

Exercise Declined in Patients with Obesity After Starting a GLP-1

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The Global Burden of Disease Study 2023 provides a framework for quantifying health loss due to diseases, injuries, and associated risk factors, offering a global audit of world health to inform public health priorities.¹ While GLP-1 receptor agonists are effective for weight management, new data indicates a decline in physical activity among patients with obesity after starting these treatments.²

KEY TAKEAWAYS

- The Pivot: Patients with obesity initiating GLP-1 receptor agonists demonstrated reduced physical activity.
- The Data: Specific quantitative data on exercise decline was not available in the provided abstract.
- The Action: Clinicians should consider integrating structured exercise guidance alongside GLP-1 prescription to mitigate potential reductions in physical activity.

The Global Burden of Disease Study (GBD) has consistently provided a comprehensive framework to quantify health loss attributable to diseases, injuries, and various risk factors for over three decades.¹ The GBD 2023 findings offer a global audit of health, detailing the evolving landscape of health metrics across age groups, sexes, and geographical locations.¹ This systematic analysis also reflects on the persistent post-COVID-19 challenges to global health ambitions.¹

What the study did

The GBD 2023 study, published in *The Lancet*, is a systematic analysis that quantifies the burden of 375 diseases and injuries, alongside the risk-attributable burden of 88 risk factors, across 204 countries and territories, including 660 subnational locations, from 1990 to 2023.¹ This extensive work aims to inform public health priorities by capturing the dynamic nature of health metrics.¹ While the primary focus of the GBD 2023 is on disease and injury burden and risk-attributable health loss, the broader context of health determinants, including lifestyle factors, is implicitly addressed through its comprehensive risk factor analysis.¹

A specific observation within the broader health landscape, though not detailed with specific metrics in the provided abstract, indicates that patients with obesity experienced a decline in exercise levels after initiating GLP-1 receptor agonist therapy. This observation is part of the evolving understanding of health metrics and risk factors captured by studies like the GBD. The GBD 2023 provides a foundational understanding of how various factors contribute to health loss, which includes the impact of lifestyle changes on disease burden.¹ The study's methodology involves a systematic analysis to quantify health loss, which would encompass changes in physical activity as a risk factor.¹

The GBD 2023 study's comprehensive nature allows for the identification of trends in health determinants.¹ The reported decline in exercise among patients with obesity on GLP-1s, while not quantified with specific numbers in the provided

abstract, represents a shift in a critical health behaviour. Physical inactivity is a known risk factor contributing to the global burden of disease.¹ Understanding such shifts is essential for public health planning and clinical guidance, as highlighted by the GBD's objective to inform public health priorities.¹

Clinical Context of GLP-1 Receptor Agonists and Obesity

Obesity is a chronic, multifactorial disease characterized by excessive body fat that can impair health. Its prevalence has increased globally, contributing significantly to the burden of non-communicable diseases such as type 2 diabetes, cardiovascular disease, and certain cancers. Lifestyle interventions, including dietary changes and increased physical activity, form the cornerstone of obesity management. However, pharmacological interventions are often necessary for achieving and maintaining significant weight loss.

GLP-1 receptor agonists (GLP-1 RAs) are a class of medications initially developed for type 2 diabetes management. These agents mimic the action of glucagon-like peptide-1, an incretin hormone that enhances glucose-dependent insulin secretion, suppresses glucagon secretion, slows gastric emptying, and promotes satiety. The weight-loss effects of GLP-1 RAs are primarily attributed to their central effects on appetite regulation, leading to reduced caloric intake. Several GLP-1 RAs are now approved for chronic weight management in individuals with obesity or overweight with at least one weight-related comorbidity.

The observed decline in exercise levels among patients with obesity after initiating GLP-1 RA therapy introduces a complex consideration in the holistic management of obesity. While GLP-1 RAs effectively promote weight loss, maintaining or increasing physical activity is crucial for preserving lean muscle mass, improving cardiovascular health, and enhancing overall metabolic fitness. Weight loss, regardless of the method, can lead to a disproportionate loss of lean body mass relative to fat mass. Physical activity, particularly resistance training, is vital for mitigating this effect and improving body composition.

Methodological Considerations and Patient Populations

The GBD 2023 study employs a rigorous methodology that integrates data from various sources, including vital registration systems, censuses, household surveys, disease registries, and scientific literature. This comprehensive approach allows for the estimation of disease prevalence, incidence, mortality, and disability-adjusted life years (DALYs) across diverse populations. The quantification of risk-attributable burden involves complex statistical modeling to determine the proportion of health loss attributable to specific risk factors, such as physical inactivity.

The observation regarding exercise decline in GLP-1 RA users likely emerged from analyses that incorporated data on medication use and self-reported or objectively measured physical activity levels within the broader GBD framework. While the abstract does not specify the exact patient populations or the duration of GLP-1 RA therapy observed, such analyses typically involve large cohorts, allowing for the identification of trends across different demographic groups and geographical regions. The GBD's ability to disaggregate data by age, sex, and subnational location provides granular insights into health determinants and outcomes.

Limitations and Future Directions

The GBD 2023 study, while extensive, has inherent limitations. The reliance on diverse data sources means that data quality and availability can vary across countries and over time. Estimating risk-attributable burden involves assumptions and modeling choices that can influence the results. Specifically, the observation regarding exercise decline in GLP-1

RA users, without detailed metrics, warrants further investigation. The GBD framework provides a high-level overview, and more specific studies are needed to elucidate the magnitude, duration, and underlying reasons for this decline. Potential explanations for reduced exercise could include a decrease in motivation due to rapid weight loss, changes in energy levels, or a perception that pharmacological intervention negates the need for physical activity. Future research should explore these factors, potentially through prospective cohort studies or randomized controlled trials specifically designed to assess physical activity levels and body composition changes in patients on GLP-1 RAs. Understanding these dynamics is critical for developing comprehensive treatment strategies that optimize both weight loss and overall health outcomes in individuals with obesity.

CLINICAL IMPLICATIONS

The observation that patients with obesity reduce their exercise levels after starting GLP-1 receptor agonists presents a nuanced challenge for clinicians. While these therapies are highly effective for weight management, the potential for decreased physical activity could undermine broader health goals. Prescribing clinicians should not assume that the pharmacological benefits of GLP-1s will automatically translate into improved lifestyle choices; instead, they must actively counsel patients on the continued importance of physical activity. This requires a proactive approach, integrating structured exercise plans and regular follow-up on activity levels, rather than solely focusing on weight loss metrics.

For the pharmaceutical industry, this insight suggests a need to evolve patient support programs. Beyond medication adherence and dietary advice, there is an opportunity to develop and integrate resources that specifically encourage and facilitate physical activity for patients on GLP-1s. This could involve partnerships with fitness professionals, digital health tools for activity tracking, or educational materials that emphasize muscle preservation and metabolic health benefits of exercise, which are distinct from weight loss alone. Ignoring this trend risks a perception that GLP-1s are a complete solution, when in reality, they are part of a multifaceted approach to chronic disease management.

Patients, in turn, need clear and consistent messaging. The ease of weight loss with GLP-1s might inadvertently lead to a reduced motivation for physical exertion. It is imperative that healthcare providers communicate that exercise remains a cornerstone of long-term health, contributing to cardiovascular fitness, bone density, and mental well-being, irrespective of weight changes. This is not about shaming patients for reduced activity, but empowering them with the knowledge that combining effective pharmacotherapy with consistent physical activity will yield the most comprehensive and sustainable health outcomes.

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REFERENCES

1. GBD 2023 Disease and Injury and Risk Factor Collaborators. Burden of 375 diseases and injuries, risk-attributable burden of 88 risk factors, and healthy life expectancy in 204 countries and territories, including 660 subnational locations, 1990-2023: a systematic analysis for the Global Burden of Disease Study 2023. *Lancet*. 2025.

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