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INTRODUCTION

What is the ANIBES scientific study?

Knowing and understanding the energy balance concept (ingesting the same amount of energy that is expended) and being able to analyze in an integrated way its components and interactions, so that it can subsequently be applied to our lives, is perhaps the most important factor in maintaining a good healthy lifestyle and, therefore, controlling overweight and preventing obesity. Nevertheless, there is still a lack of knowledge with respect to what we eat and the energy we expend, which makes it difficult to balance energy properly, due mainly to the fact that we have been unable to use the exact methodology that allows us to apply new technologies.

In spite of the fact that several previous scientific studies have assessed the overall quality of the Spanish diet, pinpointing eating patterns as well as the population’s nutritional status, to date, energy balance and its determining factors have not yet been analysed. The development of the scientific study on Anthropometry, Intake and Energy Balance in Spain (ANIBES in its Spanish acronym) means being able to assess macronutrient intake and energy expenditure, as well as the population’s anthropometric data and eating habits, for the first time in a study in Spain. Furthermore, the data on the different food subgroups has been calculated, in such a way that we can gain a more realistic insight, through the wide variety of food products on offer in the market and are able to adopt criteria that serve to establish the adequate consumption of all foods and incorporate them, together with physical activity, into the energy balance in order to be able to lead a healthy lifestyle.

This is also the first time that research on these characteristics has used innovative tools (such as tablets for recording food and drinks and accelerometers for validating and quantifying the level of physical activity) in order to obtain accurate information on the Spanish population’s energy and food intake, eating habits, behaviour and anthropometric data, as well as energy expenditure and physical activity patterns.

The energy balance, current lifestyles and future public health policies

In Europe, lifestyles have changed considerably over the last fifty years. To be specific, our country has undergone significant socio-economic and sociological changes since the 60’s,
including high rural-urban migration, the widespread incorporation of women into the workplace, and the rapid urbanization process, all of which have an impact on eating habits, due to new lifestyles, a reduction in free time and an increase in machinery and technology, which are pivotal to understanding not only diet changes, but also those produced in physical activity levels and in lifestyle in general.

All of these factors seem to have had adverse effects both on present and future populations, as overweight and obesity currently affect over 50% of the adult Spanish population and around 30% of the child-adolescent population.

It has been suggested that over-consumption of energy is the main cause of overweight and obesity. However, the conclusions from the ANIBES scientific study and other recent studies suggest that surplus energy may have different origins, and also overweight and obesity may have a multifactorial nature in Spain. Moreover, it has been observed that, together with energy input from foods and beverages, sedentary lifestyles and the lack of physical activity and exercise have an increasing role in this issue, as well as behavioral patterns such as sleep time, family meals, parental level of education, family and economic environment, etc. Although overweight and obesity are the result of an imbalance between energy intake and expenditure, there is a current need to delve into it in order to quantify and assess, throughout the year and with representative samples and methodologies as accurate as possible, the amount of energy and other macronutrients’ intake in the daily diet, and how and when this energy is expended.

All of the above can be implemented provided that we understand the energy balance better, given how essential its knowledge is in determining the population’s energy requirements, reference intakes and minimum energy expenditure for different population groups.

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The final protocol of the ANIBES scientific study was previously approved by the Clinical Research Ethics Committee of the Community of Madrid (Spain).