

NUMBER 4



Nutritional issues in Spanish women: findings of the ANIBES scientific study

















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It has been proved that women generally have dietary and lifestyle patterns that are more suited to their needs than those faced by men, despite the different nutritional challenges they face over the course of their lives.

In this respect, women go through different stages in which their energy and nutritional needs vary and also may place them in vulnerable situations concerning their nutritional status on certain pathologies related to nutrition.

The aging process, body weight control concerns or the appearance of certain chronic diseases increase vulnerable situations. For this reason, it is essential to have up-to-date and accurate information about the nutritional status of women in Spain in order to establish preventative measures.

Longer life expectancy

Women have a longer life expectancy than men, and it appears that adequate diet and lifestyle have a positive impact on it.

However, a longer life does not mean that the aging process takes place with a good quality of life. In fact, a situation of dependence and the loss of functional autonomy are more frequent among women. Moreover, diseases like osteoporosis, some types of cancer or neurodegenerative illnesses are increasing as a consequence of a longer lifespan in this group of population.

• Implications of a continuous body weight control

One of the main concerns of women across different stages of life is controlling body weight, which often entails following weight loss methods, some of them like the so-called 'magic' diets, and may compromise their nutritional status.

The consequences of this malnutrition are clear: if there is an excessive consumption, it results in overweight and obesity. On the contrary, insufficiency may imply nutritional disorders like anorexia or bulimia.

· Chronic diseases prevention

A healthy diet and lifestyle may help prevent chronic illnesses that are common in women, such as diabetes mellitus, cardiovascular illnesses and certain types of estrogenic cancers.

Few representative studies in the female population

71.3 % of women positively evaluate their health, figure that adds up to 79.3 % as regards men, according to the latest Spanish National Health Survey data 2012.

In spite of this optimistic perception, it is estimated that 1 out of every 6 adults over 15 years-old in Spain suffer from chronic health problems and that these are much more common among women, who suffer from diseases like migraines, chronic back pain, depression, arthrosis or arthritis. Furthermore, due to the increase in life expectancy, women that are functionally autonomous over 65 are less than half (47.7 %), while the number of functionally autonomous male population is 61.3 %.

At present time, no representative studies have been done that specifically evaluate the nutritional status of the female population, as well as its determinants over different life stages. The ANIBES scientific study (Anthropometry, Intake and Energy Balance in Spain) has analyzed these features among a representative sample of people aged between 9 and 75, in which the strengths and weaknesses as regards energy intake of the Spanish population are described, including those of women over the course of different life stages.

The fieldwork of the ANIBES scientific study was done from September to November 2013, following the completion of two pilot studies. The ANIBES study included a sample of 2,009 people, of which 49.6 % corresponds to women.

The results of this study indicate that the nutritional problems of Spanish women should be a priority, not only for the Spanish Health System, but also for the Nutritional Education tools and programmes.



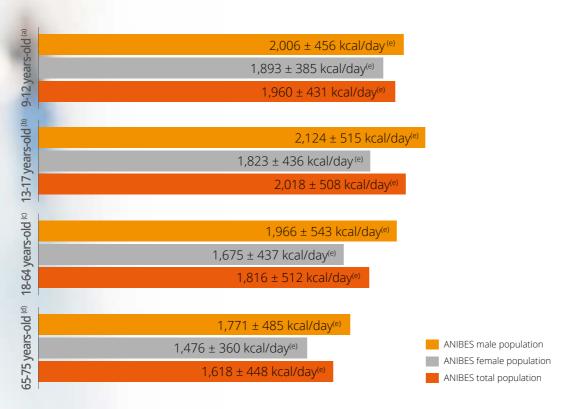


Energy intake

According to the data of the ANIBES scientific study, the average energy intake per day and per person among the Spanish female population, which included a sample of 996 women, is $1,660 \pm 426.7$ kcal/day. In general terms, it is a lower intake in comparison with the total population energy intake ($1,810 \pm 504.4$ kcal/day) and also compared to the male population, whose intake adds up to $1,957 \pm 531$ kcal/day.

This trend can also be seen when the data are stratified by age groups, being the energy intake particularly low among women over 65, standing at $1,476 \pm 359.9$ kcal/day.

AVERAGE ENERGY INTAKE BY SEX AND AGE GROUP



⁽a) Total sample of children: 213 (of which 126 are men and 87 are women)

⁽b) Total sample of adolescents: 211 (of which 137 are men and 74 are women)

⁽C) Total sample of adults: 1,655 (of which 798 are men and 857 are women)

⁽d) Total sample of elderly over 65: 206 (of which 99 are men and 107 are women)

⁽e) Mean ± standard deviation

The average energy intake data of the ANIBES scientific study female population are lower in comparison with those found by other studies such as ENIDE (National Survey on Dietary Intake in Spain), which was conducted in 2011, or those found by the Food Consumption Panel.

Implications of a decrease in energy intake among different age groups

- Energy intake in the 25th percentile of the female participants in the ANIBES scientific study is only 1,600 kcal/day and it is just over 1,500 kcal/day in the case of adolescents. Among vulnerable groups and during periods of growth like childhood and adolescence, this reduced intake may compromise an adequate nutritional status.
- Among women over 65, with an energy intake remaining below 1,500 kcal/day, the reference recommended amount of energy intake to fulfill the adequate nutrient density is not achieved. In this group of population, it is necessary to reach the 75th percentile in order to observe energy intakes higher than 1,600 kcal/day.

Caloric profile and nutrient distribution

The Spanish female population has an unbalanced caloric profile, according to the EFSA recommendations, with an excess of protein intake, but with a carbohydrate intake below the recommended rates. Among the sample of women of the ANIBES scientific study, it can be observed that 17.0 % of the energy intake comes from proteins, 38.7 % from lipids, 41.2 % from carbohydrates (of which 17.8 % are simple sugars), 1.4 % from alcohol and 1.5 % from dietary fibre.

Proteins

By age groups, the total energy intake that comes from proteins increases with age; a behavioral pattern that is not observed with carbohydrates or lipids. Even though the imbalance occurs in all age groups, it is most marked among the elderly women.

Protein intake above the EFSA recommendations is a trend that is also observed in our neighboring countries of the European Union, where they range from 11.1 % to 17.6 % of the total energy intake.





Carbohydrates

At EU level, carbohydrates range from 43 % to 58 % of the total energy intake among children and adolescents, and from 36 % to 56 % in adults, according to the European Nutrition Health Report 2009. In this case, the Spanish female population is not only below the recommended amounts, but also in the lowest range.

Lipids

In the case of lipids, the EFSA proposes a wide range between 20 % and 35 % of the total energy intake, figure that is far exceeded by Spanish women.

The lipid profile of the ANIBES population is not equilibrated, with an elevated intake of saturated fatty acids (11.7 %). The intake of monounsaturated fatty acids, which stands at 16.9 %, but nevertheless, it is within the recommended amounts established by the WHO, ranging from 16 % to 19 %. This is the consequence of a higher consumption of olive oil in cooking. This also occurs with the polyunsaturated fatty acids, whose intake (6.6 %) is within the recommended established amounts, though it is still insufficient in the case of omega-3 fatty acids.

Contribution to the energy intake from food and beverage groups

The ANIBES scientific study has identified 16 food and beverage groups that, are divided into 29 subgroups.

In this sense, the food group composed of grains and their derivatives is the main contributor to the daily intake among the Spanish female population, standing at 27.0 %. In this group, it should be emphasized that bread comprises 11.0 %. This group is followed by meat products and their derivatives, which stand at 14.1 % of energy; oils and fats being 13.1 %; and milk and its derivatives standing at 12.4 %. These groups, overall, comprise approximately two thirds of total energy intake.

TABLES INDEX

Dietary sources of energy from food and beverage groups and subgroups in the female population

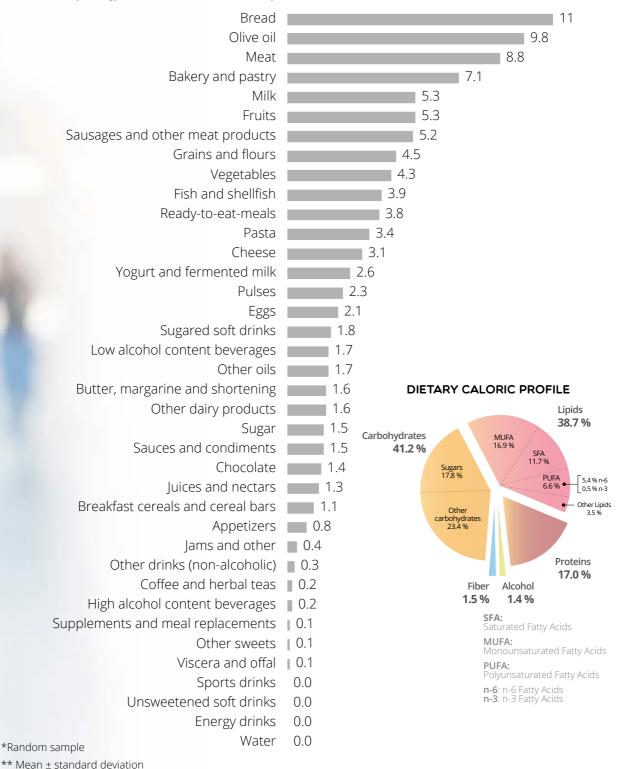
- 1. General | Women (9-75 years old)
- **2. Girls** (9-12 years old)
- **3. Adolescents | Girls** (13-17 years old)
- 4. Adults | Women (18-64 years old)
- **5. Elderly | Women** (65-75 years old)



1. GENERAL WOMEN 9-75 YEARS OLD

(% kcal/day/person) Sample: 996 individuals*

Mean daily energy intake: 1,660 ± 427 ** kcal/day



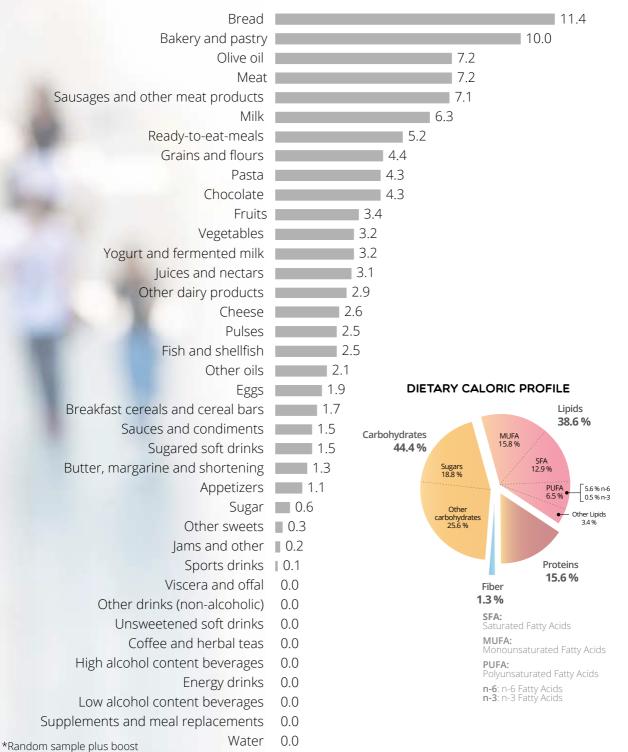
ANIBES scientific study >> Anthropometric data, macronutrients and micronutrients intake, practice of physical activity, socioeconomic data and lifestyles of the population

2. CHILDREN GIRLS 9-12 YEARS OLD

(% kcal/day/person)
Sample: 87 individuals*

** Mean ± standard deviation

Mean daily energy intake: 1,893 ± 385** kcal/day



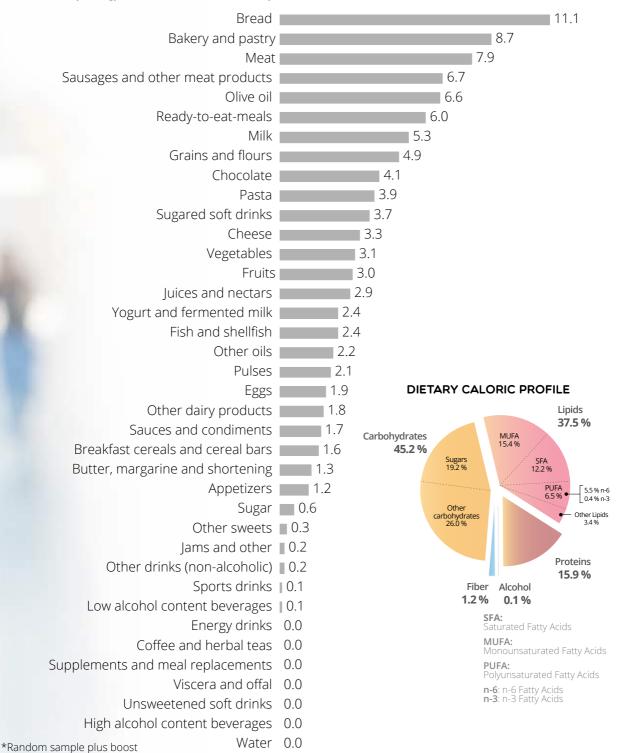
^{*}



3. ADOLESCENT GIRLS 13-17 YEARS

(% kcal/day/person) Sample: 74 individuals*

Mean daily energy intake: 1,823 ± 436** kcal/day



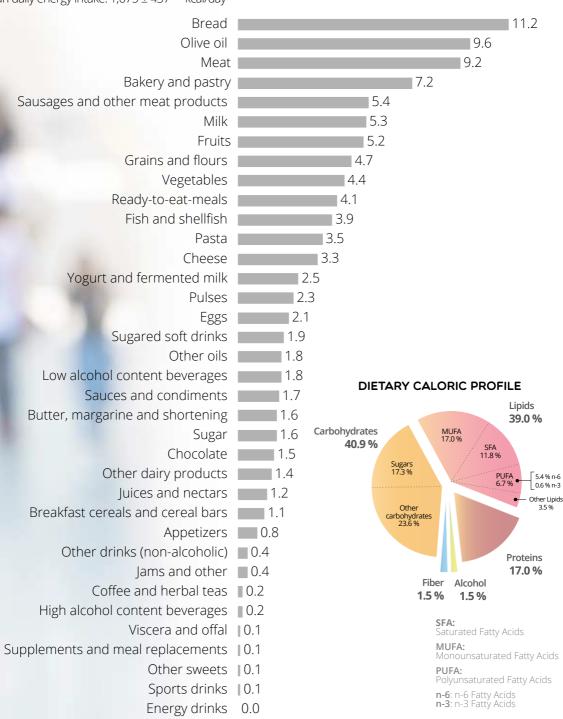
ANIBES scientific study >> Anthropometric data, macronutrients and micronutrients intake, practice of physical activity, socioeconomic data and lifestyles of the population

** Mean ± standard deviation

4. ADULT WOMEN 18-64 YEARS OLD

(% kcal/day/person) Sample: 857 individuals*

Mean daily energy intake: 1,675 ± 437** kcal/day



^{*}Random sample plus boost

Unsweetened soft drinks 0.0

Water 0.0



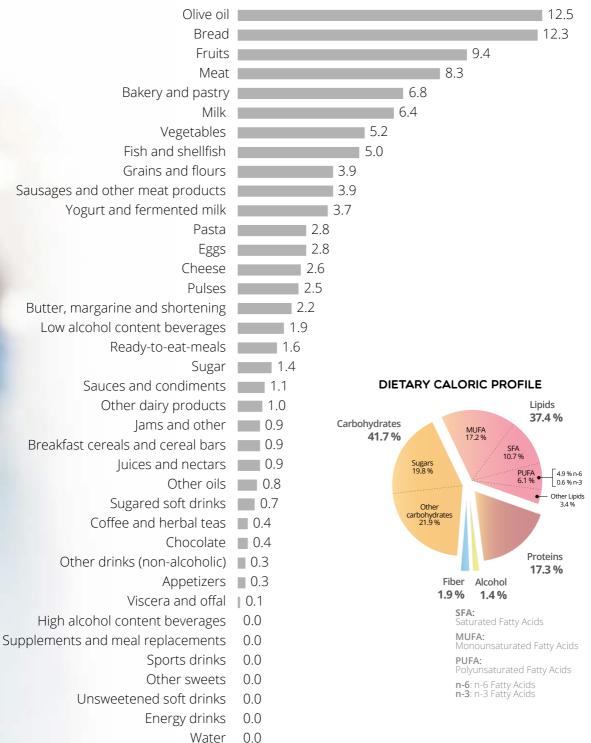
^{**} Mean ± standard deviation



15. ELDERLY WOMEN 65-75 YEARS OLD

(% kcal/day/person) Sample: 107 individuals*

Mean daily energy intake: 1,476 ± 360** kcal/day



^{*}Random sample plus boost

^{**} Mean ± standard deviation

References

Varela-Moreiras G. Nutritional issues in Spanish women; findings of the ANIBES Study. Nutr Hosp, 2015;32(1):14-19; doi:10.3305/nh.2015.32.sup1.9472



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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).

