

Science > Health

# A Freediver Held His Breath For Almost Half an Hour—and Obliterated a World Record

The attempt was only possible thanks to some pre-gaming with pure oxygen, but still eye-popping.

BY DARREN ORF PUBLISHED: DEC 20, 2025 12:32 PM EST

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Here's what you'll learn when you read this story:

- Croatian freediver Vitomir Maričić broke the world record for longest human breath hold with a stunning 29 minutes and 3 seconds—almost *five minutes longer* than the previous record, set in 2021.
  - Maričić's record was oxygen-assisted, meaning that he was able to breathe pure oxygen for several minutes before making his attempt.
  - While this record doubles the maximum breath-hold of bottle nose dolphins and even rivals some seals, it still falls *way short* of many other marine mammals.
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The act of breathing has been central to **life on Earth** since the beginning, and the average human will take more than **600 million breaths** in a single lifetime. But there's a specific group of humans—a subclass of freedivers known as apneists—who train their minds and bodies to efficiently halt this intuitive autonomic function, far exceeding the typical 30-to-90-second limit of breath-holding.

Take, for instance, Croatian freediver Budimir Šobat. On March 27, 2021, **Šobat held his breath** underwater for an astounding 24 minutes and 37 seconds—a feat that was only possible thanks to minutes of huffing **pure oxygen** before making the attempt. Four years later, fellow countryman and freediver Vitomir Maričić exceeded this world record—and it wasn't even close.

On June 14, 2025 in Opatija, Croatia, Maričić performed an oxygen-assisted breath hold that shattered Šobat's by nearly a *full five minutes*, clocking in at **29 min and 3 seconds**. A member of the Adriatic Freediving group, Maričić performed the attempt in a three-meter-deep pool at the town's Bristol Hotel in front of a 100-person crowd, according to the website Divernet. He says he took on this record as both a personal challenge and a way to raise awareness for **ocean conservation**.

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“After the 20-minute mark, everything became easier, at least mentally,” Maričić told DiverNet. He clarified, however, that the experience “got worse and worse physically, especially for my diaphragm, because of the contractions. But mentally I knew I wasn’t going to give up.”

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Denying your body life-supporting oxygen isn’t something to be taken lightly. While the body has various areas that detect oxygen levels, the main system is a group of specialized cells in the brain and neck known as chemoreceptors. These cells track the balance of carbon dioxide and oxygen in the body. When someone holds their breath, CO<sub>2</sub> rises and drives an increased desire in the brain to breathe. Eventually, the diaphragm will begin contracting involuntarily, which is typically when untrained apneists will break down and start gulping down air.

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However, Maričić pre-gamed his world-record-breaking attempt by inhaling pure oxygen for 10 minutes before submersion. This offsets that initial oxygen-carbon dioxide balance, allowing freedivers to hold their breath for significantly longer than is possible for our unaided biology. That’s why the world record for unaided breath holding is a much shorter (but still very impressive) 11 minutes and 35 seconds.

As ScienceAlert notes, Maričić's world-record fully doubles the maximum breath hold for bottlenose dolphins, and nearly matches the abilities of the harbor seal. However, humans have zero hope of ever snatching any world record from marine mammals entirely—the Cuvier's beaked whale can stay submerged underwater for more than three hours.

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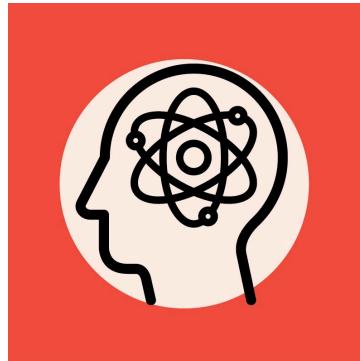
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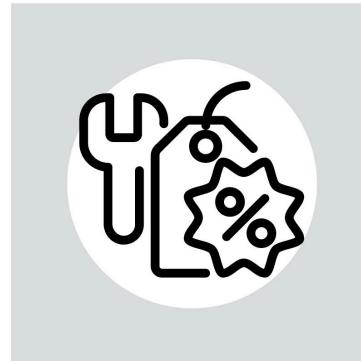
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