

Why Swimming Knowledge is Important for the Scuba Diver?  
(Swimmer or Non-Swimmer, is the scuba question...)  
by Kenneth L Tuttle Wilhelm, MSpSc

This article, with some slight editing, is a reprint of the original as appeared online at:  
<http://www.idivher.com/why-swimming-knowledge-is-important-for-scuba-diver/#.WAUQc7wLx5>

Literally the other day, someone asked me, how would I answer to others the question: "Is the ability to swim is necessary to scuba dive?"

To be honest, this is not a new question, or dilemma that I've encountered. As someone who started out in the aquatic sports as a lifeguard, and then as a nationally certified swimming instructor, and having been a scuba diving professional since 2002, this question has crossed my path numerous times.

It should be a very straight forward answer, and that answer would be yes. (Yes, in order to scuba dive, one should be able to swim.)

But in reality, I've known of non-swimmers diving, in multiple locations around the world: Taiwan, Thailand, Vietnam, Malaysia, Florida, Hawaii, Guam, Palau, even Australia.

So if I leave my answer as: "Yes, to be a scuba diver, you must be able to swim." Then many divers and potential divers will simply dismiss my thoughts on the matter.

To really look at this question it is important to understand the issue from several observation points:

1. A short history of diver training
2. Regulatory (government or non-government organisational rules, policies, or 'standards')
3. The legal system
4. The student diver
5. The instructor
6. The certified diver

1. A short history of diver training:

Diving actually has a history that goes back more than 100 years. But the scuba diving that we know today, really got its start in the 1950s. And at that time virtually all the instructors were formally military divers. So there was a definite 'machismo' that pervaded diving in the beginning.

But really the important thing to understand about the scuba diving at that time, is that the equipment for diving was actually very limited. Basically the divers had mask fins, a weight belt, and a belt-like harness to hold the tank on their back, and the regulator. And the tanks at that time were all made of steel.

That's it... nothing else. Except in colder waters, divers might have had rubber wetsuits. And maybe a knife strapped to their leg, with a 'dive watch' strapped to their wrist.

Also, it should be noted that most all recreational diving was done from the shore. And any diving from a boat would have been only for very experienced divers.

Additionally, there was no air pressure gauge on the regulator, so divers could only be warned of the tank running low by the common tank valve at the time, called the 'J'-Valve. The J-Valve was designed to actually shut off the flow of air, as a warning to the diver that the tank was running low on air. The diver would have to turn a switch to open the valve again, and have access to the remaining air in the tank.

Dive training in those days, depending on the training agency, would take anywhere from two months to six months.

So what did this mean for a diver?

Diving with only a harness and some weights meant that the diver needed to learn how to control their buoyancy through a combination of exact weighting, and lung volume control.

Steel tanks do become 'lighter' through a dive, but they are still negatively buoyant at the end of the dive. So this is a definite factor when learning to dive in the 1950s compared to today, (because steel and aluminium tanks differ greatly in their buoyancy characteristics).

With no air pressure gauge to monitor the remaining air in a tank, divers needed to be conservative and stay close enough to an exit point, so that, should they have to switch the valve to access the remaining air, they would be able to return to the exit point and not run out of air in the process.

Most shore diving, because of typical bottom topography will be within 500m of the shoreline.

In the early days of diving (1950s – 1960s) a diver who went out from the shore they were no more than 500m from the beach, in many areas around the world, going farther than 100m from shore, the depth of the ocean is too deep for scuba, or maybe the currents simply too strong. So there was a consideration for how far from the shore you might actually be (see point #6 below)

With no buoyancy devices (that we have now), no air pressure gauges, using steel tanks, and diving from the beach, it all added up to the need for anyone wanting to dive, simply HAD to be a swimmer. They had to have good swimming skills, and they had to have physical endurance.

If you ran out of air, and when you came up to the surface, you might find yourself 200-500m away from the beach. Which meant that you unless you wanted to ditch your expensive gear, you needed to have the skill and strength to swim back to shore with all your gear.

Equipment has gradually modernised and that means training has been able to make some adjustments as well. Basically the main thing that has changed recreational diving is the introduction of the buoyancy device.

Of course there are so many other pieces of gear that have come on the market, but in terms of pure diving techniques and skills, it's the buoyancy device that has precipitated a change in diving.

What does this piece of equipment provide the diver? The buoyancy device, of course allows the diver to control their buoyancy externally (meaning not relying on their own lung volume, and not having the need to establish 'perfect' weighting). Divers thus control their position and depth in the water with the use of two

buttons on the Low Pressure Inflator (LPI). One button to inflate, and one button to deflate/release air. (and now the 'dump valves' have been added)

So with less physical demand on control of buoyancy, and now having a device that keeps you positively buoyant at the surface (at the end of a dive), we have ARTIFICIALLY reduced the need for better swimming skills and endurance. There is more to say in this area, but I'll save it for the end

2. Regulatory (government or non-government organisational rules, policies, or 'standards'):

In most countries around the world, there is very little government intervention or regulation in the training conducted for scuba diving. (some particular exceptions: Australia, England, and France in particular)

That means that the 'standards' (similar to rules or regulations) for scuba diving have traditionally been set by non-government organisations. The longest standing worldwide standards group consisting of completely independent training agencies, is the WRSTC (World Recreational Scuba Training Council). This agency is made up of various scuba training agencies (ie: ACUC, IAC, IDEA, NASDS, PADI, PDIC, PSS, SDI, SNSI, SSI among others)

There is a new standards organisation that has established a presence in setting minimum standards for diver training. This organisation is called the European Underwater Federation (EUF). This organisation has had a membership of training agencies that has fluctuated over recent years.

But the EUF essentially does the same thing as the WRSTC, which is to establish minimum standards for various levels of diver training.

The wikipedia website for the WRSTC  
[https://en.wikipedia.org/wiki/World\\_Recreational\\_Scuba\\_Training\\_Council](https://en.wikipedia.org/wiki/World_Recreational_Scuba_Training_Council)

The wikipedia website for the EUF  
[https://en.wikipedia.org/wiki/European\\_Underwater\\_Federation](https://en.wikipedia.org/wiki/European_Underwater_Federation)

What's the point for divers and people who want to dive?

Well, virtually EVERY dive training agency has written into their standards, that a dive student should be able to demonstrate swimming competency. Typically that means being able to swim at least 200m (non-stop) and tread water or float for at least 10 minutes.

There are select agencies that require even more stringent (more challenging) swimming skills and endurance.

### 3. The legal system:

In most countries, that have a developed court system, if there is a scuba accident, and a court case, or lawsuit is later filed over the accident, the court(s) will look to the minimum training and certification standards as stipulated by either the WRSTC or EUF.

This means that if a diver is certified by an instructor, and that instructor did not require his student to pass the swimming tests, then that instructor would normally be found legally negligent.

And in some municipal locales the instructor could also be found criminally culpable. And quite possibly the dive centre would also be considered negligent for not monitoring the activity of the instructor, and thus allowing the instructor to not adhere to internationally established requirements for training and competencies of the diving student.

### 4. The student diver

Here I propose a question to the readers:

If you were intending on learning to ride a motorcycle, do you believe that having previously learned how to ride a bicycle would be helpful?

Similar question:

If you were going to learn to fly a 500 seat passenger jet, do you believe that having previously learned to fly smaller planes would be reasonable?

Surely most if not all of you would agree with the point here:

There are activities, which for the sake of safety, require the individual to learn and establish prerequisite skills first, prior to taking on the more complicated, more challenging, and more dangerous activity.

### 5. The instructor

Every scuba instructor when they took their examination, and each year when they pay their professional dues, have to sign an agreement, that they accept that they are responsible for conducting their training, and giving certifications to their students only when all standards and skill mastery requirements have been achieved.

If you are not willing to go into the hospital and submit to a surgical procedure from a doctor who says that he is will use techniques that are not sanctioned by the medical community...

WHY would you be willing to take a scuba class, or even accept a certification card from an instructor who tells you that he will not require you to meet the internationally established swimming skill and endurance requirements?

If an instructor is willing to bend rules that are for your safety and survival, what other shortcuts might he be taking with your training, or on the ocean dives?

### 6. The certified diver:

Yes.. it is possible to learn to scuba dive, and not know how to swim...

Is it safe? Not really. Someone who dives, and does not know how to swim, is playing the odds. Gambling that nothing stressful will happen to them in the water.

But in the water... when you're 20m or 30m down from the ocean surface, and something happens... Will you have the calm, the strength, and the skill to 'swim' your way out?

As a diver and instructor: I've actually seen the following things happen (sometimes to other fun divers in the group, and sometimes to divers in training):

Low Pressure Inflators FAIL: either constant inflating the buoyancy device, or constantly leaking air.

O-rings in the tank valve FAIL in the water, during the dive.

O-rings in high pressure hose connection to the air pressure gauge FAIL, causing a loss of air.

A fin strap break, and the fin drifts off into the deep ocean blue, leaving the diver with one fin.

A mask strap break, forcing the diver to abort the dive while constantly using one hand to hold onto the mask.

A diver entering the water from a boat, with the tank valve in the CLOSED position.

High pressure hoses and low pressure hoses... BURST... causing a fast free flow of air.

Regulators FAILED and go into free flow.

Dump valve on a buoyancy device FAILED, thus it didn't hold air.

Every one of these failures and so many more, are possible on any dive. And when something happens, it is very STRESSFUL. So my question is... who is more likely to handle a major stressful situation underwater ... the swimmer ... or non-swimmer ??

I've completed more than 3,500 dives in my time as a diver and instructor. So I can say that stressful events are not happening all the time, in fact they are relatively rare, but things do happen.

People don't try climbing to the top of the world (Mt Everest – low oxygen environment) without proper training and skills... (and they need physical strength and endurance)

Why would anyone really want to go under the ocean surface (no oxygen environment) without proper training and skills?

When you are using equipment to go into a no-oxygen environment, it is important to understand that there is no equipment on the market that is guaranteed to not fail. You simply can not buy any equipment that has a guarantee from failure. There is always the small risk (as indicated in the small print of the manufacturer's disclaimer).

This is why swimming skills and swimming endurance are still part of the worldwide accepted standards for training and certification. Because if something fails, it could be your ability to swim that will save your life.

Here are points to consider when you are deciding to take your Open Water Diver course, or you are going to get your friend or family member into a course:

The cost and expense of living and providing services has risen dramatically over the past 20 years. And yet the cost of scuba diving classes has not gone up at the same rate.

How do dive centres and instructors manage to stay in business, with rising costs, and course fees not rising? They do it by cutting back somewhere. And it's usually in the number of hours devoted to class time and pool time.

If you're going to learn to dive, isn't increased time in the classroom and more time in the pool preferable? Don't you believe that more time learning and training will make you a better diver?

And if you're going to get in the ocean, and descend into the deep, shouldn't you know how to swim?

Kenneth L Tuttle Wilhelm, MSpSc  
Course Director and Instructor Examiner:

~ Scuba Educators International (SEI)  
~ Professional Diving Instructors Corporation (PDIC)  
~ Confédération Mondiale des Activités Subaquatiques (CMAS)

Instructor Trainer:

~ National Association of Scuba Educators (NASE)