

First edition of the International Microbiota Observatory

Microbiota are essential to our health, but remain poorly understood worldwide.

Americans are among the least inclined to change their behavior to protect their microbiota and receive relatively little information on the subject from their healthcare professionals.

*The human microbiota is made up of billions of microorganisms (bacteria, viruses, fungi, etc.) living in symbiosis with our body. There is a gut microbiota, but also a skin, oral, lung, urinary tract, and vaginal (to name a few) microbiota. All play an essential role in our health. But what does the general public know about this role? What do they know about how to take care of their microbiota? Do they suffer from health problems that they associate with their microbiota? What role do healthcare professionals play today in informing patients about the behaviors they should adopt to preserve the balance in their microbiota? To answer these questions, **the Biocodex Microbiota Institute commissioned Ipsos to carry out a major international survey of 6,500 individuals across seven countries (France, Spain, Portugal, the USA, Brazil, Mexico, and China): the International Microbiota Observatory. Over and above geographical disparities in behavior, this exclusive survey has revealed a lack of awareness worldwide of the microbiota's role in health and has underlined the essential role played by healthcare professionals in educating the public in this regard.** The results were presented on June 27, 2023, to celebrate World Microbiome Day.*

Microbiota's role in health poorly understood...

- **Only 1 in 5 people (21%) claim to know the exact meaning of the term "microbiota".** The gut microbiota is the most well-known microbiota, with 53% of those surveyed familiar with the term, but only 24% claim to know exactly what it means. Other microbiota are much less well known, including, in descending order, the vaginal microbiota (45% of those surveyed are familiar with the term, but only 18% know its

exact meaning), the oral microbiota (43% and 17%, respectively), and the skin microbiota (40% and 15%, respectively).

- 3 out of 4 of those surveyed are aware that a microbiota imbalance can have a significant impact on health (75%). 74% of those surveyed stated that diet has a significant impact on the balance of our microbiota, and 72% that microbiomes play a major role in immune defense mechanisms.
- **However, more than 1 in 3 (34%) are unaware that antibiotics have an impact on our microbiota.** The vast majority of those surveyed are unaware that certain non-digestive diseases, such as Parkinson's, Alzheimer's, or autism, may be linked to the microbiota (75%).

... coupled with limited awareness of “good” behaviors that protect the microbiota

- They know that a balanced diet (84%), physical activity (76%), and avoiding smoking (72%) are essential to good health, and that these behaviors consequently have a positive impact on the microbiota.
- **However, when it comes to more specific behaviors, the level of awareness plummets:** only 1 in 3 (35%) know that to help preserve the skin microbiota it's better to avoid washing twice a day. Less than 1 in 2 women (42%) know that vaginal douching is harmful for their vaginal microbiota.
- More than 1 in 2 people (57%) say they have adopted behaviors in their daily lives to keep their microbiota in balance.
- **This new awareness should be celebrated, but also put into perspective.** Firstly, only 1 in 7 (15%) say they do “a lot”, while most of the rest (42%) say they only do “a little”. Secondly, 43% of those surveyed say they have not adopted any specific behavior. The results of the International Microbiota Observatory show that there's still much work to be done in this area.

The microbiota explained by healthcare professionals: the key to successfully adopting good behaviors

- **Only 1 in 3 people (37%) say their doctor has informed them about what the microbiota is and what it does.** Less than 1 in 2 state their doctor has explained the behaviors needed to maintain a balanced microbiota (44%, but only 19% have received these explanations more than once).

- The information provided by doctors when prescribing antibiotics illustrates just how inadequate it remains. Fewer than 1 in 2 patients (41%) claim to have been informed by their doctor about the risks of digestive problems associated with antibiotics. Only 1 in 3 patients (34%) claim to have received advice from their healthcare professional about minimizing the adverse effects of antibiotics on their microbiota, or to have been informed that taking antibiotics may adversely affect the balance of their microbiota (33%).
- **On the other hand, when a patient is repeatedly and fully informed about the subject, his or her relationship with the microbiota sees a major change.** More than 9 out of 10 (95%) of those informed by their healthcare professional subsequently adopted a behavior that helped maintain a balanced microbiota, compared to 57% of those not informed.

Older people poorly informed, even though more vulnerable

- **Even though they're at an age when the health problems associated with aging tend to become increasingly evident, older people (i.e., those aged 60 and over) are the least likely to know precisely what the gut microbiota is (20%, 4 points below the overall figure).**
- They are also the least likely to adopt behaviors that keep their microbiota in balance (only 50% vs. 57% overall).
- Given this mismatch, doctors again have an essential role to play in encouraging older people to change their behavior. Despite this, they rarely touch on these subjects. Only 1 in 3 of them have ever received advice from their doctor about how to keep their microbiota in balance (32% vs. 58% of 25-34 year-olds). 1 in 4 say they have been told what the microbiota is (26% vs. 50% for 25-34 year-olds). This urgently needs to change.

Americans are among the least inclined to change their behavior to preserve the balance of their microbiota and receive relatively little information on the subject from their healthcare professionals.

- **Americans show less awareness than citizens of other countries about their microbiota, but not about probiotics.** For example, they are the least familiar with the terms “microbiota” (only 53% vs. 64% overall), “gut microbiota” (42% vs. 53% overall), and “dysbiosis” (only 20% vs. 28% overall). On the other hand, while their awareness about probiotics is not high, it is better than in many countries: they

beat the average when it comes to knowing the precise meaning of terms like “probiotic” (53% vs. 43% overall) and “prebiotic” (36% vs. 27% overall).

- **They have a very low awareness of the various behaviors that should be adopted**, but are more likely than citizens of other countries to know that probiotics (65% vs. 62% overall) and prebiotics (56% vs. 51% overall) can have beneficial effects on the microbiota.
- **However, Americans are also the least likely to have adopted specific behaviors to preserve the balance of their microbiota**, with only 47% having done so (10 points below the overall figure and the lowest level along with the French) and only 16% claiming to do so “a lot” (1 point above the overall figure).
- **Moreover, Americans are among the least likely to discuss the matter with their doctor.** Only 37% declare they have ever been prescribed probiotics or prebiotics (versus 46% overall). However, this is more than in France, Spain, or Portugal. They are also the least likely, along with the French, to say that their doctor has explained the behaviors needed to preserve their microbiota (31% vs. 44% overall). Lastly, only 1 in 4 Americans has ever had the role of their microbiota explained to them (28% vs. 37% overall). Only 1 in 5 report that their doctor suggested them to have their microbiota tested (21% vs. 30% overall).
- **In the US, patient education is now key to explaining both the role of the microbiota and the behaviors needed to best preserve them. This vital education should be provided by healthcare professionals.**

Murielle Escalmel, Director of the Biocodex Microbiota Institute:

“This observatory is the first of its kind and it provides us with a wealth of information on the knowledge, behavior and expectations of the world’s populations with regard to their microbiota. It also highlights the key role played by healthcare professionals in raising awareness about the right behaviors when it comes to taking care of the microbiota. The survey shows that from the moment patients receive information from their healthcare professionals, their relationship with the microbiota changes. Better still, virtuous behaviors result. We should therefore step up our support for healthcare professionals, so that the microbiota becomes an integral part of patient care.”

Find out about the results of the International Microbiota Observatory at:

→ www.international-microbiota-observatory.com

About the Biocodex Microbiota Institute

The Biocodex Microbiota Institute is an international knowledge hub dedicated to promoting better health by communicating about the human microbiota. To this end, it targets healthcare professionals and the general public, raising awareness of the central role played by this little-known organ.

→ www.biocodexmicrobiotainstitute.com



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