

Why do we yawn when we see someone else yawn?

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After a hearty lunch at work, you and your co-workers go into a meeting. First one colleague starts to yawn, then a second and finally it's your turn. Many biological explanations have been put forward for this, but what is the scientific consensus?

Yawning is a universal phenomenon, observed in <u>many vertebrate species</u>, from wolves to parrots, and, of course, humans, from a very early age. But why do we tend to yawn when we see someone else doing it?

The reason why yawning has been present in so many species for so long is that it seems to be a necessary survival mechanism. But what is its real purpose? Whether it's to oxygenate the brain, regulate body temperature or provide a social signal, there is no shortage of hypotheses, both among the general public and in the scientific community.

The widespread idea that yawning increases oxygenation of the brain <u>has not been confirmed</u>. Another explanation suggests that yawning helps maintain attention. Again, there is no consensus on this either.

What seems more certain is the link between yawning and <u>circadian rhythm</u>, our biological clock. The majority of yawns occur <u>at rest</u>, generally concentrated around the phases of waking and falling asleep. More precisely, they occur when the body is less alert, as when it's working to digest a meal.

A means of communication?

Although the reasons behind yawning have yet to be confirmed, it's "contagious" nature is generating significant discoveries in various disciplines, both in biology and social psychology.

Yawning could play an important role in social interactions, as observed in ostriches, which use it to synchronise group behaviour. As in humans, they often yawn when they shift from waking to resting, or vice versa. Yawning can then serve as a signal indicating a change in activity or alertness, ensuring that all members of the group are alert or at rest at the same time, increasing collective safety and maintaining the group's rhythm.

However, the contagion of the yawn seems to be a predominantly human characteristic, with a few exceptions, such as <u>chimpanzees</u> or the <u>lion monkey</u>. This specificity reinforces the idea that human yawning, over and above its purely physiological functions, is a means of non-verbal communication. The main hypothesis is that yawning helps to synchronise group behaviour, a function similar to that observed in ostriches.

Indeed, seeing or hearing someone yawn stimulates brain regions involved in imitation and empathy, thanks in particular to <u>mirror neurons</u>. These neurons are activated by observing actions – for example when a child follows his parent's movements to tie her or his shoes. However, certain areas of the brain specifically involved in contagious yawning are part of neural networks linked to empathy and social interaction.

A predisposition to contagious yawning?

Empathy appears to play a key role in susceptibility to contagious yawning. Individuals with social disorders, such as <u>autism</u> or <u>schizophrenia</u>, seem less receptive to picking up yawning from others. <u>Research</u> even shows that external factors such as breathing and body temperature could respectively reduce and increase contagious yawning.

This observation reinforces the idea that the perception of contagion may be exaggerated, partly because studies often involve observing individuals in groups. This dynamic could influence the observed frequency of yawning, suggesting that it is not necessarily seeing someone yawn that triggers the reaction, but rather the presence and interactions within the group.

So if you find yourself yawning when your colleague yawns after lunch, it may well be that it's not his or her yawning that's influencing you. Instead, it could simply be the shared context – in this case, having eaten well together – that provokes this synchronised reaction.