

Name: _____ Class: _____

What is it about yawning?

By Christine Calder
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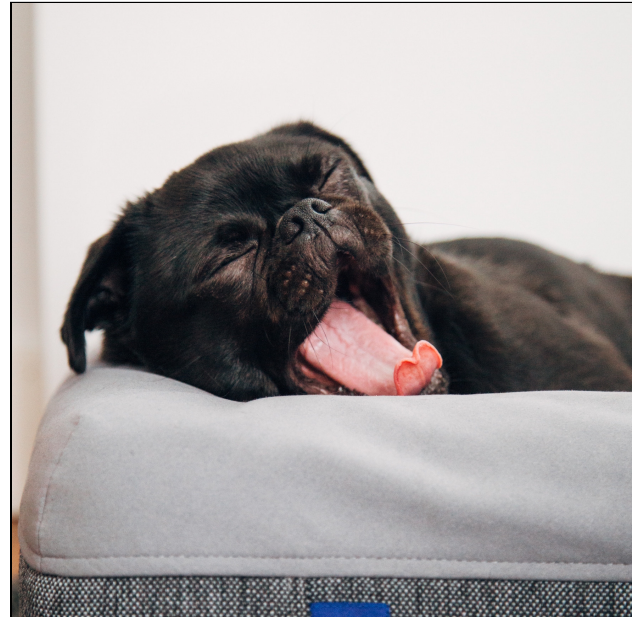
When do you yawn? Is it when you're tired or because of someone who is close by yawns? In this informational text, Christine Calder explores why humans and some animals yawn. As you read, take notes on what can cause someone to "catch" a yawn.

- [1] You know the feeling. It's impossible to resist. You just need to yawn.

A yawn consists of an extended gaping of the mouth followed by a more rapid closure. In mammals and birds, a long intake of breath and shorter exhale follows the gaping of the mouth, but in other species such as fish, amphibians, and snakes there is no intake of breath.

But what's behind a yawn, why does it occur?

In the past, people have had many hypotheses.¹ As far back as 400 B.C., Hippocrates thought yawning removed bad air from the lungs before a fever. In the 17th and 18th century, doctors believed yawning increased oxygen in the blood, blood pressure, heart rate and blood flow itself. More recently, consensus² moved toward the idea that yawning cools down the brain, so when ambient³ conditions and temperature of the brain itself increase, yawning episodes increase.



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- [5] Despite all these theories, the truth is that scientists do not know the true biological function of a yawn.

What we do know is that yawning occurs in just about every species. It happens when an animal is tired. It can be used as a threat display in some species. Yawning can occur during times of social conflict and stress, something researchers call a displacement behavior.

And that wide-open mouth can be contagious, especially in social species such as humans, chimpanzees, bonobos, macaques, and wolves.

Watching someone yawn — heck, even reading about yawns — can lead you to yawn yourself. Why?

1. a proposed explanation for something based on limited evidence
2. a general agreement
3. relating to the immediate surroundings of something

Research on humans tells us that people who are more empathetic⁴ tend to be more susceptible to contagious yawning. When you see someone else yawn, the networks in your brain responsible for empathy and social skills are activated.

- [10] Is yawning contagious for dogs, too? In 2011, U.K. biologists tested for contagious yawning between people and man’s best friend. Although 5 of the 19 dogs they studied did yawn in response to an unfamiliar person’s yawn, the researchers couldn’t prove the yawns were contagious.

In 2013, cognitive and behavioral scientists at the University of Tokyo once again tested contagious yawning in canines⁵ while controlling for stress. This time the researchers found that dogs were more likely to yawn in response to a familiar person. They concluded that dogs can “catch” a yawn from humans and that yawning is a social rather than a stress-based behavior.

In 2014, University of Nebraska psychologists looked at contagious yawning in shelter dogs. They found that some dogs that yawned when exposed to human yawning had elevated cortisol levels — a proxy for stress. Levels of the cortisol stress hormone did not rise in dogs that didn’t yawn in response to a human yawn. This finding suggests some dogs find human yawning stressful and others do not. More research is needed to evaluate this aspect of the human-dog relationship.

So the jury’s still out on the true why of yawning. But when it comes to inter-species yawning, you can collect your own anecdotal⁶ data. Try an experiment at home: Yawn and see if your pet yawns back.

[“What is it about yawning?”](#) by Christine Calder, Mississippi State University, July 5, 2018. Copyright © The Conversation 2018, CC-BY-ND.

4. **Empathetic (adjective):** showing an ability to understand and share another person’s feelings
5. dogs
6. based on personal accounts or observations rather than facts or research

Text-Dependent Questions

Directions: For the following questions, choose the best answer or respond in complete sentences.

1. Which statement identifies the central idea of the text?
 - A. Scientists know more about the biological functions of yawning than why some social species “catch” yawns from each other.
 - B. Scientists believe that dogs are more likely to engage in contagious yawning because they are more empathetic than most humans.
 - C. While scientists do not know what causes yawning, they have found that people who yawn more frequently are often mentally and physically healthier.
 - D. While scientists have limited knowledge about why we yawn, studies have shown that people and animals can “catch” yawns from social interactions.

2. Which detail from the text best supports the answer to Part A?
 - A. “More recently, consensus moved toward the idea that yawning cools down the brain, so when ambient conditions and temperature of the brain itself increase, yawning episodes increase.” (Paragraph 4)
 - B. “When you see someone else yawn, the networks in your brain responsible for empathy and social skills are activated.” (Paragraph 9)
 - C. “In 2013, cognitive and behavioral scientists at the University of Tokyo once again tested contagious yawning in canines while controlling for stress.” (Paragraph 11)
 - D. “Levels of the cortisol stress hormone did not rise in dogs that didn’t yawn in response to a human yawn. This finding suggests some dogs find human yawning stressful and others do not.” (Paragraph 12)

3. Which of the following describes the author’s main purpose of the text?
 - A. to explore why people and animals yawn and how yawns are contagious
 - B. to prove that yawning is more of a biological function than a social one
 - C. to explain why scientists know so little about why humans yawn
 - D. to support the theory that yawning helps cool down the brain

4. How does the author’s discussion of the studies conducted on dogs contribute to the text?
 - A. It emphasizes how yawning and contagious yawning differs greatly between species.
 - B. It proves that social species have more in common than scientists initially realized.
 - C. It provides additional information on the possible causes for contagious yawning in other species.
 - D. It suggests that dogs are just as empathetic as humans because they experience contagious yawning.

5. What is the relationship between “catching” a yawn and social behavior?
