



Edited by  
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Technical diving requires mastery of basic skills e.g. frog kicks are an essential skill in cave diving

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**Becoming a good technical diver means starting with the solid basics. There is no magic! But let's take a look at several things in general...**

**1. Excellent trim.** Your position in the water and the overall buoyancy are very important and even essential elements that influence your fatigue and your gas consumption. Known as "trim," this concept embraces the horizontal position of the diver's body together with perfect buoyancy. You can obtain a correct trim through judicious combination of your equipment configuration and training.

As soon as you acquire a horizontal posture your become much more streamlined, you have less drag, you are more efficient and thus you consume less gas. Your risk of getting short of breath also remarkably diminishes.

The trim is an absolute necessity for diving in overhead environments such as caves or wrecks, where in order to conserve a good visibility it becomes vital not to disturb the silt on the bottom

by a clumsy fin kick or a seahorse posture. Having a sound trim also represents a big step towards acceptable or even impeccable frog kick propulsion, modified frog kick that is useful in constrained

areas as well as the legendary backward kick that allows you to move backwards and is "a must" for an experienced diver as well as a camera man and a photographer. It is also an important

component of team diving and communication.

In order to master all these techniques, do not hesitate to start with Intro to Tech training right from the beginning.

**2. Good physical condition.** Your body is your first diving tool, and you can influence it by regular exercise (for example, up to 25 percent improvement of endurance). It is important to choose



# 10 Tips On Going Pro

VITYA LYAGUSHKIN





Excellent trim

*A better physical condition will also positively affect the quality of the decompression, overall fatigue during and after the dive, consumption and the risk of getting short of the breath.*

rics or stretching can help you to enrich this aerobics foundation.

Apart from improving your shape, this combination will render your dives more enjoyable and will increase your security margin in case of any problems. A better physical condition will also positively affect the quality of the decompression, overall fatigue during and after the dive, consumption and the risk of getting short of the breath.

Include a little bit of apnea in your exercises. It's not a question of holding your breath while underwater, but more of incorporating apnea in your training.

## Going Pro



VITYA LYAGUSHKIN



Try to improve your comfort in breath-holding even in the swimming pool, particularly in motion, as well as your amount of time without taking a breath. And then don't forget apnea-based skills and drills during the courses and the training in the natural environments.

For example, a classical thing to do is to go after your buddy's mouthpiece at 15-20m, depending on your level. You

will quickly grasp the need to stay close in the team. Also, it is a good way to learn your real possibilities for holding your breath in case of out-of-air situations.

Regularly practicing one of the relaxation methods can only add to apnea time improvement, but it is particularly good for stress management and remembering your

dive plan with all its emergency procedures.

*Regularly practicing one of the relaxation methods can only add to apnea time improvement, but it is particularly good for stress management and remembering your dive plan with all its emergency procedures.*

Heavy trim configuration (above) for technical diving

the activities that you like and that you will practice willingly and with pleasure. Basically, it has to be an endurance activity: walking, cycling, swimming with or without fins, with exercise duration from 30 to 120 minutes. The minimum seems to lie between

one hour and 30 minutes and two hours and 30 minutes a week in two to five sessions depending on the activity and its intensity, and up to three or five hours for the most motivated divers. A small portion of resistance and two weekly sessions of gym, isomet-

Drills on land are as important as drills underwater



*After many years spent cumulating equipment brought to the water under the tag line of safety, the trend has now turned to the functional minimum. That is to say, the diver should leave all excessive equipment behind, but the diver then has to be much better trained.*



spent cumulating equipment brought to the water under the tag line of safety, the trend has now turned to the

and team diving. It is worth mentioning that this configuration is multipurpose and versatile and suits all types of technical diving activities, as well as diving in overhead environments in caves or

in wrecks.

Choice of equipment aside, you should be at ease managing it. Adjust all hoses, D-rings and buckles so that gear is not

**3. Learn to plan your dives, however modest they are.** That means you should always anticipate all solutions for plan deviations, resolving a maximum amount of possible problems as well as the famous "what if's"—i.e. "What do I do if...?"

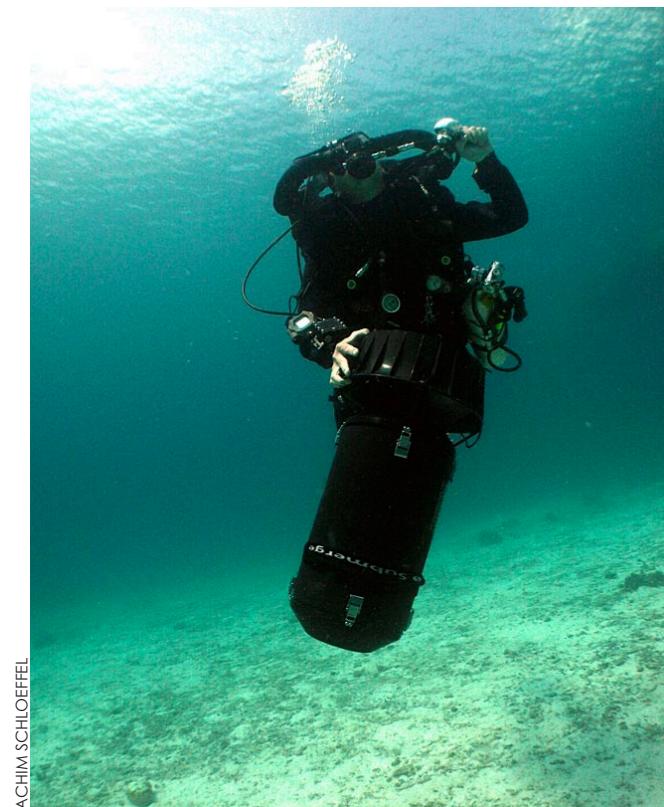
**4. Learn to dive in team.** This includes team positioning in progressing as well as assisting a team buddy with gas, in all potential situations. In this case, mastery of skills and automatic reactions also comes from training and practice.

**5. Choose equipment that is simple, functional, reliable and versatile.** When it comes to the configuration of equipment, the fashion calls for simplicity, and it is very good. It has to be clear and set as simple as it can be. After many years

*...mastery of skills and automatic reactions also comes from training and practice.*

functional minimum. That is to say, the diver should leave all excessive equipment behind, but the diver then has to be much better trained.

In regards to this notion, the Hogarthian configuration, or its derivatives, have become increasingly widespread. This configuration is based on statistical studies of real risks of an accident and on experience. It favors streamlining, safety



CLOCKWISE: Diver on rebreather uses underwater scooter; Technical diver with five stages of air tanks; Diver in training with stages

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# tech talk

*The concept called skills and drills consists in practicing a particular skill until it becomes your second nature.*

only streamlined but also fits you perfectly. For example, a standard long hose measures 2m, but it may be too short for a husky fellow and too long for a small girl. You should easily reach all your D-rings to attach the necessary accessories without having to look where they are. Placing them 2-3cm higher or lower may facilitate your task a lot. It may seem trivial, but make sure you are able to attain your valves

whenever you start diving with a twinset that is new to you.

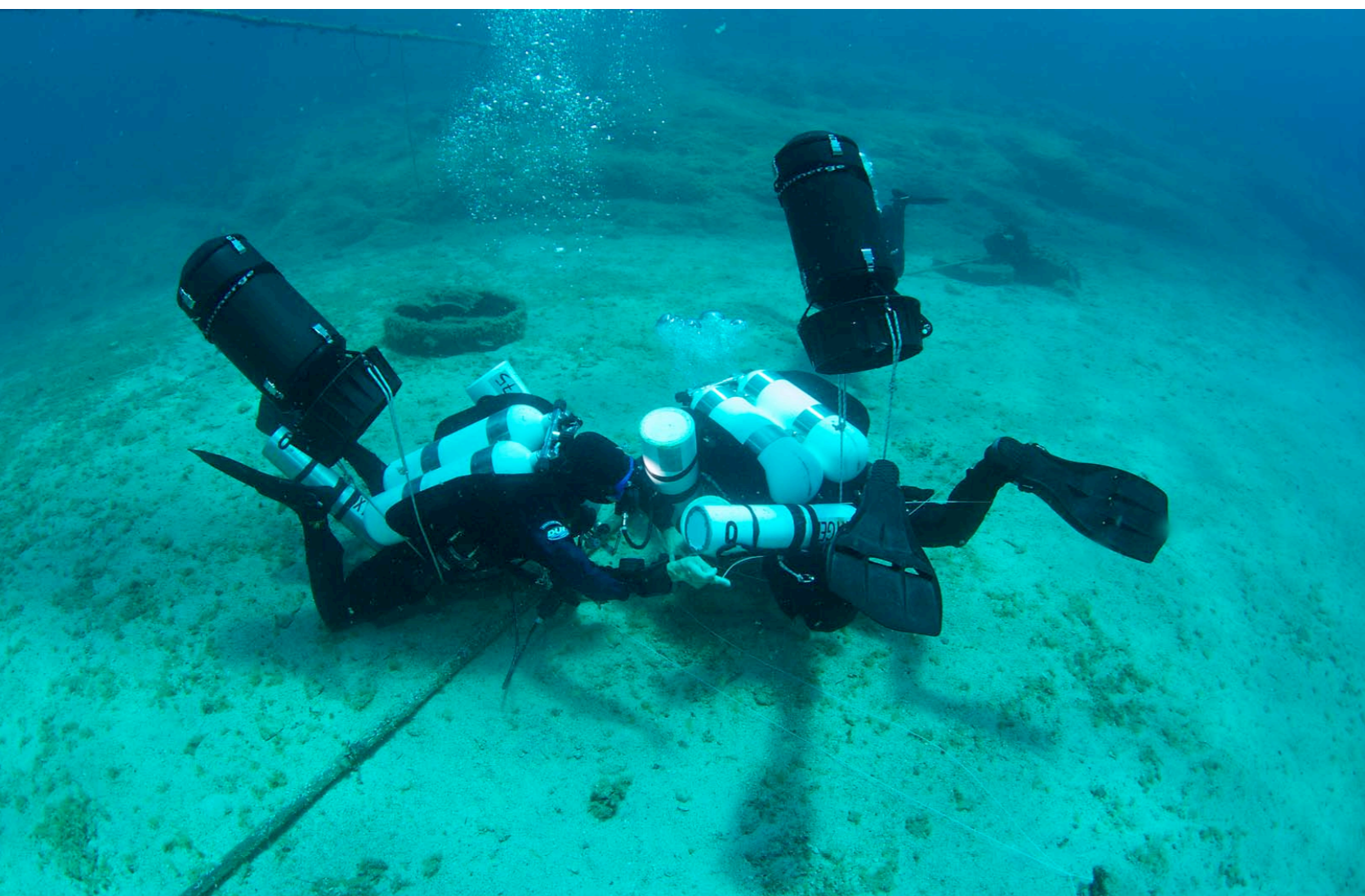
### 6. Automate your reactions.

According to statistics for overhead diving, the main causes for accidents are lack of training, practice or experience. More regular experience, training and practice mean more accurate and rapid reactions, which lead naturally to the economy of gas. It is the same with

finning—less stress invariably results in reduced consumption.

The concept called *skills and drills* consists in practicing a particular skill until it becomes your second nature. The same exercises can be performed individually or practiced with a buddy or even in a team (communication, assistance, etc). In this respect, it is very important to duly perform all on land exercises during the courses before practic-

## Going Pro



ACHIM SCHLÖFFEL

Technical divers with diver propulsion vehicles (DPVs) otherwise known as underwater scooters

go quietly, amid the noise and haste...

[ 3 hours @ 20m - no deco ]

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Image by Ray van Eeden of Prodivers, Kuredu, Maldives



ACHIM SCHLOEFFEL

Technical diver on Semi-Closed Rebreather (SCR) with four stages and underwater scooter

ing them underwater.

**7. There is never too much experience.**

As soon as you graduate from any tech course, it is very important to continue to gain experience in the field. Only in this way will you start to learn your real capabilities and personal limits. Normally, the course gives you just the overall picture of the activity, but you need much more practice to become proficient in this sphere and to understand all its subtleties. Also, during courses, students often discover some skills pertaining to the

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chosen activity that need to be improved. The idea is to get more experience.

**8. Choose appropriate gas mixes.**

A few French divers sometimes joke about the restrictions imposed by PADI or SDI who maintain that the deep diving zone begins at 30m. However, this figure is not random. It came from accident statistics. Like in overhead diving, it depends greatly on the diver,

his or her training, physical fitness at the given moment and general diving conditions—water tem-

perature, visibility and currents. It is always better to dive with nitrox up to 30m, then with trimix beginning from 30m or 40m.

**9. Enjoy diving, have fun and do not force yourself.**

It may seem obvious, but who has never dived a little bit out of shape and tired just to follow his or her mates or simply because it was expected. This is never a good idea. Doing this in deep diving, however, becomes extremely dangerous. The reasons for many so-called unintentional accidents are dehydration, fatigue and stress.

Tech diving may always remain a bit challenging for you, as challenge is intrinsic to its nature, but it should never turn into a "mission impossible". Listen to yourself and



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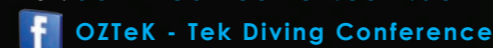
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Image courtesy of Jill Heinerth



# tech talk

*Versatility, in diving as well as beyond it, makes you perform better and smarter and become more open to new experiences.*

dive for pleasure—yours and that of your buddy or team.

**10. Try to gain new experience, become versatile, and make a college try at all aspects of tech diving.** For example, let's say, try diving sidemount. It's in fashion nowadays! The tanks are mounted at both sides of the diver,

below the shoulders and on the belt instead of on the back of the diver. Thus, you can carry tanks separately to the water, and it is much lighter than a twinset on your back. You can put them into the water without any effort. Two 6-liter tanks can replace one 12-liter tank, with double the safety and an easy access to the valves

in case of any problem. And what freedom it is underwater! Pure pleasure.

Or try diving with nitrox—under ice, in caverns, while cave diving. Simply put, it is the mother discipline of tech diving. Test new equipment, dry suits, rebreathers, etc.

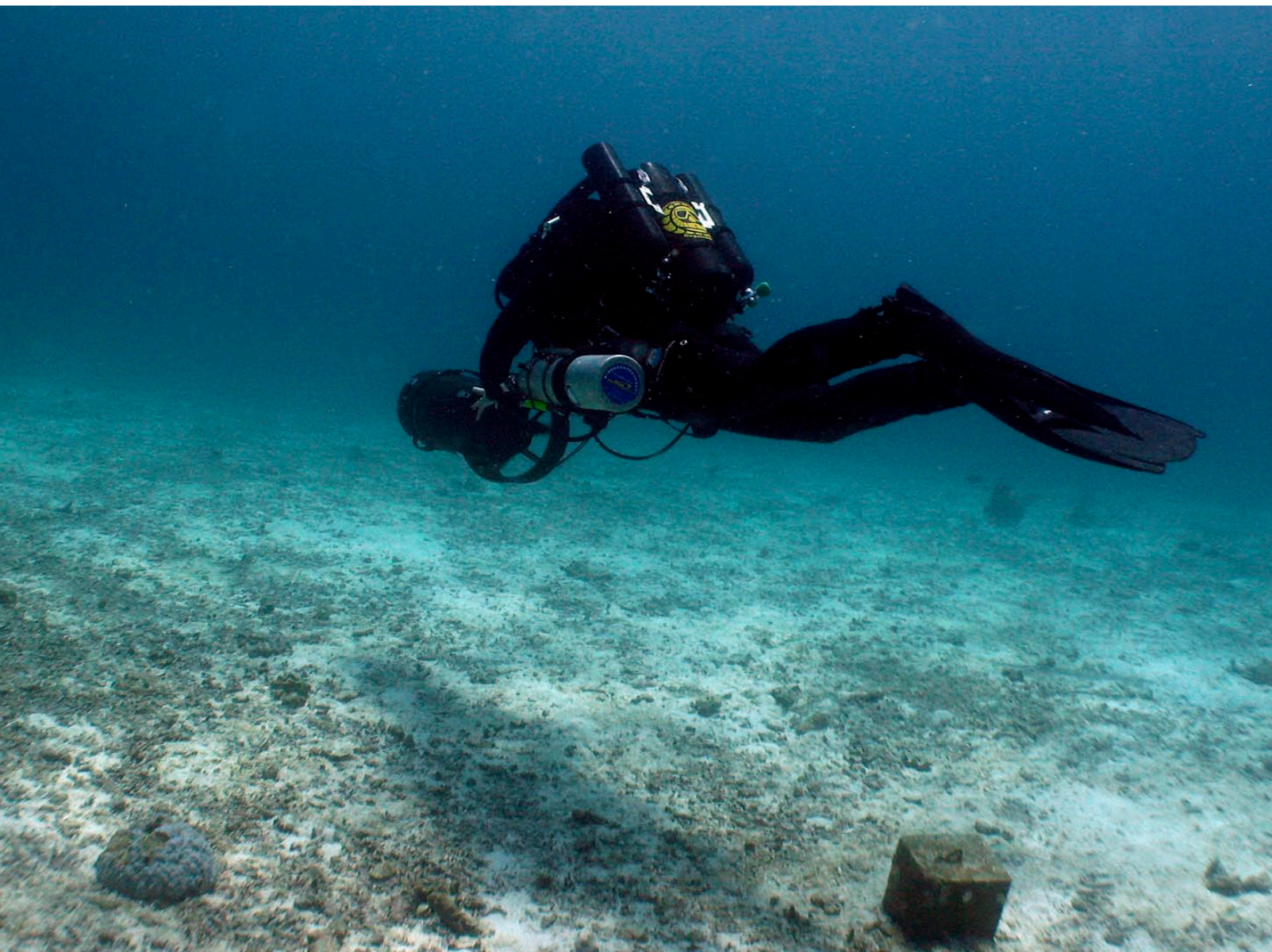
Use a propulsion vehicle. Far



from being a gadget, it can be very useful in reducing your gas consumption, as it decreases your efforts. It can expand your action range, as it goes much faster than you can with fins, and it can offer you a new feeling underwater, comparable to aerial acrobatics.

By the way, the very first book on scooters by D. Rebikoff was entitled, *Underwater on a Plane*. Versatility, in diving as well as beyond it, makes you perform better and smarter and become more open to new experiences. ■

*Pascal Bernabé of France holds the world record depth on a deep dive using self-contained breathing apparatus. He dived to 330m on trimix on 5 June 2005 off Propriano, Corsica.*



Diver on rebreather with underwater scooter

ACHIM SCHLOEFFEL