

# PUSHING THE LIMITS

**Freediver Herbert Nitsch** dives to great depths – without an oxygen tank.

Breathe in deeply. Hold it. See if you can continue to hold it for nine minutes. For most, not breathing for this amount of time would simply be impossible. But for Herbert Nitsch, it's entirely achievable. Nine minutes (and four seconds, to be precise) is his personal record for static apnea – that is, holding a single breath underwater.

But this breathtaking personal best is a modest achievement compared with the other feats of which Nitsch has proven himself capable. More than a decade of involvement in the sport of freediving has seen the former pilot hold over 30 world records in all eight recognized freediving disciplines.

**Freediving is the sport** – perhaps art – of diving underwater for extended periods of time without a breathing apparatus, sustained only by the last breath you took before descending into the deep blue.

However, it's not as simple as taking a huge, gasping breath and plunging below the surface. Nitsch explains how he prepares to go underwater: "It helps to try to relax every muscle, and be in a very calm, almost sleep-like state," he says. "I try to take more air in my lungs by 'packing.' This is a technique whereby the epiglottis acts as a piston to push more air in the lungs." With this technique, Nitsch can expand his own lung capacity from an already amazing 10 liters to an impressive 15



1 Herbert Nitsch descends into the blue, aided by a guiding wire – and his supporters on the surface.  
2 When freediving, preparation is everything.

**"The mind is amazing in stimulating the body to go beyond limits you first believed were impossible."**

Herbert Nitsch, freediver

liters. Compare this with the lung capacity of the average adult male, which is six liters. This technique, paired with special training to stretch the diaphragm and lungs, helps to make the lungs more flexible so they can expand to hold more air, and compress more from pressure at depth, thus enabling his incredible breath-holding times.

For someone who has earned such accolades in an ocean-based sport, it's surprising to learn that Nitsch is self-trained, and hails from a landlocked country: Austria. To suit his circumstances, says Nitsch, "I figured I needed a different and more efficient approach to training. Where some other elite freedivers had the advantage of training regularly in the ocean, I came up with a combination of breath-hold training on the couch at home, combined with cardio and muscular training." When competing, Nitsch arrives early and goes "spearfishing and fun freediving" in the sea to prepare.

**Since 2010, Nitsch has focused** solely on the extreme "No Limit" freediving discipline. In No Limit dives, freedivers use a weighted sled to descend as far as they possibly can on a single breath. An air-filled balloon aids their return to the surface. Nitsch holds the current No Limit world record: an astonishing 214 meters, for which he was dubbed "The Deepest Man on Earth." His focus on No Limit diving illuminates a single-minded determination: his ultimate goal of diving to 1,000 feet (304.8 meters).

On 14 June 2012, when attempting to reach this goal, Nitsch almost didn't emerge from the blue. A blackout in the depths led to his suffering a severe form of decompression sickness, known as Type II DCS. That day, Nitsch reached 253.2 meters (830.8 feet). However, because the accident forced him to abort the dive, his record attempt was not officially recognized. His existing record still stands, yet to be equaled or broken. Following a hard-won recovery,

Nitsch is now back to freediving, which he says "feels like finally being back in the real world" again. To another attempt at his 1,000-foot goal, Nitsch takes a "never say never" approach – which implies that he will try again.

**In the moment when** he is plunging down, his lungs demanding oxygen and all his human instincts inclined to agree, Nitsch needs to take control and harness all his energy for the dive. "I focus on the important things of the moment, and I try not to think about anything else. I tune out any bodily sensations and use my energy solely to concentrate on the essentials."

Fittingly, preserving resources is second nature to Nitsch. Without his extraordinary ability to do so, he couldn't perform in his sport the way he does. This belief extends beyond his own physical resources: Nitsch is a proud ocean conservationist, holding an advisory role with the Sea Shepherd Conservation Society. This environmental consciousness carries over into his everyday life in landlocked Austria: "I decided to get rid of the car, and I bike everywhere in my home town of Vienna. And, I am currently in the process of designing a fast ocean-going eco-sailing boat that uses wind and solar power only, without a combustion engine."

It's another remarkable pursuit from a man who refuses to treat apparent limits as insurmountable. "Freediving taught me that as long as you keep believing things are possible, they are. The body is amazing in what it can do, and the mind is amazing in stimulating the body to go beyond limits you first believed were impossible." //



For videos and more on freediver Herbert Nitsch, visit [www.herbertnitsch.com](http://www.herbertnitsch.com)