If diving isn’t enough of an adventure to start with, try doing it without any scuba equipment. Hold your breath – DAMON EVANS shows you how.

My five minutes of pranayama breathing is up, and I’m ready. I exhale with a loud whoosh, take a final deep breath and sink my head underwater. It’s the first day of our beginner’s freediving course. I manage a mere two minutes, paling in comparison to my friends’ efforts, and the astonishing world record for static apnea (breath holding), which stands at over ten minutes.

Freediving – diving without artificial breathing equipment – is an undersea adventure of skill and daring. For many exponents, it’s also an inner journey with spiritual dimensions.

It’s for freediving that I’ve have travelled to Koh Lanta, in the Andaman Sea off Thailand’s southwestern coastal town of Krabi.

The art of freediving is purely to explore the undersea world on a single breath, and the key to it is learning how to relax in the deep blue, explains our instructor Marc of Koh Lanta-based Blue Planet Divers.

Free from cumbersome scuba equipment, a freediver can spend minutes underwater and feel the ocean like any other marine mammal does, gliding to the bottom for an encounter with a manta ray, or, as in our case, watch a leopard shark literally sweep right by our faces.

The day begins with the theory and history behind the sport. Marc explains the correct breathing techniques to make us feel as safe and comfortable as we can in the abyss.

He demonstrates by breathing in for 10 seconds, holding for two seconds, and breathing out for five. We watch in awe as his lower belly expands like a balloon, followed by a slow hiss as he exhales to control the airflow. The trick is to learn to breathe using the whole of the lungs and to stretch the diaphragm down, filling the ribcage with oxygen to slow the heart rate prior to descent.
It seems bizarre, especially at the start, and feels slightly ridiculous. But as we learn to draw out respiration while remaining completely calm, we become much more aware and sensitive to our breathing. Marc teaches us to listen attentively to each breath and visualise it, feeling the passage of air through the lungs.

Later in the day, we move on to the pool session to practice static apnea – holding one’s breath underwater for as long as possible in a motionless position – which places a great demand on our ability to concentrate.

As I finish my “breathe-up” and duck my head under the surface, I forget about the landlocked world above and try my best not to count the time, to restrain instinct with reason. Reassuringly, Marc is beside me and we communicate at intervals via hand movements. I give him the signal when I want to surface: on this he gently glides me to the side of the pool and encourages me to push further. By the end of the session, I manage a best time of around two minutes. Disappointingly, I failed to fight the diaphragmatic contractions, which made me feel as though I was running out of breath, although they are actually quite normal.

Marc assured us that once we hit this stage we should be able to stay under for several minutes more. I am consoled by the fact that freediving is the toughest form of diving from a psychological point of view.

My friends fared slightly better, with times of around three minutes, having started to fend off the contractions and banishing thoughts of surfacing.

It is possible for the average person to remain underwater easily for four or five minutes with practice, while competitive times are more than double this.

As the day draws to a close, we reflect on the techniques we’ve been taught and focus...
our minds on the next day’s diving in the deep blue ocean.

On the second day of the course, we head out to sea and, after dropping off a noisy bunch of scuba divers, we find a quiet spot to practise our newfound skills.

First off, we learn to duck dive. This will help us conserve lots of energy and begin our dive in a more fluid manner – it involves raising one leg and then sliding under – a much more precise technique than sticking our legs in the air to descend when snorkelling. I must admit it’s not easy to learn the correct technique straight away – you’re meant to leave just a tiny ripple, not the tidal wave I was creating.

After practising the duck dive it’s time to begin my “breathe-up” and prepare for my first freediving decent – Marc and I will follow a guide rope to the ocean floor about 15 metres below.

I take my final deep breath; we duck dive and start to descend. I pull myself slowly, steadily down the line. The first thing that hits me is a peaceful sensation throughout my entire body. Surprisingly, I feel an immense sense of calm in this new dimension and become one with the sea.

Interestingly, you don’t swim frantically downwards to reach your goal. Everything is very slow and deliberate to conserve oxygen. Descending, Marc and I finally encounter the seabed just short of fifteen metres.

I release the rope and swim briefly around the reef before the pressure in my lungs starts sending me warning signals. I reach for the rope and start to climb again. Calmness and economy of effort are essential at the turn-around point, I had been warned, to conserve oxygen and keep the pulse rate low. Other instructions: don’t exhale (as you need all the air you can get); don’t look up (it can stop the blood flow to the brain and lead to a shallow-water blackout); and don’t get faster towards the end. Above all – never panic.

Finally I break the surface, fix my eyes on the horizon and take several deep breaths. Marc has followed me all the way and he makes sure I give him the “okay” sign before we both relax. He knows that most freediving accidents happen in those last few moments.

We carry on practising before taking a break for lunch and then spend the afternoon exploring the underwater world; a perfect conclusion for our two-day beginner’s course.

The godfather of freediving, Jacques Mayol (his rivalry with Enzo Majorca was immortalised in the cult film The Big Blue), once said: “The sea is neither a territory to conquer, nor a boundary to cross. The sea is a friend.” Perhaps freediving is not extreme at all, but something we were all born to do.

Several changes take place in the physiology of the human body under dive conditions, relating to something called the “mammalian diving reflex”. It’s these changes that enable freedivers to dive so far down for so long.

**Bradydcardia:** The heart’s pulse rate drops.

**Vasocnstriction:** The blood vessels shrink and blood is directed away from limbs in the direction of the heart, lungs and brain.

**Splenic contraction:** This releases red blood cells which carry oxygen.

**Blood shift:** Blood vessels in the lungs are filled with blood plasma. This prevents the lungs from shrinking and causing permanent damage.

Freedivers will often hyperventilate to some degree before a competitive dive. The aim here is to reduce the level of CO2 in the lungs and bloodstream. By doing this, the brain is deprived of the warning signals that the body is running out of air. This sounds dangerous, and it is. It can lead to shallow- or deep-water blackouts. Trained freedivers always have supervision when they compete. If they do blackout, their “buddies” will help with rescue and resuscitation.

If you’ve seen footage of a blackout, you may have noticed a buddy blowing air across the face of a blacked-out diver. This is to trigger a breathing reflex – it’s often used by doctors to get newborns to breathe for the first time, too. Air flowing across the breathing receptors in this part of the face tells the body that it’s no longer under water, so it’s okay to breathe.

Blue Planet Divers, run by Laurent Pinci, is located in Koh Lanta, Thailand. Visit www.blueplanetdivers.net or www.diving-koh-lanta.com for more information about the company’s freediving courses, PADI courses or fun dives.
Austrian Herbert Nitsch (born 1970) currently holds the world record for No Limits freediving, in which a diver uses a weighted sled to descend and an air-filled balloon to return to the surface. In 2007, in Spetses, Greece, he descended to 214m. Nitsch has a lung capacity of 15 litres, and his pulse rate when resting is 40bpm.

The world record for a Constant Weight dive (the maximum depth reached by a diver by swimming down and back up without any assistance from fins, sleds, lines etc.) is 88m for men (William Trubridge, set at Dean’s Blue Hole, Long Island, Bahamas) and 60m for women (Natalia Molchanova, set at Dahab, Egypt).