Obesity as Disease: Who Benefits from the Redefinition?

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The classification of obesity as a disease rather than a lifestyle choice has profound implications for clinical practice, research funding, and patient access to care. This redefinition, while seemingly semantic, fundamentally alters how healthcare systems approach weight management, moving it from a realm of personal responsibility to one requiring medical intervention.1

This shift raises critical questions about who stands to gain most from this reclassification: patients, clinicians, or the industries developing new treatments. Examining recent research on obesity-related conditions and interventions offers a lens through which to evaluate these benefits.

KEY TAKEAWAYS

- The Pivot: Classifying obesity as a disease facilitates medical intervention and pharmaceutical development, shifting the treatment paradigm.
- The Data: Hypercapnia, a treatable trait in obesity hypoventilation, identifies patients benefiting from non-invasive ventilation.
- The Action: Clinicians should consider the broader implications of disease classification on patient access to care and the evolving landscape of pharmacological and device-based therapies.

Obesity, defined by excessive body fat, presents a complex challenge for healthcare systems globally. Its prevalence continues to rise, contributing to a cascade of comorbidities including type 2 diabetes, cardiovascular disease, and respiratory complications. For decades, the prevailing narrative often framed obesity as a consequence of individual choices, primarily diet and exercise. This perspective, however, has increasingly come under scrutiny as scientific understanding of metabolic pathways, genetic predispositions, and environmental factors has deepened. The reclassification of obesity as a chronic disease by major medical organizations aims to destigmatize the condition and promote a medical approach to its management, analogous to hypertension or diabetes. This redefinition opens avenues for increased research, dedicated clinical guidelines, and, crucially, insurance coverage for treatments that were previously considered elective or cosmetic. The immediate beneficiaries of this shift are often patients who gain access to therapies, but the pharmaceutical and medical device industries also see expanded markets.1

The clinical manifestations of obesity are diverse, extending beyond metabolic dysfunction to impact nearly every organ system. One area where obesity significantly complicates management is respiratory health. Patients with obesity often present with conditions like obesity hypoventilation syndrome (OHS), characterized by chronic hypercapnia and hypoxemia, particularly during sleep. This syndrome can lead to acute respiratory failure (ARF), a life-threatening

condition requiring intensive care and ventilatory support. Understanding the specific physiological traits in these patients is paramount for effective treatment. A scoping review by Dueñas-Castell and colleagues, published in J Clin Med in 2026, explored the role of arterial carbon dioxide pressure (PaCO2) as a treatable trait in ARF, including in patients with obesity hypoventilation.1

Treatable Traits and the Obesity Paradox

Dueñas-Castell and colleagues conducted a comprehensive scoping review using PRISMA-ScR and JBI guidelines to synthesize evidence on hypocapnia and hypercapnia as prognostic, stratification, or clinically relevant variables during respiratory support. The investigators searched PubMed/MEDLINE, ScienceDirect, and Web of Science for studies published between 1994 and 2025, supplementing this with manual reference checks. The review ultimately included 34 studies, which were categorized into four key areas: pre-intubation or early acute presentation, non-invasive support (NIV/HFNC), invasive mechanical ventilation (IMV), and weaning or post-extubation. This broad approach allowed for a detailed examination of PaCO2's role across the continuum of respiratory failure management.1

The review found that hypocapnia was consistently linked to worse outcomes or failure of support in hypoxemic or cardiogenic cases. This finding underscores the delicate balance required in managing respiratory parameters, where over-ventilation can be as detrimental as under-ventilation. But, for patients with obesity hypoventilation, hypercapnia proved to be a critical identifier. The presence of hypercapnia helped identify patients who specifically benefited from non-invasive ventilation (NIV), such as those with chronic obstructive pulmonary disease (COPD) or obesity hypoventilation. This is a crucial distinction, as NIV can prevent the need for invasive mechanical ventilation, reducing associated complications and improving patient outcomes. The ability to stratify patients based on a measurable trait like PaCO2 allows for more precise and effective therapeutic interventions, aligning with the principles of precision medicine.1

For patients requiring invasive mechanical ventilation (IMV), the effects of PaCO2 depended on the presence and severity of acidosis and its duration. This highlights the complexity of managing respiratory parameters in critically ill patients, where a one-size-fits-all approach is insufficient. Overall, PaCO2 demonstrated context-dependent clinical relevance, primarily acting as a prognostic or stratification marker. In narrower settings, it served as a variable that could inform monitoring or support decisions. The review provided a pragmatic framework for interpreting PaCO2 across various respiratory support contexts, emphasizing the need for safe and clinically meaningful targets. This detailed understanding of respiratory physiology in obesity-related conditions is vital for optimizing patient care and preventing adverse events.1

The reclassification of obesity as a disease also drives research into novel therapeutic strategies. While the Dueñas-Castell review focused on respiratory management, other research initiatives are exploring dietary interventions and pharmacological approaches specifically tailored for individuals with obesity. For example, the Soy Treatment Evaluation for Metabolic health (STEM) Trial, described by Erlich and colleagues in Nutrients in 2026, investigates the effect of replacing sugar-sweetened beverages (SSBs) with cow's milk versus soymilk on intrahepatocellular lipid and other cardiometabolic risk factors in adults with obesity who consume SSBs. This parallel randomized trial aims to provide evidence for dietary modifications that can mitigate the metabolic consequences of obesity. The rationale and design of such trials become more compelling when obesity is recognized as a disease requiring active management, rather than a condition solely addressed by general health advice.2

The STEM trial's focus on intrahepatocellular lipid (IHCL) is particularly relevant, as elevated IHCL is a marker for non-alcoholic fatty liver disease (NAFLD), a common comorbidity of obesity that can progress to non-alcoholic steatohepatitis (NASH) and cirrhosis. By targeting specific dietary components, the trial seeks to identify practical, scalable interventions that can improve liver health and reduce broader cardiometabolic risk in this vulnerable population. The baseline characteristics of participants in the STEM trial will provide valuable insights into the demographic and clinical profiles of individuals who consume SSBs and live with obesity, further informing targeted interventions. This type of detailed nutritional research, supported by the disease classification, can lead to more evidence-based dietary recommendations for clinicians.2

Still, the classification of obesity as a disease is not without its critics. Concerns often revolve around the potential for over-medicalization, the increased reliance on pharmacological solutions, and the perpetuation of weight stigma, even if inadvertently. The argument is that while some individuals may benefit from medical interventions, a broader focus on public health initiatives, environmental changes, and addressing socioeconomic determinants of health might be more effective in the long term. But, the current medical framework, driven by disease classification, often prioritizes individual-level interventions, which can be more readily funded and reimbursed by healthcare systems. This creates a tension between population-level health strategies and individual patient care.1,2

The pharmaceutical industry, in particular, stands to gain significantly from the disease classification. With obesity recognized as a chronic condition, there is a clear rationale for developing and marketing long-term pharmacological treatments. The success of GLP-1 receptor agonists in weight management has already demonstrated the immense market potential. The classification provides a regulatory and reimbursement pathway that facilitates the adoption of these new therapies. This also encourages further investment in research and development, leading to a pipeline of novel anti-obesity medicines and devices. The economic implications are substantial, influencing drug pricing, insurance coverage, and the overall allocation of healthcare resources.1,2

The open-label design of many nutritional intervention trials, like the STEM trial, is an obvious caveat. While necessary for practical reasons in dietary studies, it introduces potential for bias due to participant awareness of their assigned intervention. This can influence adherence, reporting of outcomes, and overall study results. Furthermore, the generalizability of findings from specific dietary interventions, such as replacing SSBs with milk or soymilk, may be limited to populations with similar dietary habits and cardiometabolic risk profiles. Whether benefits extend to broader groups with different dietary patterns remains unclear. The long-term sustainability and adherence to such dietary changes also pose practical challenges in real-world settings.2

The question of who truly benefits from classifying obesity as a disease is complex. Patients with severe obesity and significant comorbidities, particularly those with conditions like obesity hypoventilation, clearly benefit from improved access to medical interventions and a more structured approach to care. The ability to identify treatable traits, such as hypercapnia, and apply targeted therapies like NIV, as highlighted by Dueñas-Castell, represents a tangible improvement in clinical management. For the pharmaceutical and medical device industries, the reclassification creates a robust market for new therapies, driving innovation and investment. But, the broader societal implications, including the potential for over-medicalization and the need for comprehensive public health strategies, remain areas of ongoing debate and require careful consideration as the medical landscape continues to evolve.1,2

CLINICAL IMPLICATIONS

The reclassification of obesity as a disease fundamentally alters the clinical approach, pushing clinicians towards medical interventions rather than solely lifestyle counseling. This shift is particularly evident in managing complex comorbidities like obesity hypoventilation, where identifying treatable traits such as hypercapnia can guide crucial decisions on non-invasive ventilation. The Dueñas-Castell review confirms that specific physiological markers can stratify patients, ensuring those who truly benefit from targeted respiratory support receive it, potentially averting invasive procedures.

This medicalization, while beneficial for patients needing pharmacological or device-based therapies, also creates a significant market for the pharmaceutical industry. The development of new anti-obesity medicines and specialized devices becomes more viable under this disease framework, encouraging substantial investment in research and development. Clinicians will increasingly find themselves navigating a growing arsenal of prescription therapies, requiring a nuanced understanding of their efficacy, safety profiles, and appropriate patient selection.

But, the focus on individual medical treatment risks overshadowing broader public health strategies aimed at preventing obesity at a population level. While trials like STEM explore specific dietary interventions to mitigate cardiometabolic risks in individuals with obesity, these efforts must be balanced with addressing systemic factors contributing to the epidemic. The challenge for general practitioners and specialists alike will be to integrate these new medical tools responsibly, ensuring that the benefits of disease classification translate into improved patient outcomes without fostering over-reliance on quick fixes or neglecting the underlying social determinants of health.

The ultimate test of this reclassification will be whether it genuinely reduces the burden of obesity-related morbidity and mortality, or merely shifts the economic burden and treatment paradigm. Future research must continue to explore both individual-level interventions and broader public health impacts, ensuring that the medical community does not lose sight of the holistic picture.

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