

# Ötzi the Iceman died 5,300 years ago, but he still needs checkups

By Vicky Hallett, Washington Post, adapted by Newsela staff on 02.13.18

Word Count **855**

Level **MAX**



Image 1. This is what Ötzi would have looked like when he was alive 5,300 years ago. Ötzi is the name given to the frozen mummy of a man from around 3300 B.C. found by two German tourists in 1991 in the Schnastal glacier in the Oztal Alps. Photo by Patrick Landmann/Getty Images

Oliver Peschel has the most unusual patient. He is covered in 61 tattoos, always holds his left arm funny and insists on cranking the air conditioning way up.

Also, he's been dead for about 5,300 years.

So why the need for a few checkups a month? Because Ötzi the Iceman, (pronounced OOT-zie; rhymes with Tootsie) as he's been nicknamed, must be kept in good shape. "For science," Peschel explains.

There have already been an astounding number of discoveries made about Ötzi. The Iceman could have never predicted his future fame the day he was killed in the Alps. It was near the current border between Italy and Austria. After being shot in the back by an arrow, he was naturally mummified and preserved in a glacier. Thousands of years later, he was found by a pair of hikers in 1991.

Since then, analysis of his body and belongings have helped researchers figure out not only how he was killed but many other things. They discovered what he ate for his final meal (cooked grain and goat bacon), and what he wore. He wore a sensible outfit including a modern-looking bear fur hat. And, what health problems bugged him. He had bad teeth, joint pain and more.

### **Details Revealed By Tech Advances**

Details have continued to be revealed decades later because of technological advances. Peschel, a scientist, says he expects that trend to continue.

"We will find things we're not even dreaming about now," he said.

In just the next few months, Ötzi is scheduled to undergo his first CT scan since 2013. Peschel predicts the images will lead to more findings.

So it's Peschel's job to make sure Ötzi continues to look as though he's fresh out of his glacier. He describes it as "a place with no light, no dry air and no trouble around him." He remains this way while on display at the South Tyrol Museum of Archaeology in Bolzano, Italy.



The first thing Peschel does during his checkups is take a peek at Ötzi through the window museum visitors use. When someone stands on the viewing platform, lights shine on super skinny, brownish Ötzi. He's lying faceup on a large glass plate. His left arm is bent across his body. The walls around him are made of blocks of ice, kind of like an igloo. And Ötzi himself is covered in a thin layer of ice. This is why there's a tiny piece of fabric under his hips. Otherwise, he could slide off the plate like an ice cube.

### **Behind The Scenes At The Museum**

While most visitors just marvel at Ötzi's sunken figure, Peschel focuses on that ice layer. Despite carefully climate-controlled conditions, Ötzi has trouble keeping his cool. The glass plate is connected to a scale, which shows that Ötzi loses about 2 grams of water weight each day. Peschel says the right hand, which is the body part closest to the visitor window, sheds ice most rapidly. On a recent visit, he points out that the pinkie has no ice at all.

That means it's time for Peschel to do a "humidification process," a 15- to 30-minute shower that Ötzi takes every eight weeks. Ötzi is moved into another freezing room — there's an entire laboratory behind the museum walls, including a backup ice chamber in case of emergency — where Peschel performs a complete examination, keeping an eye out for any discoloration and evidence of bacterial or fungal growth.

Then Peschel, dressed in sterile surgeon's clothes, uses a special water gun to get Ötzi icy in all the right spots.

"I try to use less water and keep it on places I want him to have ice," he explains. "I could do it for three hours and add 10 liters, and he would weigh more. But there would be gravitational pull" that could affect the body.

Ötzi's treatment has been relatively consistent since he arrived in Bolzano 20 years ago, Peschel says. That may change soon because plans are being developed to create a larger museum. To prepare for the move, Peschel and the rest of the technical staff have started a multiyear investigation into other ways to preserve him.

One option to consider is suspending Ötzi in a giant block of ice. He'd still be visible, but access to scientists would be limited, says Peschel, who's also in charge of evaluating requests to study Ötzi. Another idea is switching from an oxygen atmosphere to a nitrogen one, which would be less friendly to bacteria. Or, Peschel says, it would be possible to vacuum-seal Ötzi like a steak. "But we don't want to eat Ötzi," he clarifies.

"No one has experience with these methods. So we can't ask anyone," says Peschel, noting that Ötzi is unique. Other bodies have been discovered in melting glaciers, he explains, but what typically happens is they drift to the bottom and are destroyed.

"The most interesting thing about Ötzi is that he's there," Peschel adds. And hopefully, he'll stick around for a while longer.