https://doi.org/10.46389/rjd-2025-1882
www.rjdnmd.org

Rom J Diabetes Nutr Metab Dis
2025; volume 32, issue 1, pages 1–4

Editorial

Lancet Diabetes & Endocrinology Commission on diagnosis of clinical obesity- possible implications on clinical practice

Cornelia Bala [1] *, Gabriela Roman [1], Nicolae Hâncu [2]

[1] Department of Diabetes and Nutrition, Iuliu Haţieganu University of Medicine and Pharmacy, Cluj-Napoca, Romania
[2] Iuliu Haţieganu University of Medicine and Pharmacy, Cluj-Napoca, Romania

* Correspondence to: Cornelia Bala, Department of Diabetes and Nutrition, Iuliu Hatieganu University of Medicine and Pharmacy, 2-4 Clinicilor St, 400 006 Cluj-Napoca, Romania. Phone: +40 264 594455; E-mail: cbala@umfcluj.ro; corneliabala@gmail.com

Received: 2 March 2025 / Accepted: 11 March 2025

Abstract

On the 14th of January 2025, the long-awaited and anticipated report of the Lancet Diabetes & Endocrinology Commission on clinical obesity was published. The report is constructed through a Delphi consensus process, and it is very complex, addressing numerous aspects regarding obesity- its causes, pathophysiology, phenotypes, relationship with other diseases, views and attitudes about obesity among patients, healthcare professionals, and policymakers. It should also be noted that the report was endorsed by 79 international, regional and national scientific societies, including the World Obesity Federation (WOF). The editorial discusses two important aspects with clear implications on clinical practice- definitions and criteria for the diagnosis of obesity and criteria for the diagnosis of clinical obesity. The proposals of the Commission on clinical obesity are challenging for the medical community, and we should wait until the future to validate all or a part of them in new guidelines for the evaluation and treatment of obesity.

Keywords: obesity, obesity-related comorbidities, pre-obesity, clinical obesity, preclinical obesity.

Premises of the new diagnosis of clinical obesity

In 2023, in a Comment article published in The Lancet Diabetes & Endocrinology [1], it was announced that a Commission on clinical obesity was established as a partnership between The Lancet Diabetes & Endocrinology and the Institute of Diabetes, Endocrinology and Obesity at Kings Health Partners (London, UK). The group of commissioners includes 60 experts across diverse disciplines, including clinical obesity and basic science, chaired by Francesco Rubino at King's College London (London, UK). The group also includes people with lived experience of obesity.

The Commission announced the intention to work on a proposal regarding a new definition and diagnosis of clinical obesity. The arguments that justified the need for a new definition of obesity brought into discussion some of the limitations currently related to the positioning of obesity as a disease in the medical world and outside it.

The recognition of obesity as a disease, although stated by the World Health Organisation (WHO) in 1948 and then by numerous medical societies starting in 2013, remained controversial among the medical profession but also in other branches of society. One of the reasons was that defining obesity as a disease might minimize the role of individual responsibility and undermine the efforts to diminish the obesity epidemic through a healthy lifestyle. Other arguments were related to the role of high body mass index (BMI) as a risk factor for illnesses and death, which does not necessarily qualify obesity as a disease, while the same conditions can occur in people with normal BMI. On the other hand, it was recognized that some individuals with BMI in the obesity range (i.e., ≥27.5 kg/m^2

for people of Asian origin or >30.0 kg/m^2 for everyone else can appear healthy and with no limitations in daily activities, thus making BMI an imprecise indicator of health-related issues and leading to either under- or over-diagnosis of obesity in some cases. The latter could determine unnecessary claims for disability and/or expensive treatments, which might impact health insurance's capacity to cover medical interventions.

Other opinions are in favour of obesity as a standalone disease. They consider that there is enough evidence that obesity fulfils the general definition of a disease—distinct tissue and organ pathophysiological alterations, clinical signs and symptoms, secondary complications and impairments of daily activity.

In the opinion of the Commission, "logic and evidence suggest that obesity can be both a risk factor and, sometimes, a disease in and of itself". Another issue was the use of BMI as a sole indicator for the definition of obesity, which was considered "an intrinsically flawed concept". Finally, and maybe the most important starting point, was that the Commission considered that a description of the distinctive clinical manifestations reflecting the impact of excess adiposity on different systems and organs and the general functioning of the entire individuals were still missing, while most of the staging systems of obesity relied on the presence of other diseases and clinical conditions referred to as "comorbidities".

To address all these issues, the Lancet Diabetes & Endocrinology Commission on Clinical Obesity was established to "identify clinical and biological criteria for the diagnosis of clinical obesity". The Commission stated, "akin to diagnostic methods for chronic diseases in other medical specialties, these criteria should reflect a substantial deviation from the normal functioning of tissues, organs, and the whole organism, with considerable effects on the individual's ability to conduct daily activities".

Main proposals for the definition and diagnosis of obesity in the report of the Lancet Diabetes & Endocrinology Commission on clinical obesity

On the 14th of January 2025, the long-awaited and anticipated report of the Lancet Diabetes & Endocrinology Commission on clinical obesity was published [2]. The report is constructed through a Delphi consensus process, and it is very complex, addressing numerous aspects regarding obesity- its causes, pathophysiology, phenotypes, relationship with other diseases, views and attitudes about obesity among patients, healthcare professionals, and policymakers. It should also be noted that the report was endorsed by 79 international, regional and national scientific societies, including the World Obesity Federation (WOF).

It is beyond the scope of this editorial to present and comment on all aspects and implications of the report. We will, therefore, limit the presentation to two important aspects with clear implications for clinical practice: definitions and criteria for the diagnosis of obesity and criteria for the diagnosis of clinical obesity.

The Commission proposes several definitions, the most important being the following:

- **Obesity-** "is characterized by excessive adiposity, with or without abnormal distribution or function of the adipose tissue";
- **Clinical obesity-** a systemic, chronic illness, independent of the development of other medical conditions, caused by obesity by "inducing alterations in the function of the whole body and/or its organs and tissues, resulting in distinct clinical manifestations, including specific signs & symptoms or limitations of day-to-day activities";
- **Preclinical obesity-** "a state of excess adiposity with the preserved function of other tissues and organs";
- **Pre-obesity-** "an earlier stage of obesity across the continuum of increasing adiposity or bodyweight levels".

These definitions are then circumscribed by the specific diagnostic criteria.

Diagnosis of obesity

Recognizing the limitations of BMI in correctly identifying individuals with excessive adipose tissue, the Commission proposes to use **one of the following criteria for diagnosis of obesity**:

a. Direct body fat measurement (*e.g.*, by Dual-energy X-ray absorptiometry -DEXA, bioimpedance etc.), or
b. At least one anthropometric criteria (waist circumference, waist-to-hip ratio or waist-to-height ratio) in addition to BMI, or
c. At least two anthropometric criteria (waist circumference, waist-to-hip ratio or waist-to-height ratio) regardless of BMI.

Note: Validated methods and age- gender- and ethnicity-appropriate cut-off points should be used for all anthropometric criteria.

https://doi.org/10.46389/rjd-2025-1882

For the Caucasian population, the following thresholds are recommended:

- BMI≥30 kg/m^2 for obesity; 25.0–29.9 for pre-obesity according to WHO criteria;
- waist-to-hip ratio (WHR) >0.90 for men and >0.85 for women;
- waist circumference >102 cm for men and >88 cm for women;
- waist-to-height ratio >0.50 (with the recognition that more research is needed to confirm this threshold);
- excess body fat through direct measurements >25% for men and 30–38% for women. The report acknowledges that these values can fluctuate depending on the type of measurement method (dual-energy X-ray absorptiometry—DXA scans, bioelectrical impedance analysis—BIA, or callipers) and need to be established for each method in different populations.

It is our opinion and also others, including the European Association for the Study of Obesity- EASO and Obesity Medicine Association- OMA [3–5], that such a set of criteria for the definition of obesity will pose some problems in the diagnosis of obesity at the individual level, but also regarding the epidemiology of obesity worldwide. Although the limitations of BMI are well-recognized, the coexistence of three different criteria for identifying an individual as having obesity will lead to situations where the same person will be diagnosed with obesity by one doctor and not diagnosed by another doctor who chooses to apply another of the three criteria.

Another observation is that, although direct measurement of excess body fat seems to be the ideal criterion for diagnosis of obesity, the applicability in clinical practice is now, and will probably continue to be, limited by the availability of DXA or BIA for a large number of the population presenting with excessive adipose tissue. As well, the Commission recognizes that there is no standardization for the two methods, which will again impact the accuracy of intra- and inter-individual diagnosis.

These limitations in the proposed criteria for diagnosis of obesity also have the potential to impact the reported epidemiological data from at group, population and region level and to make comparisons extremely difficult, especially those generated from retrospective data. It is clear that although all three criteria reflect excessive adiposity, the overlapping is limited and hard to anticipate, as comparison data from large-scale studies among them are missing.

Despite these limitations, we acknowledge that the new criteria will also present some advantages- *e.g.* will avoid over-diagnosis in individuals whose BMI is increased due to higher muscle mass or water retention and will classify as having obesity individuals whose BMI is below the threshold for diagnosis but with excess adiposity determined through other anthropometric criteria or direct measurements where available.

Diagnosis of clinical obesity

The most important novelty of the report is represented by the introduction of the concept of "clinical obesity" and its diagnosis criteria. In the view of the Commission, clinical obesity is the stage of excess adipose tissue where an ongoing illness can be identified and which should be seen as a "true" disease, fulfilling the general criteria of a disease. A list of clinical manifestations is described separately for adults, children, and adolescents. Clinical obesity is thus defined as the presence of excess adipose tissue (according to the above-mentioned criteria) plus organ/tissue dysfunctions and/or clinical manifestations representing diagnostic criteria and identified through patient interviews, physical exams and various investigations. Among these are included for example signs of raised intracranial pressure such as vision loss and/or recurrent headaches, apnoeas/hypopnoeas during sleep, hypoventilation or breathlessness, reduced left ventricular systolic function or clinical heart failure with reduced ejection fraction, hypertension, atrial fibrillation, metabolic cluster of hyperglycemia, high triglyceride levels, and low HDL cholesterol levels, reduced glomerular filtration rate and/or microalbuminuria, hepatic steatosis etc., including also limitations of day-to-day activities. The complete list of diagnostic criteria can be found in the report [2]. In contrast, "preclinical obesity" is defined as excess adiposity with the preserved function of other tissues and organs, recognizing nevertheless that it confers an increased risk of developing clinical obesity as well as several other non-communicable diseases (NCDs) such as type 2 diabetes, cardiovascular disease, certain types of cancer and mental illness, among others.

This segregation between clinical and preclinical obesity carries implications for therapy, according to the report. When clinical obesity is present, the goal of therapy should be the improvement (or remission when possible) of the clinical manifestations of obesity and the prevention of progression to further complications or end-organ damage. The recommendations

are to apply all known interventions, such as lifestyle, pharmacological, psychological and surgical methods, with the decision being made on an individual basis. In the case of preclinical obesity, the goals would be to prevent the development of clinical obesity and other obesity-related diseases and conditions mainly through evidence-based health advice and ensuring equitable access to health care when needed. Nevertheless, it is also mentioned that in high-risk individuals or when a rapid risk reduction is necessary to expedite or facilitate other treatments (*e.g.*, transplantation, orthopedic surgery, or cancer treatments), pharmacological or surgical methods can also be deemed necessary.

The proposal to make a distinction between clinical and preclinical obesity raised most of the concerns expressed by EASO and OMA, to which we also agree, at least in part. Such a distinction has the potential to delay effective interventions in people with obesity and might also contrast with the general view that in chronic diseases, early intervention is capable of preventing complications and consequences in a more effective way than waiting until clinical manifestations are installed and when the goal is only to improve or obtain a remission (which is not cure) of clinical manifestations. Maybe most affected will be the children and adolescents presenting with obesity, where clinical manifestations can occur later and where we can miss the window of opportunity to act in a timely manner before clinical manifestations are already present. EASO considers that such an attitude is opposed to that well-accepted in other chronic diseases such as type 2 diabetes or osteoporosis, where early diagnosis and prevention are the standard of care and where all available interventions are recommended as early as possible and based on the individual characteristics of each patient.

Conclusion

Obesity is a complex chronic disease, and all efforts should be made in order to provide better care and obtain better clinical results. The proposals of the Lancet Diabetes & Endocrinology Commission on clinical obesity are challenging for the medical community, and we should wait until the future will validate all or a part of them in new guidelines for the evaluation and treatment of obesity.

Conflict of interest

The authors CB, GR and NH declare consultancy fees from Novo Nordisk and Eli Lilly (not related to current work).

References

1. Rubino F, Batterham RL, Koch M, Mingrone G, le Roux CW, Farooqi IS et al. Lancet Diabetes & Endocrinology Commission on the Definition and Diagnosis of Clinical Obesity. The Lancet Diabetes & Endocrinology 11: 226 – 228, 2023.
2. Rubino F, Cummings DE, Eckel RH, Cohen RV, Wilding JPH, Brown WA et al. Definition and diagnostic criteria of clinical obesity. The Lancet Diabetes & Endocrinology 13: 221-262, 2025.
3. Medscape Medical News. Commission Issues 'Radical Overhaul' of Obesity Diagnosis. [online] Available at https://www.medscape.com/viewarticle/commission-issues-radical-overhaul-obesity-diagnosis-2025a10000tf. [Accessed February 10, 2025].
4. European Association for the Study of Obesity. EASO response to the Lancet Commission Report on Obesity Diagnosis and Management. [online] Available at https://easo.org/easo-response-to-the-lancet-commission-report-on-obesity-diagnosis-and-management/ [Accessed February 10, 2025].
5. Obesity Medicine Association. Obesity Medicine Association Raises Concerns Over Lancet Commission's New Recommendations on Obesity Diagnosis. [online] Available at https://obesitymedicine.org/ [Accessed February 10, 2025].

https://doi.org/10.46389/rjd-2025-1882