

"Chronological age versus biological age, how old do you think Spaniards are? Analysis of the differences between self-perceived and chronological age and how healthy lifestyle habits influence the population"

Spaniards feel 4.5 years younger than they actually are

- Not everyone ages at the same rate. Some are biologically younger than they actually are and vice versa. But what does ageing depend on? A pioneering study by Vivaz on this topic analyses the differences between the types of ages, since we do not have just one age, but several: chronological, biological, apparent or self-perceived.
- On average, Spaniards estimate their biological age to be 4.5 years younger than their chronological age, but this varies from one person to another and one of the most influential factors is age itself. According to the study, 6 out of 10 people feel younger than their birth age. Those who feel best are the oldest, who are on average biologically ten years younger.
- Increasing the difference between chronological and biological age can affect many areas of life: it is not just about knowing if we will live longer or not, rather, we could explore the field of ageing in different insurance terms than the ones we use now.
- One of the main conclusions of the study is that biological age can be influenced: we can take steps to feel younger, such as eating the right diet, exercising to improve fitness, getting plenty of rest, socialising, and promoting emotional well-being.
- Autonomous Communities: People from Extremadura (6 years), Murcia (5.7 years), Andalusia and Galicia (5.2 years) have the highest age difference compared to their birth age. Meanwhile, people from La Rioja (1.6 years), Madrid (3 years) and Navarra (3.5 years) have the lowest age difference compared to their birth age.

Madrid, 22 November 2021. How old would you say you are if you did not know how old you are? Historically, age has been calculated by only using people's birth age, which indicates **chronological age**. We have all heard someone say they feel younger than they actually are. If you feel younger, it is likely that you are biologically younger, because eating habits, sleep, physical activity and socioeconomic and work conditions are factors that increasingly determine the **actual or biological age** of the population.

It is important to understand that not everyone ages at the same rate. Biological age begins to separate from chronological age when someone's life path begins, or even earlier, depending on

various factors, not only genetic or epigenetic, but also **lifestyle habits that we pick up over time**. There are several ways to measure biological age (for example, through maximum oxygen consumption testing or an analysis that measures telomere extension, which is another important biomarker) but also based on the physical and emotional health condition and the perceived age of the population.

These differences in ages are analysed in the report "**Chronological age versus biological age: how old do you think Spaniards are? Analysis of the differences between self-perceived and chronological age and how healthy lifestyle habits influence the population**" prepared by the health insurance brand of Línea Directa Aseguradora, through a [Vivaz survey of 1713 people](#), and who also performed a **Patient Health Questionnaire (PHQ)**, self-report questionnaires increasingly used in the medical community worldwide, and the **WHO-5 well-being questionnaire**, a questionnaire also endorsed by the World Health Organization (WHO), which correlates self-perceived age with the level of health, well-being, mood and lifestyle.

The aim of the Vivaz study is to measure the health and perceived age of Spaniards, compare it with their chronological age, **evaluate the impact of lifestyle habits and the perception of well-being at different ages**. Thus, one of the conclusions is that **6 out of 10 Spaniards feel younger than their chronological age**; 25% feel the age they are and **only 15% feel older than they are**.

The average chronological age of the representative sample of the Spanish population studied is 48.17 years. However, Spaniards feel 43.71 years old. That is, on average **Spaniards feel 4.5 years younger than their chronological age**. This shows that **the older they are, the younger they feel**. While people between 20 and 29 years old add up to one year to their chronological age, those with an age between 70 and 79 years according to their date of birth have an average chronological age of 73.05, but they feel around 63, so ten years younger. This means that, in Spain, the elderly feel physically and mentally healthier than ever before.

Impact of biological age on the population

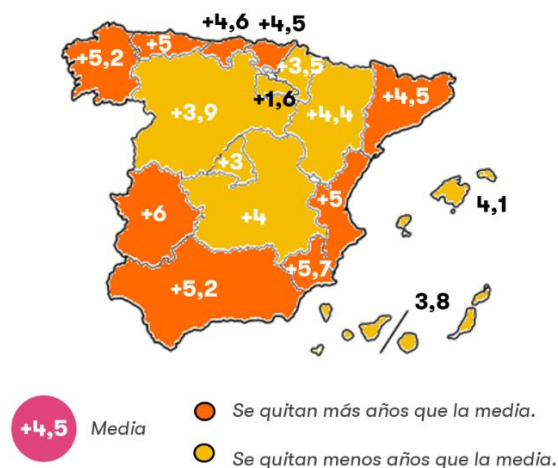
The difference between chronological and biological age can have a **huge impact on people's day-to-day lives** in many areas of life. In the future, this could influence products such as health insurance, among others, since this age group will tend to live longer and **remain independent** for longer and will tend to have fewer ailments.

This tendency to take years off as people get older correlates with the fact that the elderly (between 70 and 79 years old) **are also the age group with the best health habits**, and are the group with the largest proportion of people **doing exercise at least 2 or 3 times a week** (6 out of 10 people); walking most; eating **more healthily** (almost 79% follow the Mediterranean diet), regularly consuming fruits, vegetables, legumes and fish; and the group that **smokes less** (8 out of 10 people have never smoked or have stopped smoking) and **drink less alcohol** (77% have drunk in the last year, compared to an average of 85.61%).

Differences by sex and Autonomous Communities

By sex, 65% of **women feel younger while only 58% of men feel younger**. In addition, on average women tend to take 4.8 years off compared to the 4 years that men take off. Despite feel slightly less physically well than men, feeling worse in economic terms, practicing sports less regularly and sleeping worse, they have a better diet and smoke less and drink less alcohol than men.

In terms of Autonomous Communities, people living in **Extremadura** (6 years), **the Region of Murcia** (5.7 years), **Andalusia** and **Galicia** (5.2 years) feel the youngest compared to their date of birth, all being above the national average of 4.5 years. Meanwhile, **people living in La Rioja** (1.6 years), **Madrid** (3 years) and **Navarra** (3.5 years) take the fewest years off, which is also related to how they feel in health terms and their exposure to stress.



Influence of health and well-being and mental health on age

Health habits and one's own perception of health levels and well-being have, therefore, a clear influence on the age people feel. **The better an individual's lifestyle is and the better they feel in terms of health, emotional and economic terms, the younger they tend to feel.** Therefore, for example, those who say they feel younger than they are, value their health with an average of 75.4 points out of 100, while those who say

they feel older value their health almost 14 points lower (61.7). The same happens with the perception that people have of their emotional situation (71.9 who feel younger compared to 65.8 who feel older) and economic situation (59.2 versus 49.6).

Similarly, in terms of **the impact of mental health**, 8 out of 10 Spaniards who feel that they are older than their birth age are under **high or very high levels of stress**, while 53% of those who feel younger have normal stress levels. In the same vein, those who value their current **emotions** most highly tend to feel younger, while those with a high level of negative emotions feel older.

Generally, **90% of the Spanish population think that they have good or very good health**. However, more than 40% of those surveyed admit that their diet could be healthier, by reducing the consumption of fried foods and fats and increasing their consumption of fruits and vegetables; a third of the population smokes daily, half suffer from high or very high stress levels and 4 out of 10 Spaniards do not exercise regularly. And this influences how young or old we feel: **those who have healthy habits feel 6 years younger than they are.**

Recommendations for feeling better and modifying biological age

The study concludes by indicating that **biological age is closely related to healthy lifestyle habits**. Therefore, it is possible to feel younger by following a series of recommendations:

- Have a healthy diet.
- Exercise between 2 to 3 times a week.
- Sleep for at least 7 hours a day.
- Have an active social life.
- Get regular cancer screenings.

- Do not smoke.

Methodology

This report is part of the research project carried out by **Vivaz**, the health insurance brand of **Línea Directa Aseguradora**, and Dr **Manuel Castillo**, **Professor at the Granada Medicine Faculty, Scientific President of the Spanish Society of Anti-Ageing Medicine and Longevity and Medical Advisor to Vivaz Seguros de Salud**. The aim is to measure the difference between the chronological age and the biological and perceived ages of the population and to evaluate the influence of healthy habits and the perception of health and well-being among the population. For the preparation of the study, 1713 CAWI-type surveys were carried out on people between 20 and 79 years old, which took place between 4 and 6 October 2021. These respondents were also given the patient health questionnaire (PHQ) and the WHO-5 well-being questionnaire, among other tests. Everything was distributed appropriately for each Autonomous Communities (minimum of 90 in each) and in quotas by sex and age, with global results that offer a sampling margin of error of +/- 2.37%. The results have been weighted to adjust it to the public aim of the study to guarantee the population was represented at the national level.

About Vivaz

Vivaz is the health brand of **Línea Directa Aseguradora S.A.** It offers innovative health insurance that is easy to manage, providing excellent value for money and comprehensive healthcare for policyholders. Its medical resources include 30,000 professionals and 1,000 health centres. It is also the first health insurance to reward its customers for having healthier lifestyles, with direct discounts on their policy and other gifts in its marketplace.

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