

## FREEDIVING //

WHAT DRIVES HUMANS TO SWIM HUNDREDS OF METRES BELOW SEA LEVEL WHERE THEIR LUNGS ARE SQUASHED ALMOST FLAT, AND THEY RISK BLACKOUTS AND NARCOSIS? HERBERT NITSCH, THE WORLD'S GREATEST FREE-DIVER, TELLS DOMINIC BLISS ABOUT LIFE IN THE DEEP END.



It's cold, dark and murky at 200 metres beneath the ocean waves. Life forms include plankton, shrimp, lanternfish, the odd tuna... and occasionally an Austrian chap called Herbert Nitsch.

Nitsch is the world's deepest free-diver. At various times during his career he has held 31 different world records in the various disciplines of his sport. He currently holds four world records, including the daddy of them all: a no limits dive to 214 metres that he achieved back in 2007, off a Greek island called Spetses. For this particular dive he used a weighted sled on the descent and an air-filled balloon to return to the surface, but other free-diving disciplines (constant weight, free immersion, dynamic etc) have varying rules. Competitions are regularly held at coastal venues all over the world.

"It's a nice, peaceful loneliness down there," Nitsch says. "A feeling of being far away. You're very lonely down there and you can't see anything because the camera light is shining right in your face. Behind it the sea is completely black."

The pressure on the human body at these depths is frightening. The discomfort at the bottom of the deep end of a swimming pool is enough to put most people off diving. So imagine what it's like, all alone at 200 metres below. In very basic terms, what happens is the body goes into survival mode. The heart rate drops, extra red blood cells are released, and blood is drawn away from the limbs to the vital organs, especially the lungs. A process known as 'blood shift' prevents the lung from collapsing totally. Add to this the dangers of narcosis, potential blackouts from oxygen starvation, and high carbon dioxide, and you realise this is no weekend snorkeling trip.

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Herbert Nitsch has free-dived to 214 metres.

"If you don't have the proper safety set-up it's always very dangerous," says Nitsch who trains with a partner. "Then again, it's very unlikely you're going to break an arm or a leg like in skiing. The worst injury I've had is jellyfish stings and fire coral."

There must be something very enticing about swimming this deep. Over the next year Nitsch plans, by increments, to break the 300-metre (or 1,000-foot) mark. His aim is to reach 800 feet by this summer, 900 feet in the autumn and 1,000 feet in 2012. With training and competition costs as much as 300,000 Euros per dive, success all depends on the generosity of sponsors. Recently Nitsch packed in his full-time job as an airline pilot to concentrate on his diving which means money might be even tighter.

So how on earth does a pilot from land-locked Austria become the world's greatest free-diver? His first toe in the water was 14 years ago on a scuba-diving holiday in Egypt. After the airline lost all his diving gear he was forced to resort to snorkeling instead. Every day he ventured deeper and deeper until a friend noticed he was only a couple of metres off the Austrian free-diving record.

Hailing from Vienna, hundreds of miles from the coast and high above sea level, Nitsch's exploits were initially seen as rather eccentric. "In the beginning, maybe this was the driving factor," he explains. "I was envying those who had the sea right in front of them. I pushed myself to prove that, even though I worked full time and did free-diving purely as

a hobby, I could still do it well." Nitsch believes his totally fresh approach to the sport also helped him steal a march on his rivals.

His technique is radically different to that of his peers. A few weeks before a competitive dive he travels to the site and immediately starts training to the extreme, without any rest between dives. Even out of the water he is constantly practising breath holds, diaphragm movements, pumping his adam's apple, and "controlling the valves in his head". Before a training dive he totally empties his lungs and submerges with just a mouthful of air, thereby tricking his lungs into thinking they are much deeper underwater than they actually are, which in turn increases the blood shift effect. This way he can use shallow training dives just as effectively as other divers use very deep dives. "I do 30 shallow dives every day during training, plus one very deep dive. My rivals train with only very deep dives which means they get to do just two dives every three days. So I get to train much more."

Bizarrely, Nitsch knows of no other free-diver who uses his unique training methods, and he's convinced his physiology is no different to that of his competitors. "I find it hard to understand why they don't give it a try," he says. "I am very open with my methods."

The wrong side of 40 years old, he has no plans to hang up his goggles just yet. He says he feels stronger than ever. "Most competitors are younger, that's true," he says. "But I still haven't reached my limits." ◉