



# CLÍNICA E INVESTIGACIÓN EN ARTERIOSCLEROSIS

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## EDITORIAL

# Planetary health diet: do we have to reconsider the recommendations based on the Mediterranean diet?



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More than two decades ago, a publication led by Walter Willett defined the Mediterranean Diet Pyramid, proposing it as one of the main healthy diet models, in particular for cardiovascular disease prevention.<sup>1</sup> From then on, the term *Mediterranean Diet* has been a successful reference point and a benchmark for effective communication, widely accepted by health professionals and by population sectors, in particular in the Mediterranean area. Sufficient complementary evidence has gradually been gathered on its cardiovascular benefit, of which the PREDIMED study is one of the best examples<sup>2</sup>. Furthermore, its range of beneficial effects has expanded with the confirmation of its benefit on multiple chronic conditions, which are typical of modern societies.<sup>3,4</sup> However, the growing concern about global warming, addressed at the Paris Climate Conference held in December 2015, the recommendations of which 195 countries are legally bound to, gives us cause to reflect on

whether the traditional healthy recommendations based on the Mediterranean diet are compatible with the strategies proposed at this conference. This involves a global action plan which puts a limit on global warming to below 2 °C by 2050.

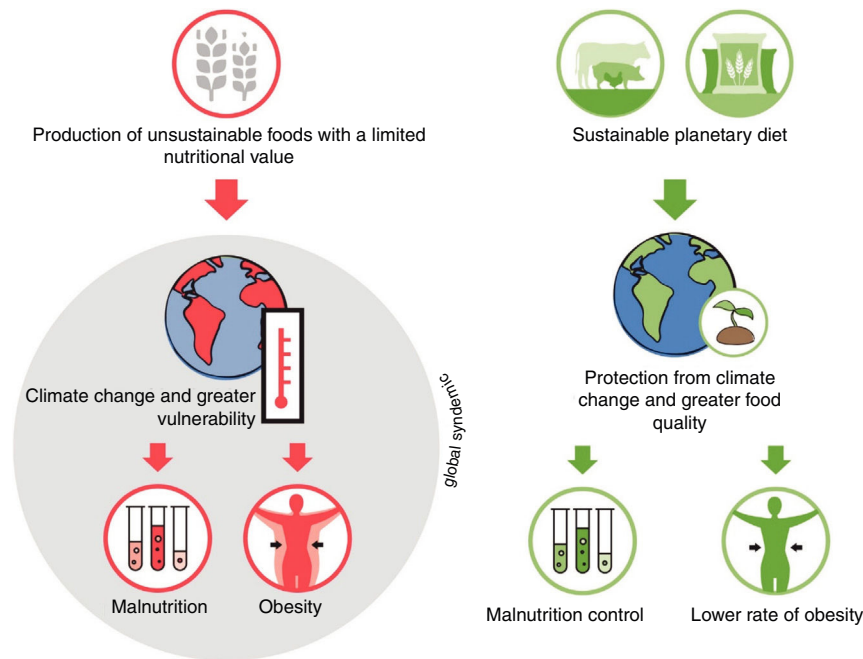
It has been known for some time that the food sector is one of the main causes of global warming, producing over 22% of the world's greenhouse gases, which makes it a key factor in the deterioration of the planet. In addition, 80% of these gases are attributable to the livestock sector, including the feeding and transport of livestock<sup>5</sup>. In 2015, the conclusions of a committee, in which the Rockefeller Foundation and the journal *Lancet* participated, were published<sup>6</sup>. These conclusions warned that the concept of health, which is typically applied to individuals, communities, populations and nations, does not take into account whether human health comes at the cost of the erosion of the planet's natural systems on which human civilisation depends. Indeed, when the improvement in health is achieved by unsustainably exploiting the environment, this has a negative impact on other current or future populations. This means that it is necessary to bear the well-being of the environment in mind when thinking about the pursuit

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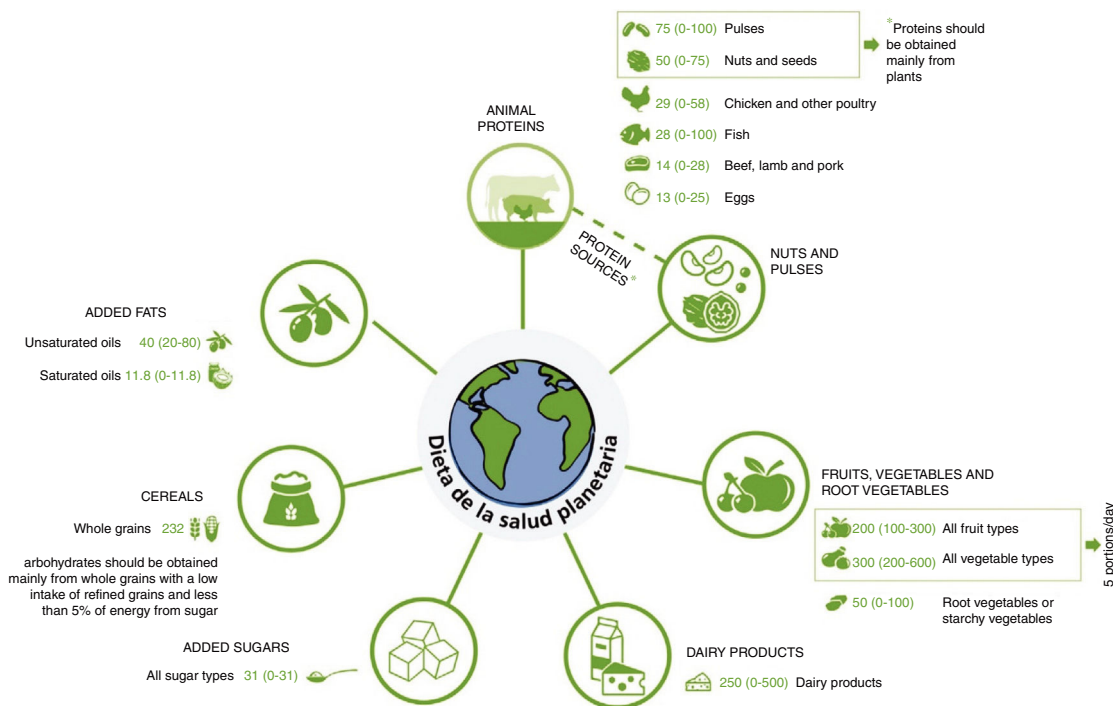


**Figure 1** The uncontrolled production of unsustainable foods is generating a dual burden of obesity and malnutrition, worsened by climate change which generates greater vulnerability. This “global syndemic” is currently the greatest threat to human health. In the face of this, a planetary health diet based on sustainable food systems will promote protection from climate change and greater food quality with the consequent control of malnutrition and a lower rate of obesity.

of human health and well-being. With this idea, and given the importance of food on human health and the sustainability of the planet, a group of experts, known as “The Lancet Commission”, have addressed the mutual relationship between the two factors of human health and planetary health. In their conclusions, they state that malnutrition in all its forms, including the two pandemics of obesity and undernutrition, are a severe threat to the health of modern societies. But the two are not isolated factors. Instead they are associated with another pandemic: global warming due to climate change<sup>7</sup>. However, the interesting thing about this observation is that there is such a powerful interaction between the three problems that it is impossible to solve one of them, if they are not addressed collectively (Fig. 1). For this reason, this conglomerate of pandemics known as the “Global syndemic” needs both a global and universal approach, with the participation of different institutions such as the world bank, governments, multinational corporations, markets, investment associations, civil societies, municipal corporations, political movements, cultural entities and any public or private institution that can help to change the global economic model. The objective is to make it more sustainable and, at the same time, make it possible to maintain global economic growth, in the face of the challenge of feeding 10 billion people by 2050.

The conclusions of this document confront doctors and the health system in general with the individual and corporate responsibility of taking initiatives to join this global commitment. This is particularly important in the field of nutritional re-education, where we can have a significant educational protagonism for the population, which is key in order for food production to be more sustainable. The big challenge would be for people to

understand that they should not only adopt a healthy diet for themselves but also for the planet. The process will be long because the change has to be very profound, but the journey has been started by a new *Lancet Commission*, now led by the great disseminator of the Mediterranean Diet, Walter Willett, starting from the principle that foods are the most powerful lever for optimising human health and environmental sustainability on Earth. In its work, a new diet model is indicated which is healthy both for human beings and for the planet, based on the production of sustainable foods, which they call food for the Anthropocene based on a “Health Planetary Diet”<sup>8</sup> (Fig. 1). The same group, in a recent document written specifically for health professionals, considers that adopting this diet is a commitment by health professionals from all over the world ([https://eatforum.org/content/uploads/2019/01/EAT\\_brief\\_healthcare\\_professionals.pdf](https://eatforum.org/content/uploads/2019/01/EAT_brief_healthcare_professionals.pdf)). In it, the foundations of this diet are listed, as indicated in Fig. 2, along with the general guidelines that we should be aware of and follow for its implementation. It is necessary to shift towards a flexitarian diet, based on plant-based foods, with varied fruit, vegetables, nuts, pulses and whole grains, along with small amounts of meat and dairy products, and with particular reduction of red meat. With this, 11 million premature deaths can be prevented annually, and a healthy diet for every corner of the planet can be ensured by 2050. The diet should be flexible and adaptable to the geographic conditions of each population, to the individual culinary traditions and to personal preferences. For this reason, a practical task, which will be arduous and complex, will be to translate these recommendations to our setting simply and efficiently. We start from the principles of the Mediterranean Diet and we will have to adapt them towards the



**Figure 2** Food consumption targets for a planetary health diet, with possible ranges, for an intake of approximately 2,500 kcal/day.

new planetary model, which, with a simplistic approach, we might think will be easy. But it will not be because there are some remarkably substantial adaptations, of which the animal protein sources in our diet are one example, the reduction of which is the main objective of the planetary health diet. This is the case for recommendations on the consumption of fish which, along with red meat, is a food that will have to be reduced because it generates significant quantities of greenhouse gases, in particular when its origin is trawl fishing and recirculation fish farms. In fact, in a study by Tilman et al., the Mediterranean diet is one of those that generates the most greenhouse gases, only exceeded by the omnivore diet, to a large degree due to the consumption of fish.<sup>9</sup> Another example is the acceptance of recommending the frequent consumption of white meat and lean red meat, which have a very negative impact on sustainability and the consumption of which should be reduced drastically, as listed in Fig. 2. Nevertheless, the production of foods should also be adapted in order to manage to replace the criterion of producing large quantities with producing healthy foods. This may allow foods, such as fish, to be produced in a more sustainable way in the future.<sup>10</sup>

Dieta Planetaria sostenible  
 Protección del cambio climático y mayor calidad alimentaria  
 Control desnutrición  
 Menor obesidad  
 GRASAS AÑADIDAS  
 Aceites insaturados  
 Aceites saturados  
 CEREALES  
 Granos enteros  
 Los carbohidratos deben obtenerse principalmente de granos enteros con una ingesta baja de granos refinados y menos del 5% de la energía del azúcar  
 AZÚCARES AÑADIDOS  
 Todo tipo de azúcares  
 LÁCTEOS  
 Lácteos  
 FRUTAS, VERDURAS Y TUBÉRCULOS  
 Todo tipo de frutas  
 Todo tipo de verduras  
 Tubérculos o vegetales almidonados  
 5 porciones/día  
 FRUTOS SECOS Y LEGUMBRES  
 FUENTES DE PROTEÍNAS\*  
 PROTEÍNAS ANIMALES  
 Legumbres  
 Frutos secos y semillas

Sustainable planetary diet  
 Protection from climate change and greater food quality  
 Malnutrition control  
 Lower rate of obesity  
 ADDED FATS  
 Unsaturated oils  
 Saturated oils  
 CEREALS  
 Whole grains  
 Carbohydrates should be obtained mainly from whole grains with a low intake of refined grains and less than 5% of energy from sugar  
 ADDED SUGARS  
 All sugar types  
 DAIRY PRODUCTS  
 Dairy products  
 FRUITS, VEGETABLES AND ROOT VEGETABLES  
 All fruit types  
 All vegetable types  
 Root vegetables or starchy vegetables  
 5 portions/day  
 NUTS AND PULSES  
 PROTEIN SOURCES\*  
 ANIMAL PROTEINS  
 Pulses  
 Nuts and seeds

Producción de alimentos no sostenibles de limitado valor nutricional	Production of unsustainable foods with a limited nutritional value
Cambio climático y mayor vulnerabilidad	Climate change and greater vulnerability
Desnutrición	Malnutrition
Obesidad	Obesity
Sindemia global	Global syndemic

*Las proteínas deben obtenerse principalmente de plantas	*Proteins should be obtained mainly from plants
Pollo y otras aves	Chicken and other poultry
Pescado	Fish
Ternera, cordero y cerdo	Beef, lamb and pork
Huevos	Eggs

For now, it is time to get down to work, to take decisions and, with our individual and corporate action, through scientific societies, health institutions and citizens' movements, to promote the new paradigm shift, both with research and with clinical practice and the education of those around us. In fact, the *Sociedad Española de Medicina Interna* [Spanish Society of Internal Medicine] has taken its first step<sup>11</sup>, which must be followed by many other medical organisations, because, without doubt, this initiative is the action with the greatest translational basis, which we can address and, as indicated in the document by Willett et al. "If we do not take action, the world runs the risk of not fulfilling the Sustainable Development Goals and the Paris Agreement, and the children of today will inherit a planet that has been severely degraded and where a large proportion of the population will suffer increasingly from malnutrition and preventable diseases."<sup>8</sup>.

## Declaration of interests

The authors have no conflicts of interest with the content included in this material.

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