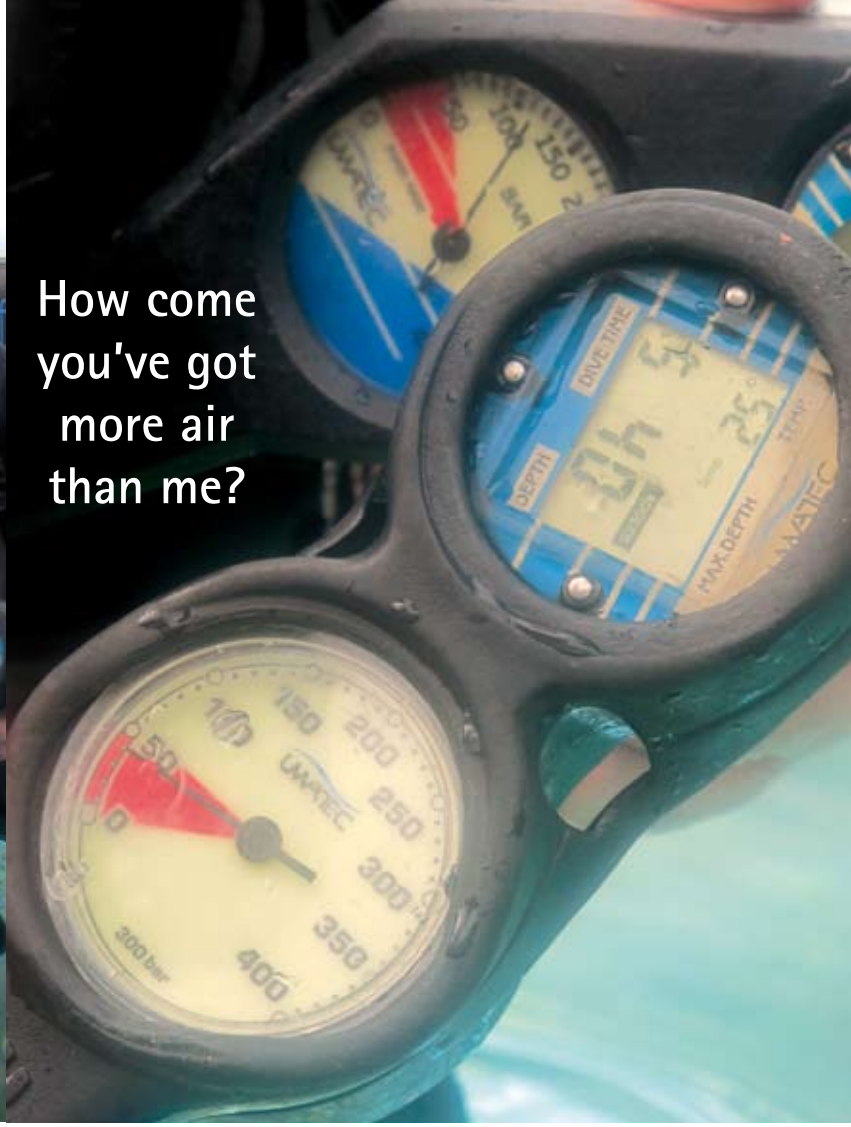
Why breathing right and buoyancy control is so hard for some!

Marathons? I don't do marathons. At high school we had the annual forced run for fitness around the streets surrounding our school. Yes, we were warned of its imminent approach but no we were not adequately prepared – like running around the footy pitch a few times. In my last year I figured that a bit of practise beforehand would be smart and ended up a stunning third: breathless and with a stitch. I still remember the spoken/unspoken comments from supervising teachers about our abilities and the eye rolling that went with it.

I have often seen the diving equivalent of this. Experienced divers complaining about the air pigs they'd just dived with and what a pain it was to come back early because one (or three) of the divers had run out of air early. This forced the whole group to return well before they normally would have.

Why is this? I have a theory. From what I've seen in quite a few beginner open water courses, following whichever training agency's standards (and I do get around), it is unsurprising that many end up with a certification that entitles them to dive in open water as triple 'A' grade air pigs and marine life crushers. It all boils down to lazy training in buoyancy control starting from their very first splash in the confined water situation.

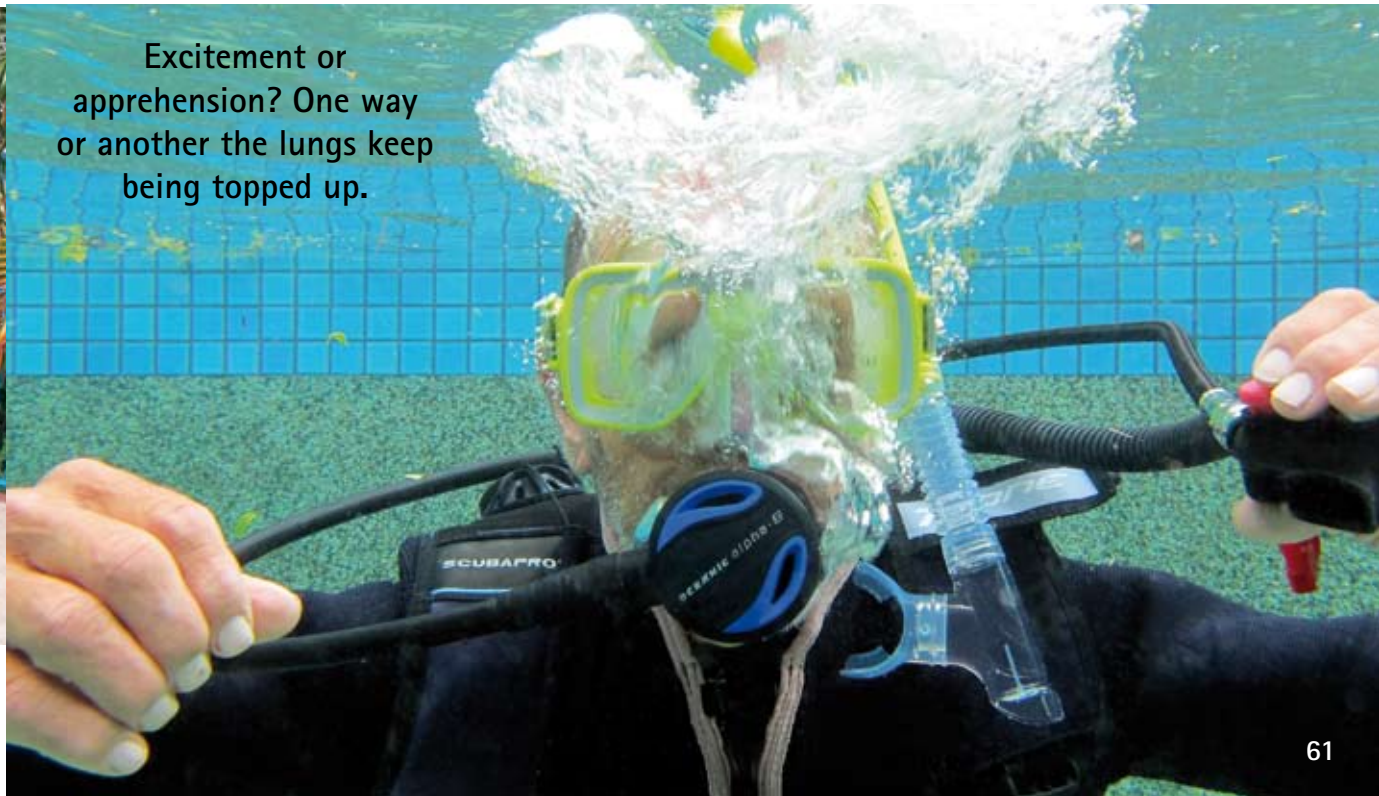
It's all well and good talking about ideals that are aspired to by an agencies' training

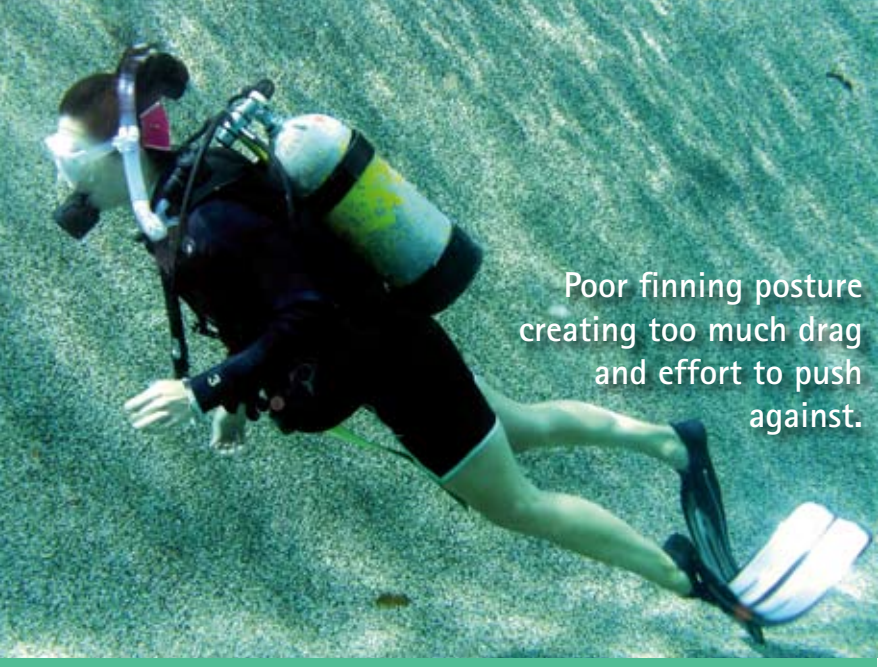


standards but there are a few issues left out of those idealistic scenarios that make training a little different than just going from one performance objective to another.

Here's how it goes: A pool session starts and the students show a range of emotions from apprehension to excitement. Apart from all being wet, they now have another thing in common: they're breathing a bit more than usual. That means lungs constantly full and needing more effort to keep them underwater until they eventually start settling down. But it's the beginning of the course and there's a schedule to keep. The instructor has to move things along so a quick fix is in order. The quickest fix is to shove enough weights on their weightbelts to keep them pinned to the bottom no matter how excited they get about the hair and snot balls floating across the bottom. Bingo! Now that's sorted, all of those other pesky skills are relatively easily managed. Come on finish time!

And this may well be the start of air pig training by a ratbag instructor.





Poor finning posture creating too much drag and effort to push against.

Fairly good trim with much less drag potential.

Bobbing at eye level is a good measure of neutral buoyancy when BCD is empty and breathing normally.

In a beginner's course, one of the first (if not the first) buoyancy control exercises is to be able to adjust the students' buoyancy characteristics by emptying all of the air from the buoyancy control device (BCD) and with a normal breath, bob around eye level at the surface in water too deep to stand up in.

From there the exercises progress from simple exercises in shallow water to become familiar with how much air to have in the BCD to balance the exhalation of air from the lungs (and vice versa), to the more complex exercises of hovering in mid-water with as little movement as possible or swimming underwater with a horizontal trim and smooth fin action. This requires correct weighting, using as little air as necessary to compensate for loss of relative weight due to compression of the wetsuit, correct breathing and when moving from one point to another – correct fin strokes.

In all of these exercises, simple to complex, using arms and hands to assist with balance and positioning is discouraged.

As the course continues, instead of being concerned with progressively removing weights and compensating for students feeling more comfortable underwater, students complete their shallow water training inappropriately weighted and swimming with greater difficulty than necessary. Their pose is often slightly inclined upwards and not with the horizontal trim they should be aspiring to. They are entirely compensating for the extra 'sink' by inflating their BCs. That way, the bum goes down and the top comes up. This inclined position (no matter how slight) creates significantly more drag potential and requires the diver to use more effort to get along than they would/should otherwise need.

But wait, there's more!

To complete training, the students are taken to the open water for their final dives. This is usually salt water as opposed to the fresh water they've just trained in. Here the waiting instructor now asks the student diver how much weight they remember using in the pool. After whatever response the often heard statement is 'You'll probably need another weight or two to compensate for the extra buoyancy of salt water' even though they were already using too much in the first place. Now the overweighting dilemma is continued.

On making that first entry into the water, buoyancy compensators are partly full and buoyancy at the surface is almost guaranteed – a great disguise for an overweighted diver. Straight to a shot line and down they go together. If the instructor hasn't been vigilant in pool training it's surely a certainty he/she will be equally as slack with open water evaluation.

Now we see the results: tilted swimmers working hard and using loads of air. An instructor in this category will all too easily put this down to 'what do you expect from beginners?'

I'd like to think a lot more. This is a serious problem for the diver in particular and the industry in general. For the diver, it can create a situation where they use air far too quickly, could easily be negatively buoyant (or close to it) at the end of the dive and have difficulty in staying at the surface. This has a negative impact on whether they wish to continue with this as a sport. With short times underwater, no matter how beautiful the dive might be, being out of breath with a feeling of thankfulness for surviving rather then enjoying the dive isn't good. For the industry that wants to grow, training standards are in place with all agencies to enable instructors to get the right job done.

For the recreational diving industry in general, growing a repeat base of customers starts with this first beginner course. Just coming back from a dive alive isn't the final proof of instructional success and keeping someone diving. Comfort through good buoyancy control and good times underwater are much better indicators. On the other hand, air pigs are a good indication that the preparation hasn't been done correctly and the ratbags need recognising and dealt with. Nicely of course.

Running didn't do it for me but I could see, even though prior training was absent, that practise needed more than just repetition. It was important to also know technique.