



Nutrición Hospitalaria



Special Article

The Malaga Declaration on Body Composition and Morphofunctional Assessment *Declaración de Málaga sobre la Composición Corporal y la Valoración Morfofuncional*



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Málaga, 24th April 2025, within the framework of the National Congress of the Spanish Society of Clinical Nutrition and Metabolism (SENPE)

Nutritional care is a human right, encompassing both the right to food and the right to health.

Gathered in the city of Málaga, professionals with a focus on clinical nutrition, dietetics, and related disciplines express our commitment to promoting the assessment of **body composition (muscle and fat mass)** by integrating ***morphofunctional evaluation within a comprehensive nutritional assessment (including medical history and physical examination)*** as an essential tool in the clinical and dietetic care process.

This approach is key for the prevention, screening, diagnosis, and personalised treatment of disease-related malnutrition and its associated consequences.

1. RECOGNITION OF THE IMPORTANCE OF BODY COMPOSITION IN HEALTH

Skeletal muscle and fat mass are essential components of body composition, not only as energy and protein reserves, but also as key regulators of metabolic, immune, and functional health. They are **essential endocrine and metabolic organs**.

Their roles include:

- Regulating insulin sensitivity and glucose metabolism.
- Modulating chronic low-grade inflammation.
- Determining functional capacity and quality of life.

Loss of muscle mass and alterations in the distribution and/or quantity of fat mass, even without a low body mass index (BMI) (i.e., **hidden disease-related malnutrition**), are associated with:

- Increased incidence of clinical complications (**morbidity**).
- Higher mortality.
- Deterioration of functional autonomy and quality of life.

We recognise that **hidden malnutrition**—characterised by muscle mass loss without visible signs of malnutrition—and **sarcopenia** (loss of muscle mass and strength) are frequently underdiagnosed in clinical practice.

We propose considering body composition as a critical marker of health and prognosis, integrating the assessment of muscle and fat mass beyond body weight and BMI.

2. IMPORTANCE OF MORPHOFUNCTIONAL ASSESSMENT

Morphofunctional assessment combines the analysis of ***body composition (muscle and fat mass), patient functionality, and nutritional clinical history***. Its application allows for:

- **Early detection of muscle mass and functional loss.**
- **Identification of patients at higher risk of complications associated with malnutrition and sarcopenia.**
- **Guidance for personalised therapeutic decisions, considering the quantity and distribution of muscle and fat mass.**
- ***Evaluation of the underlying causes of disease-related malnutrition and alterations in body composition before initiating medical nutritional treatment.***

3. TOOLS FOR BODY COMPOSITION AND FUNCTIONAL ASSESSMENT

We propose a comprehensive approach for selecting morphofunctional evaluation tools based on clinical needs and available resources. We propose a comprehensive approach to the selection of morphofunctional assessment tools, based on the availability of resources and clinical needs. The use of these techniques, together with a thorough **clinical and nutritional history** (employing structured and validated screening and nutritional assessment tools), should be part of routine clinical practice.

To ensure complete and accurate assessment, we encourage the routine use of:

Body composition techniques:

- **Bioelectrical impedance analysis (BIA)**, especially phase angle as a prognostic marker.
- **Nutritional ultrasound** to measure the rectus femoris area and other key muscles.

- **Computed tomography (CT)**, using opportunistic imaging to evaluate muscle quality and quantity.
- **Body circumferences**: simple but informative methods, especially in resource-limited settings.

Functional and metabolic tests:

- **Handgrip dynamometry**: an indirect indicator of global muscle strength, linked to nutritional status and overall health.
- **Functional performance tests**: such as gait speed or sit-to-stand tests, using validated tools associated with disability, quality of life, and prognosis.

4. THERAPEUTIC APPROACH BASED ON MORPHOFUNCTIONAL ASSESSMENT

A precise diagnosis must be followed by **personalised interventions** that include:

- **Individualised medical nutrition therapy**, aimed at optimising recovery of muscle mass and functionality, considering the amount and **distribution of muscle and fat mass**.
- **Therapeutic exercise programmes** integrated into clinical management, with exercises tailored to **body composition** and functionality.
- **Interdisciplinary approach**: combining **clinical nutrition, physical rehabilitation, and transversal monitoring by health-care professionals**, ensuring that morphofunctional assessment is not used in isolation, but rather as part of a broader biopsychosocial approach that includes **clinical history, physical examination, quality of life, and therapeutic adherence**.

5. CALL TO ACTION

We propose the following commitments aimed at all stakeholders:

- **Promote an institutional culture that facilitates the incorporation of morphofunctional assessment as a standard of care at all healthcare levels.**
- **Ensure equity in access to advanced tools and technologies.**
- **Foster research** into assessment tools and strategies for body composition and their implications.
- **Integrate morphofunctional assessment** into undergraduate and postgraduate curricula.
- **Promote continuing education** in body composition assessment and functional testing techniques.
- **Adopt a comprehensive, person-centred approach** including *history, examination, quality of life and treatment adherence*.

CONCLUSION

Body composition is a key determinant of overall health and clinical prognosis.

The Málaga Declaration reaffirms our commitment to the fight against disease-related malnutrition through a person-centred, evidence-based, and outcome-oriented approach.

The integration of **morphofunctional assessment** is not just a technical improvement; **it is a clinical and ethical imperative** to transform nutritional care in the 21st century.

The Málaga Declaration stands as a national and international reference in this transformation.