







Obesity in occupational health: The position of the occupational physician in preventive practice

Obesidad en salud ocupacional: la posición del médico del trabajo en la práctica preventiva

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Abstract

Over recent decades, obesity has become firmly established as one of the leading public health problems worldwide, with a steadily increasing prevalence that substantially affects the working-age population. This excess adiposity is associated not only with a higher risk of morbidity and mortality from cardiovascular, metabolic, and musculoskeletal diseases but also with impaired functional capacity among workers, reduced productivity, and diminished long-term participation in the labor market.

In the field of occupational health, obesity interacts with organizational, ergonomic, and psychosocial factors, increasing the likelihood of occupational accidents, absenteeism, temporary disability, and early retirement, with a significant impact on both companies and social protection systems. Despite this evidence, obesity remains underrepresented in risk assessment, health surveillance, and preventive policies implemented in workplaces, which continue to focus predominantly on traditional physical, chemical, or biological hazards.

This article sets out the positioning of the occupational physician in preventive practice, considering obesity as a key determinant of occupational health. It proposes a comprehensive framework for addressing obesity in the workplace that integrates clinical, preventive, and organizational perspectives, with the aim of informing health policy decisions, guiding corporate strategies, and shaping priority research agendas.

Keywords: Obesity. Occupational health. Occupational medicine. Occupational risks. Workplace wellness programs. Health promotion.

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Resumen

En las últimas décadas, la obesidad se ha consolidado como uno de los principales problemas de salud pública a nivel mundial, con una prevalencia en constante aumento que afecta sustancialmente a la población en edad laboral. Este exceso de adiposidad se asocia no solo con un mayor riesgo de morbilidad y mortalidad por enfermedades cardiovasculares, metabólicas y musculoesqueléticas, sino también con una alteración de la capacidad funcional de los trabajadores, una reducción de la productividad y una menor participación a largo plazo en el mercado laboral.

En el ámbito de la salud laboral, la obesidad interactúa con factores organizacionales, ergonómicos y psicosociales, aumentando la probabilidad de accidentes de trabajo, absentismo, incapacidad temporal y jubilación anticipada, con un impacto significativo tanto en las empresas como en los sistemas de protección social. A pesar de esta evidencia, la obesidad sigue estando infrarrepresentada en la evaluación de riesgos, la vigilancia de la salud y las políticas preventivas implementadas en los lugares de trabajo, que continúan centrándose predominantemente en los riesgos físicos, químicos o biológicos tradicionales.

Este artículo establece el posicionamiento del médico del trabajo en la práctica preventiva, considerando la obesidad como un determinante clave de la salud laboral. Propone un marco integral para el abordaje de la obesidad en el lugar de trabajo que integra perspectivas clínicas, preventivas y organizacionales, con el objetivo de fundamentar las decisiones de política sanitaria, orientar las estrategias corporativas y configurar las agendas de investigación prioritarias.

Palabras clave: Obesidad. Salud laboral. Medicina del trabajo. Riesgos laborales. Programas de bienestar laboral. Promoción de la salud.

Introduction

Obesity is increasingly relevant in occupational health because it affects functional capacity, safety, chronic disease risk, and long-term work participation. In this context, occupational physicians need practical frameworks that go beyond body weight alone and help translate current obesity concepts into preventive action in the workplace.

The Lancet Commission article constructs a new definitional framework: it confers identity to “clinical obesity” as a disease in its own right, distinct from a mere risk factor; establishes dual diagnostic criteria (anthropometric plus clinical); and proposes a pre-clinical/clinical dichotomy as a tool to structure prevention and treatment¹.

The ES article acts as a critical appraisal: it endorses the conceptual advance and the critique of the Body Mass Index (BMI), but questions the operability of the binary model, the category of preclinical obesity, the exclusion of type 2 diabetes as a diagnostic manifestation, and the insistence on detailed causal attribution. In practice, it proposes harmonizing the Commission’s framework with pre-existing staging systems such as the Edmonton Obesity Staging System (EOSS)², the European Association for the Study of Obesity (EASO)³, and the American Association of Clinical Endocrinology (AACE)⁴, as well as with more pragmatic, risk- and benefit-based access criteria⁵.

The comparison between both approaches and their application in the daily practice of occupational physicians, from the perspective of prevention and health promotion within the healthy workplace framework, is presented in **Table 1**.

Beyond the occupational sphere, the conceptual evolution of obesity calls for progress towards models that integrate not only the characterization of adiposity and the presence of organ dysfunction but also a global functional assessment of the individual. In this regard, a clinical–functional approach makes it possible to move beyond both a purely anthropometric view and the strict dichotomy between preclinical and clinical obesity, by incorporating functional capacity, exercise tolerance, and impact on activities of daily living as key elements for decision-making. This model is applicable to diverse care contexts and populations and facilitates a more accurate, continuous, and person-centered assessment.

This paper argues that, in occupational health practice, obesity should be approached through a clinical–functional and preventive model that prioritizes work ability, early risk identification, and feasible workplace interventions.

Conceptual basis and scope of this position paper

This position paper is based on a narrative and practice-oriented analysis of recent conceptual frameworks on obesity, with particular emphasis on the Lancet Diabetes & Endocrinology Commission and the Endocrine Society critique, complemented by occupational health regulations, clinical staging systems, and evidence on workplace prevention strategies. Its aim is to define the role of the occupational physician in preventive practice and to translate current obesity frameworks into an operational model applicable to health surveillance, fitness-for-work assessment, and workplace health promotion.

Table 1. Comparison of the Lancet and ES publications and their practical application in occupational health.

Key axis	Lancet Commission framework (clinical / preclinical obesity)	ES / Endocrine Society approach	Operational message for workplace campaigns
Concept of health vs. disease	Distinguishes between “preclinical obesity” (excess adiposity without functional damage) and “clinical obesity” (organ dysfunction and/or limitations in activities of daily living due to adiposity).	It accepts the framework but questions the stability of this boundary; “preclinical” already entails high risk and may be interpreted as “not a disease,” delaying action.	In the occupational setting, it is preferable to speak of a “risk continuum” rather than healthy/sick and to focus messages on preventing progression to functional damage and maintaining work ability.
Role of BMI	BMI is relegated to population screening; it insists on confirming excess fat with other indicators (waist circumference, waist-to-height ratio, body fat) before labeling obesity.	It agrees on moving beyond BMI alone, but stresses that implementing additional measures must be simple and realistic.	In occupational health surveillance, BMI can be used as an entry point, but protocols should include at least waist circumference and cardiometabolic risk, not just “weight”.
Focus on function and work ability	Clinical obesity includes limitations in mobility and activities of daily living as a central criterion, aligned with impact on job performance and safety.	It emphasizes that classifications must be useful for treatment and prioritization decisions, and values staging systems that integrate functionality and mental health.	Key message: shift from “weight” to “function”: ergonomics, fatigue, sleep, exercise tolerance, and safety in high-risk tasks as the core of preventive campaigns.
Management of “obesity without apparent comorbidity”	Preclinical obesity: recommends monitoring and health counseling, with more intensive intervention only in high-risk cases or specific contexts.	It points out that these individuals already have an increased risk of type 2 diabetes, CVD, and cancer; delaying intervention because they are in the “preclinical” category may be clinically questionable.	For companies, “obesity without disease” is an opportunity to implement preventive programs (physical activity, nutrition, sleep, stress) before the onset of limitations, safety and health risks, disability, or incapacity of any degree.
Stigma and communication	It insists on non-stigmatizing, person-centered language and on avoiding blaming the individual; it recognizes the importance of social determinants.	Shares concerns about equity and warns that complex diagnostic categories should not become filters for denying treatment.	Use a campaign narrative based on “work environments that promote health” and “shared employer-worker responsibility,” avoiding blame-focused messages about weight and including specific training and information at all levels of the company, including middle management.
Practical classification tools	Proposes a solid conceptual framework but requires confirmation of adiposity and assessment of multiple organs, which is difficult to apply as a screening tool in companies.	Recommends relying on simpler staging systems (EOSS, EASO) that already integrate risk, comorbidity, and functionality and are more operational.	In occupational health, simple algorithms are advisable (BMI + waist circumference + comorbidities + functional capacity) as a basis for assessing fitness/capacity, referral, and prioritization, without replicating the full complexity of the clinical framework.

...continuation table 1

Key axis	Lancet Commission framework (clinical / preclinical obesity)	ES / Endocrine Society approach	Operational message for workplace campaigns
Intervention priority	The Lancet framework prioritizes resources for people with clinical obesity (functional damage), while maintaining preventive strategies for the preclinical category.	It stresses that the real constraint lies in the cost of treatments, not in the definition, and suggests prioritizing by risk/benefit rather than rigid labels.	Companies can justify the return on preventive investment and first target groups at higher functional risk (night shifts, physically demanding jobs, highly sedentary roles, obesity plus comorbidity) without abandoning universal interventions within a healthy-workplace framework.
Integration of mental health and quality of life	Mental health is mentioned but is not central to the criteria for clinical obesity.	It calls for explicit integration of depression, anxiety, and quality of life because of their prognostic importance.	Workplace campaigns should include modules on stress, sleep, nutrition, physical activity, psychosocial load, and organizational culture (shifts, overtime, demands), linking these factors to obesity, risk, absenteeism, and productivity.
Message to employers	"Clinical obesity" = chronic disease with functional damage that must receive treatment and support; "preclinical" = need for structured prevention.	It warns that redefining obesity must not be used to restrict access to effective interventions or to create additional bureaucratic barriers.	Positioning key: the company presents itself as a "preventive healthy environment" that reduces disability, absenteeism, and occupational contingencies and promotes the well-being of workers rather than acting merely as a "weight evaluator."

During the preparation of this position paper, a structured methodological process was followed, combining a narrative review of recent literature on conceptual frameworks for obesity with a practice-oriented analysis focused on prevention in the workplace. Drawing on the proposals of the Lancet Diabetes Endocrinology Commission and the critique by the Endocrine Society, the authors conducted a comparative reading of both texts and of the main clinical staging systems, as well as Spanish regulations on occupational health and international guidelines on health surveillance and workplace health promotion. This material was discussed in several successive rounds, with iterative exchange of drafts and internal peer review among the co-authors, until consensus was reached on the positioning of the occupational physician in preventive practice and on the clinical-functional model proposed as the central axis of the document.

Towards a clinical-functional model of obesity: implications for occupational health

From an occupational health perspective, the most useful approach is not a binary distinction between health and disease but a continuum-based model that links adiposity, functional capacity, cardiometabolic risk, and work ability.

The work of occupational physicians within occupational risk prevention services (ORPS) in Spain is highly regulated and constrained by a specific legal framework, and is primarily focused on health surveillance in relation to the risks arising from the work activity and the job. This framework includes: Law 31/1995 on the Prevention of Occupational Risks (LPRL)⁶, which establishes the general duty of protection and the obligation of health surveillance; Royal Decree 39/1997⁷ on Prevention Services, which defines the functions of ORPS and characterises them as multidisciplinary teams where occupational physicians interact with safety, hygiene, and ergonomics specialists; Royal Decree 843/2011⁸, which regulates the basic criteria for organising resources to deliver the healthcare activities of ORPS, authorising them and maintaining their standards; and the Specific Health Surveillance Protocols issued by the Ministry of Health⁹, which constitute the mandatory technical guidelines for conducting health examinations targeted at specific risks.

This regulatory context explains why occupational health approaches must be operational, proportionate, and prevention-oriented.

The core competencies of the specialty, as laid down in the formal training program, combine clinical, preventive, legal, and managerial functions with the

overarching aims of protecting workers' health, preventing occupational diseases and accidents, and adapting work to the individual¹⁰.

Within this clinical-functional framework, the concept of a "risk continuum" acknowledges that work ability exists along a dynamic spectrum, where the goal is to prevent progression from risk factors to functional impairment and work disability, rather than to classify workers dichotomously as healthy or ill. This biopsychosocial perspective emphasizes continuous functional assessment and the maintenance of work ability as central objectives of occupational medicine¹¹.

The 2025 guidelines of the American College of Occupational and Environmental Medicine (ACOEM) on the prevention of work disability state that clinicians should identify, at an early stage, individuals at risk of work disability and stratify that risk in order to provide stepped interventions. This paradigm, known as CLRRT (capacity, limitation, risk, restriction, and tolerance), facilitates this function-centered approach. The assessment should incorporate biological factors (tissue injury), psychological factors (fear-avoidance beliefs), and sociocultural factors (work environment) that influence the transition towards functional decline.

The Work Ability Index (WAI)¹² is a validated tool that operationalizes this continuum by evaluating the worker's current ability in relation to the job demands and their best-ever work ability. Factors such as age, self-reported diseases, and physically demanding work increase the likelihood of moderate or poor work ability. Although the supporting evidence is of limited quality, early intervention is generally associated with faster recovery and a lower risk of prolonged disability.

The 2026 ACC/AHA¹³ guidelines recommend that combining waist circumference with BMI is the best approach to assess obesity-related risk. For the detection of metabolic syndrome in workers, multiple studies have shown that the waist-to-height ratio (WHtR) and waist circumference (WC) have greater predictive capacity than BMI¹⁴. To these parameters, one can add the Body Roundness Index (BRI), an anthropometric index developed in 2013¹⁵ that integrates height, waist circumference, and body shape to better estimate total and visceral body fat compared with BMI. It is calculated using the following formula:

$$BRI = 364.2 - 365.5 \times \sqrt{1 - \left(\frac{WC / (2\pi)}{0.5 \times height} \right)^2}$$

where WC is the waist circumference.

Despite its robust theoretical underpinnings, there is disagreement regarding its ability to identify cardiovascular disease compared with WC and WHtR¹⁶. The main advantage of BRI is that it incorporates height into its calculation, making it independent of stature; however, this does not consistently translate into clinical superiority over WHtR, which is also height-independent and simpler to calculate.

In the world of work, the role of the occupational physician within prevention services is grounded in the evidence supporting the assertion that health surveillance protocols should incorporate at least waist circumference alongside BMI, as has been shown in studies conducted in working populations¹⁷. The approach should be holistic: assessing functional capacity, exercise tolerance, sleep quality, fatigue, and job-specific injury risk, rather than weight alone. This enables personalized interventions that enhance safety and productivity while respecting workers' dignity¹⁸.

This pragmatic approach is consistent with simple decision-making strategies based on BMI, waist circumference, comorbidity, and functional capacity.

For practical purposes in occupational health, the most appropriate approach is to consider that obesity without metabolic disease should not be classified as benign or low risk but rather as an opportunity for primary prevention. Preventive programs focusing on physical activity, nutrition, sleep, and stress management are more effective when implemented before the onset of functional limitations, safety risks, disability, or incapacity. Even a 5–10% reduction in body weight produces clinically significant benefits without the need to achieve normal weight¹⁹.

In occupational medicine, the narrative should shift from "individual responsibility for weight" to "work environments that promote health" and "shared responsibility between employer and worker." Successful programs require organizational commitment to environmental and policy changes, combined with voluntary opportunities for workers to engage in support programs. Multilevel training, particularly for middle management, is essential to implement this integrated model and to avoid blame-inducing messages that increase stigma and undermine health objectives²⁰.

The American Heart Association (AHA) defines seven traditional biometric measures for workplace screening: blood pressure, glucose, cholesterol, physical activity, diet, BMI, and tobacco use. Specifically, the AHA recommends adding waist circumference to BMI because the diagnostic accuracy of BMI for obesity is particularly limited in intermediate BMI

ranges, in men, and in older adults; moreover, abdominal adiposity provides a more refined indicator of cardiovascular mortality risk than BMI alone²¹. The AHA also clearly states that "interventions targeting higher-risk employees appear to be particularly effective" and that screenings may be even more effective in identifying risk factors and yielding a better return on investment if they are directed towards higher-risk individuals²².

Modules on stress, sleep, nutrition, physical activity, psychosocial load, and organizational culture should be integrated into workplace prevention campaigns because they are causally interconnected (stress affects sleep, diet, and physical activity; sleep affects appetite and metabolism), have synergistic effects on obesity and cardiometabolic risk, directly impact absenteeism, presenteeism, and productivity, and multicomponent interventions are more effective than isolated interventions (**Table 2**).

The company should position itself as a facilitator of an environment that makes it easier to be healthy, with the occupational physician responsible for assessing fitness for work and safeguarding workers' health. This approach entails a paradigm shift in obesity (**Table 3**): it reduces functional limitations or loss of function due to obesity and the associated stigma or discrimination; increases participation by avoiding worker blame; is more effective because it addresses environmental and organizational determinants; generates a higher return on investment by improving productivity, reducing absenteeism, and preventing disability; and complies with ethical principles of respect for body diversity and individual autonomy.

The evidence shows that investing in employee health should be a priority objective through comprehensive wellness programs that also improve performance and corporate profitability. Occupational physicians have sufficient tools to understand workers' health status and to propose that employers implement specific obesity programs. They also have supporting materials endorsed by scientific societies, such as the scientific–educational guide *Obesity and Work*, endorsed by the Spanish Association of Specialists in Occupational Medicine (AEEMT)²³, and the *Practical Handbook for Daily Clinical Practice*²⁴.

This approach not only redefines obesity but also contributes to evolving its management towards models centered on functionality, risk, and clinical benefit, moving beyond dichotomous views and facilitating more precise, person-centered decision-making.

In practical terms, this means that occupational health surveillance should combine simple anthropometric

Table 2. Multicomponent programs and their scientific evidence in obesity and work.

Module	Key content	Connection with obesity and productivity
1. Work-related stress	Demands–control–support, financial stress, coping techniques.	Chronic stress → overeating, inactivity, weight gain (OR 1.73 with cumulative exposure) ^{25,26} .
2. Sleep	Sleep hygiene, optimal duration (7–8 h), detection of disorders.	Short sleep → increased energy intake, accumulation of visceral fat, higher risk of obesity ²⁷ .
3. Nutrition	Mediterranean diet, mindful eating, meal planning.	Unhealthy diet + long working hours = synergistic effect on obesity and cardiometabolic risk ²⁸ .
4. Physical activity	Reduction of sedentary time, active breaks, structured exercise.	Combined diet and physical activity interventions improve stress and sleep and reduce adiposity ²⁹ .
5. Working hours and shifts	Limits on working hours, shift rotation, recovery.	≥ 55 h/week are associated with higher risk of obesity and lower levels of exercise ³⁰ .
6. Organizational culture	Leadership, social support, participatory job redesign.	Low social support is associated with disturbed sleep and presenteeism; multilevel interventions are more effective ^{31, 32} .

Table 3. Shift in the preventive approach to obesity in occupational health.

Traditional approach (to avoid)	“Healthy environment” approach (to adopt)
“Weight-control programme”	“Comprehensive wellness programme”.
“Obesity assessment”	“Assessment of functional capacity and health”.
“Weight loss as the goal”	“Improved energy, sleep, mobility, and well-being”.
“Individual responsibility of the worker”	“Shared employer–worker responsibility”.
“Incentives for weight loss”	“Incentives for participation in healthy activities”.
“BMI screening”	“Screening of cardiometabolic risk and functional capacity”.

measures, assessment of comorbidity and work ability, and early preventive interventions adapted to the specific occupational context.

Considerations of both approaches regarding their practical utility in occupational health

Although both frameworks are valuable, they serve different purposes in occupational health. The Lancet Commission offers greater conceptual precision for defining obesity as a disease, whereas the Endocrine Society approach is more applicable to everyday occupational practice because it is more compatible with multicausality, functionality-based assessment, and the operational constraints of prevention services (**Figure 1**).

In occupational medicine there is a need to make rapid decisions on fitness for work, to have tools that can

be applied in health examinations/medical check-ups, and to rely on reproducible criteria in health surveillance.

- ES does not require strict proof of “caused by obesity,” allows for multicausality (the rule among workers), and is compatible with systems such as EOSS or AACE, which are more usable in clinical practice.
- Lancet Commission requires fine causal attribution, which is difficult in real-world occupational practice and may entail additional testing, making it less feasible in collective surveillance.

Among workers, pathology is usually multifactorial (age, lifestyle, work, comorbidity), and it is rarely possible to demonstrate that a given condition is “caused solely by obesity”.

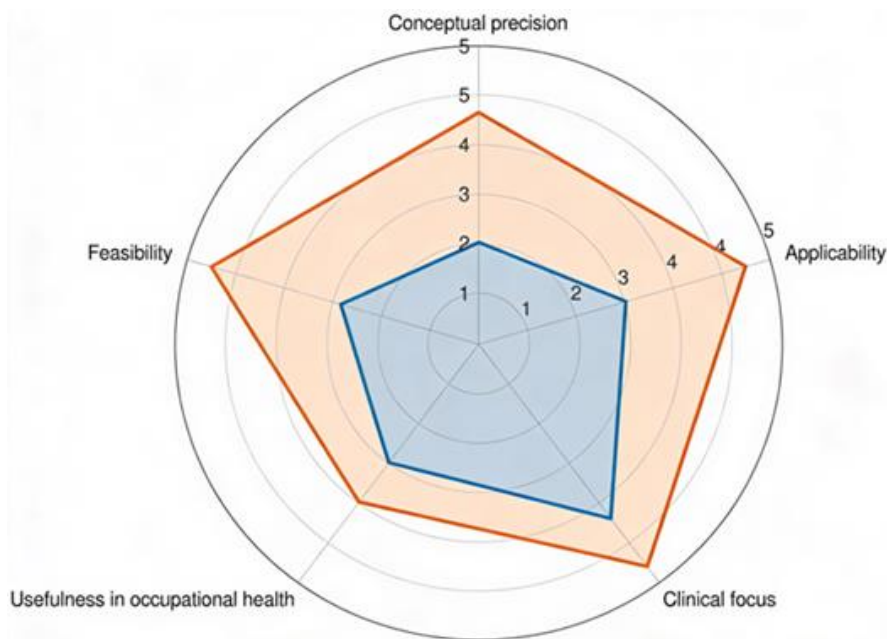


Figure 1. Comparison of The Lancet vs. JCEM in Occupational Health. Own elaboration

The model proposed by *The Lancet* shows greater conceptual strength, whereas *The Journal of Clinical Endocrinology & Metabolism* offers greater clinical applicability and usefulness in occupational health.

- ES acknowledges this explicitly.
- The Lancet Commission attempts to “isolate obesity as a cause,” which is not very realistic in occupational risk prevention.

Health surveillance at work requires identifying risk—not only established disease—and acting at an early stage.

- Lancet Commission includes the category of pre-clinical obesity, which may be interpreted as “not a disease” and thus delay preventive interventions in workers.
- ES recognizes that there is already significant risk in early stages and promotes anticipatory intervention, which is key in occupational risk prevention.

Regarding the impact on fitness for work, occupational medicine is concerned not only with disease but also with functional capacity and safety conditions in the workplace.

- ES: better integrates functionality, quality of life, and mental health and is more closely aligned with decisions on fitness and job adaptation.
- Lancet Commission: focuses more on “objectifiable” organ dysfunction and may underestimate limitations that are relevant for work.

Under regulations such as Law 31/1995 on the Prevention of Occupational Risks and Royal Decree 39/1997, resources are limited and health surveillance must be efficient.

- Lancet Commission requires more tests and more extensive assessment, which makes it less viable in prevention services.
- ES is more flexible and therefore better adapted to real-world resource constraints.

Taking into account the biopsychosocial approach that underpins occupational health (and is crucial in the workplace):

- ES places greater emphasis on mental health and quality of life, which are highly relevant for absenteeism, performance, and temporary disability.
- Lancet Commission has a more limited capacity to integrate these dimensions into its diagnostic criteria.
- Se pueden destacar esos dos puntos con un breve apartado específico dentro del texto, por ejemplo al final de la comparación entre ambos modelos. Te propongo este desarrollo (en inglés, para mantener coherencia con el paper) que puedes ajustar en extensión:

Practical limitations of the Lancet Commission model

Despite its conceptual robustness, the Lancet Commission framework has important practical limitations in occupational health settings. It requires detailed causal attribution and confirmation of organ damage, which often demands additional tests and time that are not feasible in routine health surveillance or in large working populations. In real-world prevention services, where multimorbidity and multicausality are the rule, isolating obesity as the main cause of functional impairment is rarely possible and may delay early preventive action. In addition, the distinction between preclinical and clinical obesity may inadvertently reinforce a binary view of disease that does not fit the continuum-based approach needed to preserve work ability and prevent disability. From an operational perspective, its implementation would require complex screening protocols, a greater number of complementary tests, and advanced recording systems, which is in tension with the limited resources of many occupational health services and with the need for simple, reproducible tools that can be easily integrated into periodic medical examinations.

Potential biases and gaps in the Endocrine Society approach

The Endocrine Society's appraisal, although more pragmatic and aligned with everyday occupational practice, also presents potential biases and gaps. Its emphasis on clinical usability and flexibility may lead to heterogeneous implementation, with variability in how risk, functionality, and comorbidity are actually assessed across different companies or services. By prioritizing existing staging systems and operational criteria, there is a risk of underestimating the need for more precise definitions of obesity as a disease and for harmonized thresholds that facilitate comparisons across studies and health systems. Moreover, although the approach explicitly incorporates mental health and quality of life, it still provides limited operational guidance on how to systematically integrate psychosocial and organizational determinants of obesity into occupational risk assessment and preventive interventions. To translate its proposals into practice, it would be necessary to develop specific implementation tools for the workplace, such as screening algorithms that combine body mass index and waist circumference with work ability indices, stepped referral protocols according to functional risk, and multicomponent workplace programs (training modules on stress, sleep, nutrition, physical activity, and organizational culture) that can be applied consistently within the framework of health surveillance and workplace health promotion plans.

To mitigate the risk of limited international projection, this position paper deliberately situates its proposals within widely used global frameworks and guidelines and presents the Spanish regulatory context as a transferable example rather than an exceptional case. By grounding the recommendations in internationally recognized staging systems, cardiometabolic risk markers, and workplace health promotion evidence, the operational model described here can be adapted to different legal and organizational environments beyond Spain. Furthermore, the emphasis on simple, scalable tools for health surveillance and multicomponent workplace programs is intended to facilitate uptake in diverse occupational health systems, thereby enhancing the external validity and global relevance of the proposed approach.

Conclusion

In light of the strengths and weaknesses of both approaches in occupational health, it can be concluded that both models are of great interest; however, in line with The Lancet Commission recommendations, their applicability is greater for defining what constitutes disease (conceptual framework), for informing health policy, and for designing research projects in occupational medicine. The contribution of the *Journal of Clinical Endocrinology & Metabolism* is more useful for daily clinical practice, health surveillance, and decision-making regarding workers.

Although the framework proposed by The Lancet Commission provides a more precise conceptual definition of obesity as a disease, the ES approach is more useful in occupational health because of its greater clinical applicability, better adaptation to multicausality, integration of functionality, and feasibility in resource-limited settings, thereby facilitating decision-making in health surveillance and fitness-for-work assessment.

Based on the preceding analysis, this position paper explicitly advocates for a clinical–functional, continuum-based model of obesity that integrates adiposity, cardiometabolic risk, functional capacity, and work ability as the primary reference framework for occupational health practice. Within this model, the Endocrine Society–aligned approach, complemented by pragmatic staging systems such as EOSS, EASO, or AACE, is proposed as the preferred operational tool for decision-making in health surveillance, fitness-for-work assessment, and workplace health promotion.

The two conceptual frameworks are not presented as mutually exclusive but as complementary, with different areas of preferential use. The Lancet Commission model is particularly useful for defining what

constitutes disease, informing policy debates, and structuring research agendas in occupational medicine and public health, especially when precise nosological boundaries and comparative data across countries or systems are required. By contrast, the Endocrine Society approach is better suited to everyday occupational health settings, where multicausality is the norm, resources are limited, and clinicians must make timely, function-oriented decisions about fitness for work, job adaptation, and the prioritization of preventive interventions.

In occupational medicine, the key question is not whether excess weight is present in isolation, but whether obesity is already affecting function, safety, work ability, or future disability risk.

This perspective supports a shift towards early, function-oriented, and workplace-adapted preventive strategies.

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M^a Teófila Vicente-Herrero: Conceptualización, Metodología, Redacción – borrador original Análisis formal, Visualización y Supervisión.

Miguel León-Sanz: Conceptualización, Análisis formal, Visualización y Supervisión.

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Use of artificial intelligence tools

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References

- Rubino F, Cummings DE, Eckel RH, Cohen RV, Wilding JPH, Brown WA, et al. Definition and diagnostic criteria of clinical obesity. *Lancet Diabetes Endocrinol.* 2025;13(3):221-262. Available from: [https://doi.org/10.1016/S2213-8587\(24\)00316-4](https://doi.org/10.1016/S2213-8587(24)00316-4).
- Padwal RS, Pajewski NM, Allison DB, Sharma AM. Using the Edmonton obesity staging system to predict mortality in a population-representative cohort of people with overweight and obesity. *CMAJ.* 2011;183(14):E1059-E1066. Available from: <https://doi.org/10.1503/cmaj.110387>.
- Liu XY, Ge SY, Liu CA, Yin B, Bu ZT, Zheng X, et al. Validation of the 2024 European Association for the Study of Obesity diagnostic criteria: a comprehensive assessment of obesity-related mortality risks. *Diabetes Obes Metab.* 2025;27(5):2405-2417. Available from: <https://doi.org/10.1111/dom.16236>.
- Garvey WT, Mechanick JI, Brett EM, Garber AJ, Hurley DL, Jastreboff AM, et al. American Association of Clinical Endocrinologists and American College of Endocrinology comprehensive clinical practice guidelines for medical care of patients with obesity. *Endocr Pract.* 2016;22(Suppl 3):1-203. Available from: <https://doi.org/10.4158/EP161365.GL>.
- Muniyappa R, Chukir T, Desai D, Weintraub MA, Corrigan MD, Gianchandani R, et al. Defining disease or delaying care? A conceptual and clinical appraisal of the Lancet obesity framework. *J Clin Endocrinol Metab.* 2026;dgag097. Available from: <https://doi.org/10.1210/clinem/dgag097>.
- Spain. Law 31/1995, of 8 November, on the Prevention of Occupational Risks. *Boletín Oficial del Estado.* 1995;(269). Available from: <https://www.boe.es/eli/es/l/1995/11/08/31>
- Spain. Royal Decree 39/1997, of 17 January. *Boletín Oficial del Estado.* 1997;(27). Available from: <https://www.boe.es/eli/es/rd/1997/01/17/39>
- Spain. Royal Decree 843/2011, of 17 June. *Boletín Oficial del Estado.* 2011;(158). Available from: <https://www.boe.es/eli/es/rd/2011/06/17/843>
- Ministry of Health, Social Services and Equality. Health surveillance protocols. Madrid: Ministry of Health; [date unknown]. Available at: <https://www.sanidad.gob.es/ciudadanos/saludAmbLaboral/docs/protocolos.pdf>
- Spain. Order SCO/1526/2005, of 5 May. *Boletín Oficial del Estado.* 2005;(127):18091-18100. Available from: <https://www.boe.es/eli/es/o/2005/05/05/sco1526>
- Kertay L, Caruso GM, Baker NA, Christian JH, Cook JL, Das R, et al. Work disability prevention and management. *J Occup Environ Med.* 2025;67(4):e267-e280. Available from: <https://doi.org/10.1097/JOM.00000000000003320>.
- Ebener M, Hasselhorn HM. Validation of short measures of work ability for research and employee surveys. *Int J Environ Res Public Health.* 2019;16(18):3386. Available from: <https://doi.org/10.3390/ijerph16183386>.
- Kittleson MM, Benjamin EJ, Blumer V, Harrington J, Januzzi JL, McMurray JJV, et al. 2025 ACC scientific statement on the management of obesity in adults with heart failure: a report of the American College of Cardiology. *J Am Coll Cardiol.* 2025;86(20):1953-1975. Available from: <https://doi.org/10.1016/j.jacc.2025.05.008>.
- Nadolsky K, Garvey WT, Agarwal M, Bonnacaze A, Burguera B, Chaplin MD, et al. American Association of Clinical Endocrinology consensus statement: algorithm for the evaluation and treatment of adults with obesity/adiposity-based chronic disease—2025 update. *Endocr Pract.* 2025;31(11):1351-1394. Available from: <https://doi.org/10.1016/j.eprac.2025.07.017>.

15. Thomas DM, Bredlau C, Bosy-Westphal A, Mueller M, Shen W, Gallagher D, et al. Relationships between body roundness with body fat and visceral adipose tissue emerging from a new geometrical model. *Obesity (Silver Spring)*. 2013;21(11):2264-2271. Available from: <https://doi.org/10.1002/oby.20408>.
16. Eng PC, Teo AE, Leow MKS, Tai ES, Khoo CM. Body roundness index (BRI) and obesity-related anthropometrics: relationship to visceral adiposity, insulin sensitivity index and cardiometabolic risk. *Diabetes Obes Metab*. 2025;27(10):5554-5565. Available from: <https://doi.org/10.1111/dom.16601>.
17. Obesity indices and their sociodemographic, lifestyle, and social isolation correlates in a large Spanish working population. *Front Endocrinol (Lausanne)*. 2025;16:1695705. Available from: <https://doi.org/10.3389/fendo.2025.1695705>.
18. Hymel PA, Stave GM, Burton WN, Schultz AB, Jones N, Liva J, et al. Incorporating lifestyle medicine into occupational medicine practice: ACOEM guidance statement. *J Occup Environ Med*. 2025;67(1):e72-e84. Available from: <https://doi.org/10.1097/JOM.0000000000003268>.
19. López Velasco L, Tárraga López PJ, López-González AA, Busquets-Cortés C, Vicente Herrero MT, Obrador de Hevia J, et al. Joint associations of sleep quality, Mediterranean diet, and physical activity with central and visceral adiposity in Spanish workers. *Obesities*. 2026;6:21. Available from: <https://doi.org/10.3390/obesities6020021>.
20. Fonarow GC, Calitz C, Arena R, Baase C, Isaac FW, Lloyd-Jones D, et al. Workplace wellness recognition for optimizing workplace health: a presidential advisory from the American Heart Association. *Circulation*. 2015;131(20):e480-e497. Available from: <https://doi.org/10.1161/CIR.0000000000000206>.
21. Arena R, Arnett DK, Terry PE, Li S, Isaac F, Mosca L, et al. The role of worksite health screening: a policy statement from the American Heart Association. *Circulation*. 2014;130(8):719-734. Available from: <https://doi.org/10.1161/CIR.0000000000000079>.
22. Mozaffarian D, Afshin A, Benowitz NL, Bittner V, Daniels SR, Franch HA, et al. Population approaches to improve diet, physical activity, and smoking habits: a scientific statement from the American Heart Association. *Circulation*. 2012;126(12):1514-1563. Available from: <https://doi.org/10.1161/CIR.0b013e318260a20b>.
23. Vicente-Herrero MT, Ramírez Íñiguez de la Torre MV, Muñoz Ruipérez C, López González AA, Sánchez Juan C, Marcos Fernández M, et al. Obesity and work: scientific-educational guide. 2nd ed. Madrid: Spanish Association of Specialists in Occupational Medicine; 2026.
24. Vicente Herrero MT, Muñoz Ruipérez C, Ramírez Íñiguez de la Torre MV, Capdevila García L. Obesity in occupational health: clinical management and preventive strategies. 2nd ed. Madrid: Spanish Association of Specialists in Occupational Medicine; 2026.
25. Tomiyama AJ. Stress and obesity. *Annu Rev Psychol*. 2019;70:703-718. Available from: <https://doi.org/10.1146/annurev-psych-010418-102936>.
26. Klingberg S, Mehlig K, Johansson I, Lindahl B, Winkvist A, Lissner L. Occupational stress is associated with major long-term weight gain in a Swedish population-based cohort. *Int Arch Occup Environ Health*. 2019;92(4):569-576. Available from: <https://doi.org/10.1007/s00420-018-1392-6>.
27. Duan D, Kim LJ, Jun JC, Polotsky VY. Connecting insufficient sleep and insomnia with metabolic dysfunction. *Ann N Y Acad Sci*. 2023;1519(1):94-117. Available from: <https://doi.org/10.1111/nyas.14926>.
28. Peñalvo JL, Sagastume D, Mertens E, Uzhova I, Smith J, Wu JHY, et al. Effectiveness of workplace wellness programmes for dietary habits, overweight, and cardiometabolic health: a systematic review and meta-analysis. *Lancet Public Health*. 2021;6(9):e648-e660. Available from: [https://doi.org/10.1016/S2468-2667\(21\)00140-7](https://doi.org/10.1016/S2468-2667(21)00140-7).
29. Battalio SL, Spring B, Wilson E, Hedeker D, Pfammatter AF. Behavior change intervention targeting physical activity and diet improves stress and sleep. *PLoS One*. 2026;21(3):e0343397. Available from: <https://doi.org/10.1371/journal.pone.0343397>.
30. Li X, Li J, Ren X, Xia T, Arah OA, Chen L. The associations of long working hours and unhealthy diet with cardiometabolic outcomes and mortality in US workers. *Prev Med*. 2025;195:108275. Available from: <https://doi.org/10.1016/j.ypmed.2025.108275>.
31. Cuevas AG, Greatorex-Voith S, Assari S, Slopen N, Economos CD. Longitudinal analysis of psychosocial stressors and body mass index in middle-aged and older adults. *J Gerontol B Psychol Sci Soc Sci*. 2021;76(8):1580-1589. Available from: <https://doi.org/10.1093/geronb/gbaa142>.
32. Seguin-Fowler RA, Graham ML, Demment M, Uribe ALM, Rethorst CD, Szeszulski J. Multilevel interventions targeting obesity: state of the science and future directions. *Annu Rev Nutr*. 2024;44(1):357-381. Available from: <https://doi.org/10.1146/annurev-nutr-122123-020340>.