead presses with them. It can be something really small to just get them going. I've seen it. I've had success with it. But you've got to have good rapport with a member."

Calzadilla added: "I can help with making those briefer, more efficient workouts that fit better into routines. So I'm asking how much time they're putting in at the gym. How do we maximize it? I've had plenty of success helping members stick to gym routines."

#SkinnyTok and the Power of Health Misinformation

- #SkinnyTok had over 500K posts on TikTok
- The hashtag promoted unrealistic body images and extreme weight loss
- The platform banned it in June 2025
- This type of content is correlated to a risk for disordered eating
- Women and girls are especially vulnerable
- Health misinformation on social media is still rampant

Facilitating Long-Term Success on GLP-1s

For millions of Americans, a GLP-1 prescription might unlock achievable weight loss for the first time. If patients lack a solid understanding of how these medications impact their body composition, they are more likely to experience weight health setbacks, **within one year** when they stop taking their medication.

Here at Omada we strive to support our members at every step of their GLP-1 journey, from before initiation to after discontinuation. We remain consistent, rooted in a core belief that human-led care scaled by technology drives real behavior change. Within Omada's programs, educating, building trust, and helping members gradually incorporate resistance training into their routines appears to be paying dividends:

- At 12 months after stopping their GLP-1, Omada members **largely demonstrated weight maintenance** (0.8% average weight change) and **63.2% of members** maintained or continued to lose weight.

  Clinical trials participants see 11-12% weight gain over the same period.

- After 4 months, Enhanced Care Track members had **27% more days physically active**.

- Enhanced Care Track members average 3.44 days of reported physical activity.

"It's really cool when you see members taking GLP-1s who have consistently started exercising," Karen Hartung, another Omada Exercise Specialist, said. "They tell me how much better they feel. Or they tell me me they couldn't even get up and down the stairs, and now they can without being out of breath anymore. That's huge. That's why we do what we do."

→ **Learn more about Omada Health's GLP-1 Care Track**

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