

Scientists find honey in Egyptian graves that can still be eaten

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What is it that makes honey such a special food? Photos by: The research agency of the U.S. Department of Agriculture. Sean Gallup, Getty Images.

Scientists often find pots of honey in old Egyptian graves. These jars of honey are thousands of years old and can still be eaten today. Honey does not spoil.

There are a few other foods that could be kept forever, like salt, sugar and dried rice. Most people do not want to eat raw rice or salt. Yet you could dip into a thousand-year-old jar of honey and enjoy it as if it were a day old. Moreover, honey can be used for healing wounds. These other foods cannot. The question is what exactly makes honey such a special food?

The answer is complicated. There are a bunch of things working together.

Germs Can't Live In Honey

The first comes from the honey itself. Honey is a sugar, and sugars are hygroscopic. They contain very little water but can take in moisture, or water.

Amina Harris is the head of the Honey and Pollination Center at the Robert Mondavi Institute. The center is at the University of California, Davis.

"Honey in its natural form is very low moisture," she said. Most bacteria, or germs, can't live in honey. They just die. They don't live long enough to spoil the honey.

Honey also has acid in it. The acid will kill off almost anything that wants to grow there, Harris said.

There are other sugars out there. So why does one spoil while another lasts indefinitely? The answer is bees.

"Bees are magical," Harris jokes. There is certainly something special that goes into honey. Bees collect flower nectar to make honey. Nectar contains much water. The bees remove much of this moisture by flapping their wings to dry it out. Also, a bee's stomach is the important part. Bees have a special chemical in their stomachs. This chemical mixes with the nectar and breaks it down into two materials. One of them is hydrogen peroxide, a chemical that kills germs.

Honey Was Used In Medicine

For this reason, honey has been used for hundreds of years as a medicine. It protects wounds and keeps them from getting infected. Honey is thick, it doesn't allow anything to grow and it contains hydrogen peroxide. The Sumerian people lived in what is now Iraq. About 4,000 years ago, they wrote that they used honey in many of their medicines. The ancient Egyptians also used honey to treat skin and eye diseases. "Honey was used to cover a wound or a burn or a slash, or something like that, because nothing could grow on it," Harris said. "It was a natural bandage."



What's more, when honey can suck in moisture, it draws water out of a wound and helps prevent infection. A company called Derma Sciences makes bandages covered in honey. It sells them to hospitals around the world.

A tightly closed jar of honey is the final reason. Honey will spoil if you leave it out. "As long as the lid stays on it and no water is added to it, honey will not go bad," Harris said. As soon as you add water to honey, it may go bad. Also, if you open the lid, it may get water in it and become spoiled.

So if you want to keep honey for hundreds of years, don't open your honey jar. Keep it closed. It will be a hard thing to do with this delicious treat.

Quiz

- 1 Which selection from the article helps the reader understand that honey is still being used for treating wounds?
- (A) Scientists often find pots of honey in old Egyptian graves. These jars of honey are thousands of years old and can still be eaten today.
 - (B) For this reason, honey has been used for hundreds of years as a medicine. It protects wounds and keeps them from getting infected.
 - (C) A company called Derma Sciences makes bandages covered in honey. It sells them to hospitals around the world.
 - (D) So if you want to keep honey for hundreds of years, don't open your honey jar. Keep it closed. It will be a hard thing to do with this delicious treat!

- 2 Read the following sentences from the section "Germs Can't Live In Honey."

Bees have a special chemical in their stomachs. This chemical mixes with the nectar and breaks it down into two materials. One of them is hydrogen peroxide, a chemical that kills germs.

Based on these sentences, which of the following is TRUE?

- (A) Bees are not an important reason why honey kills germs.
 - (B) The chemical in bees' stomachs is what keeps honey from spoiling.
 - (C) Bees make hydrogen peroxide by flapping their wings.
 - (D) The germs that are found in honey come from bees' stomachs.
- 3 Read the first paragraph of the section "Honey Was Used In Medicine."

For this reason, honey has been used for hundreds of years as a medicine. It protects wounds and keeps them from getting infected. Honey is thick, it doesn't allow anything to grow and it contains hydrogen peroxide. The Sumerian people lived in what is now Iraq. About 4,000 years ago, they wrote that they used honey in many of their medicines. The ancient Egyptians also used honey to treat skin and eye diseases. "Honey was used to cover a wound or a burn or a slash, or something like that, because nothing could grow on it," Harris said. "It was a natural bandage."

Which information MOST contributes to the organization of this paragraph?

- (A) where the Sumerian people lived
 - (B) why honey was used as a medicine
 - (C) where diseases or injuries can happen
 - (D) why honey contains hydrogen peroxide
- 4 According to the author, how can honey help wounds heal?
- (A) It attracts bees to protect them.
 - (B) It has acid that helps skin close up.
 - (C) It adds moisture so they do not dry out.
 - (D) It prevents them from getting infected.