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### Weekly Article #1

While reading, mark the main idea and supporting details (use different colors or symbols)

## Why do we get brain freeze when eating ice cream?

By Allie Shah, Star Tribune, adapted by Newsela staff  
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We all scream for ice cream, but sometimes snarfing down a cold treat in a hurry makes us scream — in agony.

We clutch our heads. We squeeze our eyes shut and wait for what seems like an eternity for that sudden burst of pain behind our eyes to subside. Then, when all is well again, we take another bite.

We asked doctors to break down the biological chain reaction behind an ice cream headache — or brain freeze, as some folks call it. The trigger, of course, is the cold. Then things start to snowball.

### All In The Blood Vessels

"The thinking is when this super cold ice cream hits the roof of your mouth, your body's initial reaction is that the blood vessels there constrict," explained Dr. Jessica Heiring. She is an expert in headache and migraine management at the Minneapolis Clinic of Neurology.

It's a shock to your system similar to putting your hand on a hot stove. Your body senses something has gone awry, but unlike with the stove, it can't solve the problem simply by pulling away. So it rushes blood flow to the area to try to warm it up.

Meanwhile, the nerves that run alongside your blood vessels near the roof of your mouth sense the neighboring blood vessels shrinking and dilating. Then they, too, react.

"When the vessels shrink and dilate like that, the nerves next to it try to send signals up to your brain," Heiring said. These signals say, "the vessels are really dilating — something's happening inside our mouths."

### Approximate Location

But the brain misinterprets the location of the pain. That's because those nerve signals from your mouth reach a large nerve center in your brain, where more of the input received comes from nerves in the face. And for that split second, the brain thinks the cold temperature pain in your mouth is also in your face. This produces a "referred pain," explained Dr. Rohan Lall, a neurologist with Fairview Southdale in Edina, Minnesota. Seconds later, the brain sorts it all out and realizes the extreme cold and dilating blood vessels are actually inside your mouth.

"The blood gets there, the nerves stop firing and everything returns to its normal, happy place," Heiring said.

### Varies From Person To Person

How bad and how long the hurt lasts varies from person to person. Some people experience blinding pain that stops them in their tracks for minutes on end. But most people feel the burn for just a few seconds, Lall said.

There are also those rare, hardy souls who have never had an ice cream headache.

"Some may never feel that sensation in their life," Lall said, "and for others, every time they have ice cream, they feel it."

So what's a Rocky Road-loving person to do? Some people swear by this trick: Place your tongue on the roof of your mouth when you start to get a brain freeze.

"Because your tongue has a lot of good flow, it can warm up the palate quicker," Heiring said. "Also, drinking something warmer right away would help." Another approach is to go slow and eat a smaller amount at a time. A large mouthful of ice cream increases your chance that the cold stuff will hit your palate and shock your body.

"A quick temperature change — that's the trigger for all of this," she said.



**FOUR SQUARE:** Complete each square with the required information.

<p>Write a main(central) idea sentence in your own words:</p>          <p>What are three supporting details?</p> <ul style="list-style-type: none"><li>•</li> <li>•</li> <li>•</li></ul>	<p><b>Author's Craft:</b> What are five sensory detail words the author uses?</p>
<p><b>Vocabulary:</b> Define <u>neurologist</u>:</p>          <p>Choose an unfamiliar word and define:</p>	<p><b>Reflection:</b> Ask the author of this article a follow up question.</p>          <p>How will knowing the information from the question help you better understand the article?</p>