

## SCUBA REVIEW-OR JUST COME AND PLAY AMBER WAVES DIVING AQUATIC CENTER POOL SATURDAY FEBRUARY 22, 2023

## Why PADI Scuba Review?

Are you a certified diver, but haven't been in the water lately? Are you looking to refresh your dive skills and knowledge? Are you a PADI Scuba Diver and want to earn your PADI Open Water Diver certification? If you answered yes to any of these questions then PADI Scuba Review is for you.

## What do I need to start?

Hold a scuba certification Minimum age: 10 years old

## Nhat will I do?

First, you'll review the safety information you learned during your initial training. Then, you head to the pool to practice some of the fundamental scuba skills

How long will it take? A couple of hours

What will I need?

If you don't have your own gear you will need to rent gear.

## I don't want a review, but I want to play?

No problem, Just sign up and come play in the pool for a couple of hours....we want you diving!

\$100.00 for a Refresher (includes instructor fee, gear rental

SCHOOL OF SCULALOGICAL SCIENCES	
SCUBA SCHOOL	
FEB 16	OPEN POOL DIVE (2-4 PM)
FEB 21-23	OPEN WATER PART ONE (CLASSROOM AND POOL SESSIONS)
FEB 22	DISCOVER SCUBA-SCUBA REVIEWS-OR FUN DIVE (NOON-3PM)
FEB 23	OPEN POOL DIVE (2-4 PM)
FEB 28-MAR 2	OPEN WATER PART ONE (CLASSROOM AND POOL SESSIONS)
MAR 1	DISCOVER SCUBA-SCUBA REVIEWS-OR FUN DIVE (NOON-3PM)
MAR 2	OPEN POOL DIVE (2-4 PM)
MAR 8-10 POOL	OPEN WATER PART ONE (CLASSROOM AND SESSIONS)
MAR 9	DISCOVER SCUBA-SCUBA REVIEWS-OR FUN DIVE (NOON-3PM)
MAR 10	OPEN POOL DIVE (2-4 PM)
MAR 14-16	OPEN WATER PART ONE (CLASSROOM AND POOL SESSIONS).
MAR 15	DISCOVER SCUBA-SCUBA REVIEWS-OR FUN DIVE (NOON-3PM)
MAR 16	OPEN POOL DIVE (2-4 PM)
MAR 21-23	OPEN WATER PART ONE (CLASSROOM AND POOL SESSIONS).
MAR 22	DISCOVER SCUBA-SCUBA REVIEWS-OR FUN DIVE (NOON-3PM)
MAR 23	OPEN POOL DIVE (2-4 PM)

MAR 28-30 OPEN WATER PART ONE (CLASSROOM AND POOL

MAKE EVERY WEEKEND A DIVE WEEKEND

and pool fee)

- Just want to play but you don't have gear \$25.00 pool fee **MAR 29** and Full gear rental 50% off. Total \$50 plus tax
- Have all your gear but just want to play? \$25.00

## **STARTS AT NOON**

## **CALL TO RESERVE YOUR SPOT**

## Waiting to Exhale: Diving's Golden Rule Explained

MAR 30

As a child of the '50s, I was a big fan of the hallmark TV series Sea Hunt and its indomitable hero, Mike Nelson, played by the late actor Lloyd Bridges. One episode I particularly remember involved the kidnapping of a scientist. As this was the era of Sputnik, it was implied — though never overtly stated — that the culprits were a group of "stinking commies." The scientist was being held in a cave on an island. Central to the story line was the fact — seemingly unknown to the bad guys — that the cave could be entered from underwater.

Of course, Mike Nelson knew all about the underwater entryway and planned a highly sophisticated escape: he swam into the cave, distracted the guards, gave the scientist a 30-second scuba lesson, dodged a few bullets on the way out and — fade to black — the world was once again a safe place for mom, apple pie and clean-cut capitalists.

For years, I thought the episode was pretty bogus. Even as a kid I knew that becoming a scuba diver required hours of arduous training. I never gave the show much thought until years later when, following in my hero's footsteps, I, too,

became a scuba instructor. Even back then, everyone wanted to be like Mike. I soon came to realize that my hero hadn't let me down after all. In fact, his 30-second lesson was brilliant in its cut-to-the-chase elegance, and certainly could have been enough training given the dire circumstance and high motivation of the unlucky victim. I don't remember the dialogue verbatim, but it went something like this: "You see this thing? [Pointing to the regulator mouthpiece] You put it in your mouth and breathe. Whatever you do, keep breathing; don't ever hold your breath, or your lungs will burst and you'll die!"

#### End of lesson. Any questions?

It was one of the few instances where Hollywood actually got the facts mostly right. If you had but 30 seconds to teach someone to scuba dive, what would you tell them? The same thing Mike did — the Golden Rule of scuba diving. Breathe normally; never hold your breath. The rest, in most cases, is pretty much secondary.

Of course, if you're learning to dive the instructor uses the balloon illustration: If a flexible, gas-filled container — like a lung — can't vent excess pressure as it rises in the water column, its volume will expand until it bursts. Unfortunately, the balloon-aided explanation is about all that most divers ever learn. Now, there's nothing really wrong with the balloon analogy. It's just a bit oversimplified, especially if you really want to fully understand the consequences of forgetting what Mike Nelson so succinctly told the scientist. For one thing, our lungs bear little resemblance to balloons. (A sponge is a much more accurate analogy.) And due to the intricate and delicate nature of their anatomy, severe problems occur from lung expansion long before, as Mike so aptly put it, "your lungs burst and you die."

#### Lung Anatomy 101

Human lungs are amazing structures, made up of microscopically small air sacs called alveoli. While incredibly tiny, the massive number of alveoli - numbering in the hundreds of millions — provides an enormous surface area for gas exchange. How large, you ask? If the total surface area of the alveoli were somehow laid flat, it would cover an area two-thirds the size of a tennis court!

And talk about delicate — alveoli redefine the term. Their walls are only one cell thick. Yet as small as they are, each alveolus (that's singular for alveoli, for those of you whose native tongue isn't Latin) is surrounded by numerous capillaries that take up oxygen and give off carbon dioxide. And how about this for amazing: These capillaries are so small that red blood cells pass through in single file. Equally incredible is that while the distance between the gas in the alveoli and the blood in the capillary is less than one-twentieth the thickness of this page, at no time is the blood in the capillaries directly exposed to air.

Lung expansion injuries can be divided into at least three types, depending on where the bubbles go once they leave the alveolus. The most critical injury happens when air escapes directly into the tiny capillaries surrounding the lung, and the mechanism involved is very interesting. First, overpressurization of the alveolus forces air into the surrounding blood vessels. This often results from a tear in the alveolar wall. But believe it or not, because of the tiny size and delicate structure of the alveoli, in some cases gas can escape without actually tearing lung tissue.

You, as well as your instructor, have probably always assumed that lung expansion problems happen only to divers who hold their breath because of some distraction, lack of training or panic situation. In some instances, air can remain trapped in the lungs even when the diver exhales. Some of the factors that can promote air trapping include: asthma, bronchitis, cysts, tumors, scar tissue from surgery or radiation therapy, and obstructions from inflammation or mucus caused by smoking, and even recent colds or infection.

The ironic part about lung expansion problems is that while they are the most serious injuries divers face, they're also the easiest to prevent. Accident data also has provided two important lessons. First, as one might expect, lung expansion injuries occur primarily — though not exclusively in novices and less-experienced divers. Second is some good news: Recent accident analyses show the frequency of such injuries is declining (accounting for only 90 of 935 diving injuries in 1996). This is partly attributed to the increased awareness of the value of slow ascent in preventing DCS and the increased popularity of dive computers (which all have ascent rate monitors, often with audible alarms). I wonder what Mike Nelson would have to say about all this?

Like decompression sickness, one can never completely eliminate the risk of a lung expansion injury. But you can reduce your chances of injury. Here's how:

- Ascend slowly. Even if you're breathing normally, a rapid ascent rate could lead to a lung overpressure injury through gas trapping.
- Use a high-quality regulator and have it serviced regularly. It's believed by some that excessive inhalation effort may cause edema (fluid damage) to tissues surrounding the alveoli, thus reducing the size and impeding flow into and out of the airway.
- Avoid diving too soon after a chest cold or respiratory infection. This means that no matter how good you feel, don't dive if you are coughing • up mucus, or if your breathing produces any abnormal noise or resistance. To reduce the tendency for mucus obstruction after a chest cold,



SESSIONS).

DISCOVER SCUBA-SCUBA REVIEWS-OR FUN DIVE (NOON-3PM)

**OPEN POOL DIVE (2-4 PM)** 

drink plenty of water before diving.

- Running out of air is the major cause of lung expansion problems, so practice good air management techniques. Have enough air to make the dive you're planning — plus some reserve. Monitor your own and your buddy's gauges frequently.
- Forget what you were told about a 60-foot-per-minute ascent rate being OK. Slow down to half that. It will help you avoid both lung expansion injuries and DCS.
- Don't smoke, and if you do, stop. Smoking causes the buildup of mucus, which can obstruct airways.

### **Diving Accident First Aid Procedures.**

While the differences in symptomology between DCS and lung overpressure injuries can be subtle, this is of no concern to divers at the scene of an accident. Regardless of which disorder is actually present (sometimes both are), the first aid measures are the same. Do you want to know what they are and how to take care of your dive buddy? Sign up NOW for our Emergency First Responder Course. It is taught every Sunday from 1pm to 5pm.



#### Dive and Explore Package Includes:

- Airfare plus one night hotel in Miami
- 7 Nights accommodation at Fort Young
- Round-trip airport/hotel transfers
- Daily Breakfast
- 5 days of 2-tank boat diving and unlimited shore diving
- Marine Park Fee 1 - afternoon waterfall tour to rafalgar falls and Titou Gorge
- Resort tax and service charges
- \$50 per person spa credit
- Your Package Excludes:
- Personal Dive Equipment Nitrox \$143 for 5 days of
- diving
- Meals and Beverages not specified
- Gratuities
- Travel & Dive Insurance

#### PRICE BASED ON ADD 4% FOR CREDIT CARD

Leaving on Friday May 2 early evening, staying one night in Miami airport hotel, with a direct flight coming back on May 10



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## Scubapro MK11/C370 Regulator





The Mk11 First Stage Regulator is the perfect choice for the recreational diver who wants the advantage of a dia-

phragm first stage for use in temperate

waters. Diaphragm-based first stages are environmentally sealed so that water cannot enter the inner mechanism. This first stage comes standard with the Thermal Insulating System (TIS), which keeps your first stage from freezing up and malfunctioning in cold water conditions. Additionally, its over-balanced diaphragm first stage design gives

you better breathing performance at greater depths.



## OCEAN VIEW ROOM

DIVER-DBL \$2,693.00 DIVER-SINGLE \$2,968.00 NON-DIVER DBL \$2,219.00

#### Package Includes:

- Round trip airfare from Wichita
- 7 nights' accommodation at Turquoise Bay Resort
- Round-trip airport/hotel transfers
- 3 full meals daily
- Non alcoholic beverages & local alcoholic beverages
- 3 boat dive trips daily including tanks, weights & weight belt
- Horseback ride
- Botanical garden tour
- Wifi
- All hotel taxes and service charges

#### GARDEN OR HILLISIDE ROOMS DIVER-DBL \$2,575.00 \$2,800.00 DIVER-SINGLE NON-DIVER DBL \$2,100.00

## Package Excludes:

- Nitrox (\$119 + 19% tax for unlimited; if pre-paid)
- Optional Chamber Fee of \$2.00 per person/day
- Personal dive equipment
- Tips to the Dive Crew
- Trip Cancellation or Interruption Insurance

### PRICED AT CASH DISCOUNT \$500 DEPOSIT





SCUBAPRO MK19 EVO/G260

REGULATOR

THE MK19 EVO/G260 REGULATOR

IS PERFECT FOR ANY CONDITIONS, ESPECIALLY THOSE WHO DIVE DEEP, IN COLD WATER, OR IN SILTY ENVIRONMENTS. THIS SYSTEM IS IDEAL FOR HARSH CONDITIONS, MAKING IT A TOP CHOICE FOR TECH DIVERS AND CAVE EXPLORERS. THE COM-PACT MK19 EVO IS FULLY SEALED, ENSURING TROUBLE-FREE OPERATION IN COLD OR MURKY WATERS. THE G260 IS A HIGHLY IMITATED AIR-BALANCED SECOND STAGE WITH METAL COMPONENTS AND A LEFT-RIGHT HOSE ATTACHMENT OPTION, MAKING IT EXCELLENT FOR TECH DIVING SETUPS AND A CONSISTENT TOP PERFORMER. \$1,064.00

# PRICED RIGHT AT \$699.00



The Apeks XTX50 Regulator is what you're looking for in a top of the line regulator, at a reasonable price. The Apeks XTX50 is designed to handle every diving condition you could put it through. It can even be changed from right hand to left hand use, by an authorized technician. You can change out the exhaust tee from a wider tee for minimal bubbles, great for photography, or a more narrow exhaust tee for a smaller more compact regulator. Apeks XTX50 features:

- An over balanced diaphragm design first stage that is environmentally sealed
- Four medium pressure ports, with optional fifth
- Easily converts from right hand to left hand, by factory authorized technician
- Pneumatically balanced second stage
- Diver changeable exhaust tee
- Nitrox compatible

\$720.00



# HYDROS PRO BCD

The HYDROS PRO is a true breakthrough in dive comfort and convenience. The moldable Mon-

prene, adjustable fit and multi-attachment points combine to make this the most customizable and comfortable BCD ever.

The HYDROS PRO includes both Trav-Tek straps and an integrated weight system. So with a quick switch of clips, you can transform it from a harness travel BCD to a fully integrated weight BCD. Now you only need one BCD for both local diving and travel!

\$1,182.00

## **RECOGNITION OF A STRESSED OR PANICKY DIVER**

A stressed diver will behave awkwardly and clumsily. He or she may chatter continuously before a dive or be uncharacteristically quiet due nervousness.

In the water, stressed divers deviate quickly from the agreed plan and their movements are agitated and jerky. They fidget constantly with pieces of their equipment and take much longer to deal with simple tasks like ear cleaning and the equalizing of pressure in the mask.

They may also tend to cling to the buddy or instructor, swimming almost on top of their partner. Conversely, they may pay scant attention to buddy contact and swim off in one direction never looking around to check the position of a buddy











SCUBA PRO GLIDE

SCUBA PRO WOMEN'S BELLA

AQUA LUNG WOMEN'S SOUL

AQUA LUNG AXIOM





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**BLUE TOOTH** 





## AQUA LUNG 1200C WRIST COMPUTER

The i200C is an intuitive, sporty computer with an easy versatility. With its fresh design, you'll find yourself wearing the i200C as an everyday sports watch that is ready

to dive when you are. The i200C has Bluetooth capabilities. It has 4 operating modes, a user-changeable standard battery, the ability to easily switch between 2 Nitrox mixes, as well as no restriction switching between Free & Dive, it adapts to you. Air, Nitrox, Gauge (with run timer), and Free Dive (tracks calculations to allow unrestricted switching between Dive and Free).