

MADRID CHARTER

OVERNUTRITION: A MULTIDISCIPLINARY APPROACH IS URGENTLY NEEDED

Policy and Operational Guidance 2024-2029

COMPETERE
Policies for Sustainable Development



What new strategies can national governments and international institutions use to effectively combat the problem of obesity? This topic was discussed by prominent Italian and Spanish scholars and researchers at a prestigious symposium in Madrid on Monday, May 20, 2024. Their expertise spans various fields, including medicine, nutrition, economics, psychology, sociology and even urban planning.

The symposium focused on three central issues:

- The increasing prevalence of obesity, which coincides with a decline in adherence to the Mediterranean Diet;
- The significant impact of socio-economic conditions on the incidence and prevalence of overweight and obesity;
- The influence of the interaction between genes and environment in determining different individual susceptibilities to developing obesity.

The recommendations formulated during the event aim to guide policies to address these specific challenges.



OBESITY: A SILENT PANDEMIC

Obesity is now recognized as a chronic, pandemic disease with serious repercussions on public health, social and interpersonal relations, productivity and the global economy, deeply affecting the psychophysical well-being of individuals. It is effectively a disease (and not just a risk factor, as some believe) because it meets the bio-psychosocial criteria that the WHO adopts to define diseases: the presence of a dysfunctional organ (adipose tissue), an impact on the patient's psychological status (often associated with anxiety, depression, body image disorders and reduced perceived quality of life) and on social functioning (penalizing relationships with others and particularly in the workplace). As one of the leading causes of morbidity and mortality worldwide, it is imperative that efforts be intensified to promote strong and affordable policies and strategies aimed at reducing the incidence and prevalence of obesity and overweight, by focusing on approaches that allow individuals to adopt a balanced and sustainable lifestyle.

Obesity and, more generally, overweight involve an increasing number of people in all regions of the world. Globally, the total number of people living with obesity has exceeded one billion, including 159 million children and adolescents, and 879 million adults. Among children and adolescents, the prevalence of obesity in 2022 was four times higher than in 1990. Among adults, the prevalence of obesity has more than doubled in women and almost tripled in men.

In Europe, 59% of adults and almost one in three children (29% of males and 27% of females) are overweight or obese. Overweight and obesity are among the leading causes of death and disability in the European macro area, and recent estimates suggest that they cause over 1.2 million deaths per year, accounting for over 13% of total mortality in this geographical area.

The World Obesity Federation predicts that if current trends continue, by 2035, the majority of the world's population (51%, over four billion people) will be overweight or obese, and one in four people (nearly two billion) will suffer from obesity.

The global economic impact of overweight and obesity will reach \$4.32 trillion by 2035, representing almost 3% of the global Gross Domestic Product (GDP), a comparable impact to that of COVID-19 in 2020.

The greatest increases in obesity prevalence globally will mainly affect countries in Asia and Africa, involving predominantly low- or middle-low-income population groups.

For the first time in recent human history, there will be a tangible risk of a reduction in

life expectancy at birth, directly related to the widespread increase in weight and the health consequences in the population. The rise in the prevalence of obesity is partly the result of the improvement in socio-economic conditions, increased sedentary behavior and greater availability of low-cost energy-rich food, which, while on the one hand are cause for satisfaction for having helped reduce the risk of energy malnutrition, on the other hand have contributed to weight gain and thus the onset of diseases associated with poor diet and unsustainable lifestyles.

However, the problem of obesity cannot be attributed solely to excessive caloric intake. It is the result of a complex mix of factors: diet and lifestyle (quantity, quality, diversity, varied diet, energy expenditure, behaviors); other aspects of lifestyle (stress, sleep quality, emotional state, medication intake, thermal comfort); socio-cultural, economic and relational factors (educational level, economic conditions and social dynamics); and genetic, microbiota and metabolic factors (genetic predisposition and individual metabolic variations, as well as chronobiology influence).

Each of these macro-categories is influenced by additional sub-categories, which are strictly individual. Therefore, addressing the problem of obesity requires a personalized approach that takes into account the specific needs and circumstances of each individual (personalized/precise diet for obesity prevention and treatment).

IS THE MEDITERRANEAN DIET DISAPPEARING?

Adherence to the Mediterranean Diet, considered not only as a dietary regime but also as a balanced lifestyle philosophy, requires renewed support, especially in Mediterranean countries where its practice is in clear and dangerous decline. It is estimated that less than 15% of the population fully adheres to its principles. The decline in adopting the Mediterranean Diet began between the end of the 20th century and the beginning of the 21st century and has since stabilized. Despite increased global interest in this dietary style over the last two decades, there has been no sign of reappropriation of balanced dietary choices among Mediterranean populations and, more generally, in the European region. On the contrary, the consumption of fruit, vegetables, legumes, and fish—the fundamental pillars of this dietary regimen, continues to decrease.

Given the substantial scientific evidence supporting its benefits at both individual and collective levels, it is imperative that European governments actively promote the Mediterranean Diet as a healthy and sustainable lifestyle. This commitment should



include education and efforts to facilitate access to food and associated practices.

Education emerges as a crucial tool for overcoming economic social barriers that hinder the adoption of a balanced lifestyle. The fundamental elements of the Mediterranean Diet can serve as a guiding framework for promoting proper and sustainable nutrition, even in regions far from the Mediterranean, through changes in seasonal and local products and culinary traditions (e.g., the Nordic diet).

THE IMPACT OF SOCIO-ECONOMIC FACTORS

Obesity and poor nutrition leading to weight gain are influenced by several socio-economic factors, including limited economic resources, belonging to less affluent social groups and lack of food variety due to so-called 'food deserts'. These conditions of food insecurity promote a caloric imbalance characterized by excessive calorie intake and reduced energy expenditure, along with decreased physical activity. This is not simply a matter of food scarcity, but rather a deficiency in nutritional diversity, with excessively high-calorie foods being more affordable than healthier options like fruit, vegetables and olive oil, which are perceived as more expensive.

Limited economic resources and low education levels often coincide with a reluctance to adopt a balanced diet and lifestyle. The progressive replacement of free play with organized and scheduled sports and sedentary recreational activities, along with the habitual use of digital devices and social media and the digitalization of social relationships, contribute to sedentary behavior and thus to a greater risk of energy imbalance.

Work organization (e.g., increase in shift work) and social structures also contribute to reduced sleep, increased stress and other factors that may encourage excess calorie consumption. In addition, excessive exposure to social media does not promote nutritional education, but rather imposes patterns that stigmatize obesity and overweight, leading to negative psychological and psychosocial consequences.

THE IMPORTANCE OF GENETICS

Genetics plays a significant role in influencing an individual's energy balance, interacting in a complex manner with other factors of weight control. Recent scientific advancements have provided a deeper understanding of how genetics impacts the

energy and nutrient metabolism of each individual. This may lead to development of personalized dietary regimes in the future, specifically tailored to the metabolic needs of each individual. Personalized medicine, supported by these new genetic insights, represents a promising frontier for more effective and less invasive cognitive-behavioral, dietary, pharmacological and surgical treatments for both obesity management and the prevention of its clinical consequences.



CALL TO ACTION

The policies implemented so far, based on reducing the consumption of individual foods, such as front-of-pack nutritional labeling systems, have not achieved the expected results. Predictably, these measures have garnered only superficial support, more aimed at deceiving consumers rather than fostering their critical awareness and cultivating appropriate knowledge and behavior. The analysis of scientific data, which provides clear evidence of their failure, underscores the urgency of revising strategic approaches that shifts the focus from generic solutions to more targeted and personalized interventions. On the contrary, past intervention strategies have been shown to foster unintended negative and hazardous consequences on clinical, psychological and even economic levels.

Faced with the global challenges presented by the obesity pandemic, it is essential that public health strategies be rethought by focusing on the multifactorial complexity of the problem, which depends on various individual, socioeconomic, anthropological, cultural, behavioral, genetic and metabolic aspects, to effectively address malnutrition not only due to overnutrition. The problem of energy imbalance that generates overweight and obesity, as well as eating disorders, deserves a multidisciplinary approach capable of tackling the issue by combining different perspectives to find more comprehensive solutions. Thanks to technological progress and the evolution of personalized medicine, and human and natural sciences, we now have the necessary tools to implement tailor-made solutions that can adapt to the specificities of each individual, opening new ways for a more effective fight against this epidemic. The multidisciplinary approach and the resulting solutions require humility, involvement and trust in the scientific method, but above all the patience required by science to face the inevitable failures. The quick solutions often relied upon by politics are illusory and do not produce lasting results.

From the Madrid symposium, it emerged that:

- Obesity must be recognized as a chronic, recurring disease which, due to its severity, requires that therapy (dietary-nutritional, psychological-behavioral, pharmacological, surgical and physical reconditioning) be included among the essential services provided by national healthcare systems.

- The diagnosis of overweight and obesity should not be limited to a simple calculation of the body mass index, but should include an in-depth analysis of body composition, the localization of body fat, its inflammatory state and all metabolic, clinical, instrumental and laboratory parameters that can reveal suffering or damage to other organs and systems. Additionally, psychological-behavioral aspects and functional limitations that characterize individuals with obesity and become decisive in patient care should be considered. Doctors (preferably working within multidisciplinary units) should clearly inform people with overweight or obesity about the real risks, both immediate and long-term, associated with these conditions.
- Governments must create a network of public and private care centers with multidisciplinary teams and adequate equipment that can serve as true reference points for obesity care, going beyond simple medical research and superficial calorie calculations. These centers should make the patient with obesity the focal point of therapeutic decisions, including experts in all aspects: behavioral, psychological, psychiatric, nutritional, internal medicine, physiotherapy, pharmacological, educational and surgical.
- Governments and international institutions such as the European Commission must establish multidisciplinary working groups comprised of competent professionals in human and natural sciences: urban planning, architecture, economics, sociology, anthropology, communication, marketing, political science, psychology, philosophy and all branches of medicine.
- Governments must promote the dissemination of knowledge to enable individuals to make informed choices based on critical thinking, to adopt the principles of the Mediterranean Diet (or similar dietary plan such as the Atlantic Diet) as the most effective tool for a balanced lifestyle. The Mediterranean Diet, more than a dietary regimen, is a method for balanced living, and its principles can be adopted even in other geographical areas using local foods similar to those typical of the Mediterranean.
- The fight against obesity must start from childhood, with the introduction of compulsory physical, motor and nutritional education programs—including experimental activities—from early childhood education to encourage the acquisition of a balanced lifestyle. The goal is to educate people to value the relationship between body, mind, food and social environment.



- Governments and the European Commission must include an assessment of the impact on personal lifestyles in all legislative, financial and public planning initiatives.
- Governments must promote policies against the obesogenic environment by encouraging physical movement, free play, access to physical exercise and sports activities, and the development of parks and facilities for an active lifestyle at all ages. The planning and renewal of cities and living and public spaces must stimulate physical movement and reduce different types of environmental stress, such as noise and air pollution, that can affect weight gain. In addition, urban regeneration projects and new urban plans must promote access to a varied array of foods and reduce so-called 'food deserts'.
- The public and private sectors must commit to combating all forms of stigma and social disapproval towards people with obesity.
- Food production and distribution companies, along with sector associations, must collaborate to limit promotional campaigns during protected time slots and locations. Additionally, they are invited to reduce portions where possible.

Among the participants of the Madrid symposium, those who collaborated on drafting the Madrid Charter alongside Competere, CSRO, and Agrifood included: Michele Carruba (Università degli Studi di Milano), Felipe Casanueva (Universidad de Santiago de Compostela), Lidia Daimiel (IMDEA Research Institute on Food and Health Sciences), Ignacio de Tomás (Fundación Española de la Nutrición), Lorenzo Maria Donini (Sapienza Università di Roma), Ramón Estruch (Universidad de Barcelona), Rosa María Lamuela Raventos (Universidad de Barcelona), María Luisa López Díaz-Ufano (UEM), Ascensión Marcos (CSIC), Carmen Martín Salinas (Universidad Autónoma de Madrid), José Alfredo Martínez (IMDEA Research Institute on Food and Health Sciences), Pietro Paganini (Competere), Gabriele Riccardi (Università di Napoli), Gregorio Varela (Universidad CEU - San Pablo) and Francesco Visioli (Università degli studi di Padova).