



Bottom Bunch Dive Club Sea Tales Newsletter

Recognizing Air Embolism vs DCS

On one of our local dive trips their was a fatal diving accident where a diver inflated his BCD at depth. This is truly a very serious mistake, which resulted in death, but what about the girl who had just tingling in her arm, then numbness after hours after diving and finally admitting to the dive-master that something may be wrong en-route to the next dive? Can you recognize the symptoms and be able to admit that you may have DCS?

An awareness of the symptoms and signs of underwater diving accidents and other common underwater disorders is necessary to recognize a serious accident. Lets go over again the common symptoms and signs that divers may experience.

AIR EMBOLISM

As a diver surfaces without exhaling, air trapped in the lungs

Expands and may rupture lung tissue, releasing gas bubbles into the circulation which distributes them to the body tissues including vital organs such as the heart and brain. The bubbles may interrupt circulation when lodged in small arteries.

The effects of halting circulation of the brain are critical, often leading to unconsciousness and paralysis, and require immediate treatment. The precise medical term for this condition is cerebral arterial gas embolism. However, it is most commonly known to divers as an air embolism.

Air embolism can also cause minimal symptoms of neurological dysfunction such as numbness or tingling of an arm or leg, weakness of a body region, or vision, speech or hearing loss, without loss of consciousness.

A diver may ascend without exhaling as a result of

- Inadequate training
- Careless ascent technique
- Careless depth control
- Heavy work of distraction on ascent.
- Panic

The symptoms:

- Dizziness
- Visual blurring
- Chest pain
- Disorientation
- Personality change
- Paralysis or weakness

Signs

- Bloody froth from mouth or nose
- Paralysis or weakness
- Convulsions
- Unconsciousness
- Breathing may stop
- Death

Sea Tales Index

| | |
|---------------------------|--------|
| Recognizing Air | Page 1 |
| Page 1 of 2 | |
| Comparing Warm VS Cold ii | Page 2 |
| Comparing Warm VS Cold ii | Page 3 |
| Membership List | Page 4 |
| Recognizing Air | Page 5 |
| Page 2 of 2 | |
| BB Info | Page 6 |

**Wednesday
February 6th, 2008
at the Casa
Machado,
Montgomery
Airfield Admin
Building,
6PM Meet/Greet,
7PM Presentations**

Comparing warm clear water diving to the not so warm and clear California diving PART ii PAGE 1 OF 2 by Bob Beitel

Whether your diving in clear tropical or dark and cold to temperate California waters, in Part I I discussed getting down and the differences in getting there. So let's continue, now that we are in the water, how can we compare the differences in our discussion of warm and cold water diving.

When diving in the tropics- one would typically expect to find clearer water, 50 to 80 foot visibility is average, 80 to 100 foot plus is good. The water temperature is always the same, 80 plus or minus a little, regardless of where you are in the water column; it may drop to the mid 70's occasionally. The amount of marine life, both plant and animal is in major contrast to the not so warm and not so clear environments. First off, there **appears** to be a greater abundance and variety. Just like the people crowds in San Diego, it seems all the fish in the world want to live in the tropics. The beauty and variety of fish on the reefs leaves one searching for words. Since I am not one for using flamboyant wording and mystical descriptions, let me say this. WOOOOW! There is just so much to see. Words truly do an injustice to what you see on a typical coral reef dive. On every dive you see something new, at least I do. From macro to whales, they can show up anytime. Let's be honest here, diving in the Tropics is fantastic.

I mentioned that; "there appears to be a greater abundance and variety" with reference to warm water diving, I have a little trouble with that statement. When you dive in not so clear water you really have to look for the beauty, you can't see as far, so you spend more time looking and less time just enjoying. The beauty is there you just need to look a little bit closer; it just

doesn't jump out at you as it does on a coral reef. Again, there are California dives that can rival the best tropical dives. Oilrigs, every inch covered with living matter, wrecks covered top to bottom with marine life, a kelp forest reaching to the surface. The stories of California diving never stop, so there must be something to it; every dive is not a miserable experience.

Most people that do not dive seem to have a problem understanding why we as divers become so full of love and excitement about our ventures. To help us explain our crazy enthusiasm we take 50,000 pictures per dive or a video, never turning the video camera off until it hits the rinse bucket. With cameras in hand we try our best to bring back moments of time spent underwater to share. What we fail to bring back mechanically we bring back as memories. This, however, happens on every dive, no matter where we dive, or the type of water we dive in. However, any underwater photographer knows it is a hell of a lot easier to take photos in clear, warm water than in cold, dark and green water, regardless of subject matter.

Jumping into California's not so clear or warm water, we hope for, no, we pray for water visibility of at least 10 to 15 feet. Mark Pidcoe made an excellent description of what this diving is really like in a recent (Sept.07) Bottom Bunch Dive Club dive report when reporting of a dive at La Jolla Shores, he wrote; "This is such a fantastic dive site, and I never tire of diving here. Tonight the visibility was absolutely fan-damntastic. We had visibility in excess of 30'. Just awesome for SoCal Diving. Now it was a tad cold with a min temperature of about 52f at 100 ft". I had the pleasure of reading his statement right after returning from a week of t-shirt diving in Bonaire. It sort

of built a fire under me to write this, thanks Mark.

California does have days of 45 to 70 foot visibility and we do enjoy those days. On occasion we get 80 foot plus days, usually on the outer reefs or islands and we do cherish those moments. We also have an appreciation for water temperatures above 65 degrees. Because the water is 68 degrees on the surface does not mean you will have that on the bottom. You can jump in with 68 degrees on the surface, 15 feet down have 58 degrees, and on the bottom have 64 degrees. There simply are no guarantees. Due to temperature variance, we have to suit up appropriately. Remember in Part I talking about jumping into tropical waters with just a t-shirt or less, well that doesn't cut it in California. A properly dressed diver can begin with thermal garments covering the shoulders on down. This can be very bulky. Then he or she will overlay this with a watertight dry-suit, which may include attached gloves and booties. Atop all this is added 15 to 30 pounds of lead. We are definitely not talking of "a t-shirt or less" here folks. Whatever choice a diver makes, be it wet or dry, in suiting-up they try to outsmart Mother Nature, sometimes they win, sometimes Mother Nature wins.

I wasn't quite sure how to fit this next observation in, but let me stand out on a limb here and say this; "Warm water divers are spoiled pussies". No, I don't mean that in a fighting sense. What I mean is they have everything going for them. They usually have fantastic water visibility. They usually have very warm water to dive in, and they have

Comparing warm clear water diving to the not so warm and clear California diving PART ii PAGE 2 OF 2 by Bob Beitzl

tons and tons of subjects to take photos of. They can go back, time and time again to photograph or observe the same subject. Everyday is the same. There is not much of a challenge to find or photograph a subject. If they don't get that perfect picture today, they just go back the next day, probably will have the same ol' perfect weather, and redo it with the same subject, until they get it right. Boring! They just don't appreciate what they have. I have actually seen warm water divers almost go into depression because the water visibility had dropped to 40 feet from the day before, honest! It actually takes a tourist to remind them of how good they have it. If they want to go diving, they grab their gear, all of it with one hand, walk to the shore or boat, takes a couple of minutes to check out the area, and jump in. It just can't get much easier!

Hell, cold water divers are real divers. If they miss that moment in time to capture that perfect shot, it's lost. Let's face it, jumping back in the water 30 minutes after a dive to re-take a photo is all most impossible. Remember that 10 to 15 foot visibility? Most likely you won't even be able to find the same rock, much less have the subject waiting there for you. Plus, take into consideration the time and effort to get out of your gear, then to go through the ritual to do it all again, that my friends is a true test of devotion to the sport.

Take a California diver to the tropics, for his first time. Push his butt overboard, and you have a diver enjoying every breath taken from his tank. Probably took just a couple of breaths

of air and he has adjusted to the new conditions and is enjoying his dive. Reverse this same scene, take a warm water diver, suite him up, push his butt overboard, into a California kelp forest, anything can happen next. I venture to say there are very few, and I am talking experienced, warm water only divers that can adjust to what it takes to dive the temperate waters of California, within just a few dives. Dive guides in the tropics tend to enjoy diving with California divers in general, why? Because they can relax around them, they know California divers for the most part- ARE GOOD DIVERS.

I don't have enough time left in my life to get into the pissing contest of how many fish, and how much color there is or isn't between the two regions. But I am willing to add just a couple more of my personal thoughts on this subject.

For all that it may be worth, why would anybody living in California only dive in the Tropics? Regardless of visibility or temperature, California has some of the best diving to be found anywhere on earth. Think about it! It just takes a little more effort to make it happen. Take a close look at Albert Barnes climbing onboard on the home page of the Bottom Bunch Web Site; that might be a little more effort than I'm talking about, but it works for him. If you only dive on a summer vacation in the tropics, you have drastically cut your opportunities to experience that once in a lifetime dive to brag about for years.

The bottom line goes like this. No matter where you dive, you dive to have fun, with a little adventure thrown in. Properly prepare yourself, know your limits and enjoy diving. **Diving is an experience. It's an adventure**, no two dives on the same day are the same, **regardless of location, water temperature or visibility.** Some of the most peaceful moments I have spent underwater were also cold and dimly lit. Some of the most beautiful views I can recall were in the very cold and very clear waters off our coast. I am grateful for having the opportunity in my life to have experienced those moments.

Oh ya, and I have never been bothered by sea lice on a night dive in California!

Have a nice dive, have fun.



I found this juvenile Honeycomb rockfish on the North wall, La Jolla shores while diving a few weekends ago.

Image by Herb Gruenhagen © 2008

Bottom Bunch Members

Please Stand-Up and Be Counted as a BB Member! Renew your Membership in June 2008!

| name | email | | |
|--------------------------|---------------------------|-----------------------------|--------------------------|
| BB-Don Albares | donaldalbares@cox.net | BB-Kaaren Page | kaaren_Page@msn.com |
| BB-Karen Albares | karenalbares@cox.net | BB-Erin Patterson | e.patterson@yahoo.com |
| BB-David Ambrose | stargazer1@cox.net | BB-Mark Pidcoe | dapid2@cox.net |
| BB-Jim Anderson | jimandscheryl@hotmail.com | BB-Steve Preddy | spreddy@cox.net |
| BB-Stella Annunziato | navylt_03@hotmail.com | BB-Steve Raynes | steveryns@yahoo.com |
| BB-Albert Barnes | albbar@cox.net | BB-Holly Sanderson | holly.trotter@gmail.com |
| BB-Bill Bathgate | bbathgate@aol.com | BB-Mike and Holly Sanderson | mike.sanderson@gmail.com |
| BB-Karin Filijan | karfil@aol.com | BB-Connie Jo Snow | conjosnow@aol.com |
| BB-Serdos | serdos21@yahoo.com | BB-Gary Stewart | pe2nya@pacbell.net |
| BB-Bob Beitzl | bbeitl@cox.net | BB-Dan Stuhr | stuhrcrazy@hotmail.com |
| BB-Frances SanClemente | fsanclemente@san.rr.com | BB-Jen Tople | jentople@yahoo.com |
| BB-Fran & Kim Boyer | boyerusmc@aol.com | BB-Carlos de la Torre | c.e.delatorre@gmail.com |
| | marianne- | BB-Roger Uzun | uzun@san.rr.com |
| BB-Marianne Brazell | brazell@hotmail.com | BB-Gena Wagner | genaself@yahoo.com |
| BB-Jessica Busk | jrosebud72@yahoo.com | BB-John Wagner | jlwagner2@hotmail.com |
| BB-Bonita Chamberlin | Lapis27@aol.com | BB-Jon Walwick | drwalwick@sbcglobal.net |
| BB-Marc Crocker | divedolphin2@yahoo.com | BB-Bob&Jackie Wiley | sygnus@cox.net |
| BB-Reynold Demarco Jr | reynoldjr@cox.net | BB-Jackie Wiley | Jackie@dui-online.com |
| BB-Brian Downing | brianjdowning@msn.com | BB-Phillip Winter | ptwinter2001@yahoo.com |
| BB-Andy Eaton | ajteaton@gmail.com | BB-John Young | starwatcher11011@cox.net |
| BB-Stephanie Truhlar | truhlar@gmail.com | BB-Linda Young | lyoung8@cox.net |
| BB-Ned Elliott | nedellt@hotmail.com | BB-Deborah Zambianco | doctorz@san.rr.com |
| | stevebumble- | | |
| BB-Steve Gardner | bee@san.rr.com | | |
| BB-Doug & Ellen Goepfert | dgoepfert@cox.net | BB-Mark Kelly & Deborah | mkkelly@san.rr.com |
| BB-Herb Gruenhagen | hgruenha@nethere.com | | |
| BB-Fred Hallett | fredhallett@mac.com | | |
| BB-Jeff Hannigan | jthannigan@cox.net | | |
| BB-Phil Hodgens | bgbarrelridr@yahoo.com | | |
| BB-Tom Ingram | tingram@san.rr.com | | |
| BB-Ken James | kjames3@san.rr.com | | |
| BB-Rick & Rickie Kean | RPKean@cox.net | | |
| BB-Rickie Kean | rickiervt@cox.net | | |
| BB-Norma Jene Kreischer | normajene@gmail.com | | |
| BB-John Leek | jleek001@san.rr.com | | |
| BB-Dick Long | rlong@cox.net | | |
| BB-Susan Long | susanlongis@cox.net | | |
| BB-Joe Lucero | jluzero@san.rr.com | | |
| BB-Kerry Mahoney | Keret@aol.com | | |
| BB-Melissa Maldonado | MDiver@cox.net | | |
| BB-Len Mooney | lmooney@flycfa.com | | |
| BB-Greg Morris | gmorris127@aol.com | | |
| BB-Tracy Mues | tiarmues2004@yahoo.com | | |
| BB-Lina Nihiser | lnihiser@yahoo.com | | |
| BB-Carmen Nowland | schoolsky@cox.net | | |
| BB-Robert Nowland | rbnowland@yahoo.com | | |



Rob Davis, who does whale shark research in Roatan, took this image of a juvenile whale shark. Scientists know so little about the whale shark. It will be sad for them to go extinct before we learn about how to protect them.

Recognizing Air Embolism vs DCS

Prevention

- Always relax and breathe normally during ascent.
- Go Slow during ascent, and take your time. ALWAYS DO YOUR 3-MINUTE NO-DECOM STOP.
- Get a periodic physical by a physician knowledgeable in diving medicine.
- Divers with a history of lung problems should be evaluated by a doctor knowledgeable in diving medicine.

Treatment

Although a diver with an air embolism requires urgent recompression for definitive treatment, patient stabilization and early medical management at the nearest medical facility should be accomplished before transportation to a chamber.

Early oxygen therapy is vital and may reduce symptoms substantially, but this should not change the treatment plan. Symptoms of air embolism and serious decompression sickness often clear after initial oxygen breathing, but may reappear later. Recompression therapy of an air embolism can be effective even if delayed.

Now for the really scary stuff, DCS...

Decompression Sickness

Decompression sickness (also called bends, caisson disease) is the result of inadequate decompression following exposure to increased pressure. While immediate recompression is not usually a matter of life and death, as in air embolism, serious injury does occur and the quicker recompression begins, the better the recovery.

During a dive, the body tissues absorb nitrogen from the breathing gas on proportion to the surrounding pressure. As long as the diver remains at pressure, the gas presents no problem. If the pressure is removed too quickly, the nitrogen comes out of solution and forms bubbles in the tissues and bloodstream.

This commonly occurs as a result of violating or approaching too closely the diving table limits, but it can also occur even when accepted guidelines have been followed. It is always wise to stay away from the very edge of the table limits and use the tables or computer conservatively.

Bubbles forming in tissues near joints cause the pain of a classical "bend." When high levels of bubbles occur, complex reactions take place in the body. Numbness, paralysis, congestive symptoms in the lung as well as circulatory shock can occur.

Great individual variation among divers caused by age, difference in physical fitness, body weight and unknown factors, may result in the sport diver developing decompression sickness in spite of correct use of the diving tables or computers.

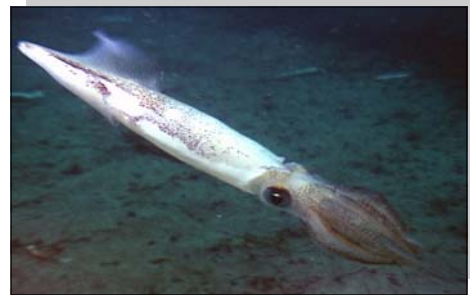
Symptoms

- Unusual fatigue
- Skin itch
- Pain in arms, legs or torso
- Dizziness, numbness, tingling and paralysis
- Shortness of breath

Signs

- Skin may show blotchy rash
- Paralysis, weakness
- Staggering
- Coughing spasms
- Collapse or unconsciousness

Symptoms and signs usually appear within 15 minutes to 12 hours after surfacing: but in severe cases, symptoms may appear before surfacing or immediately afterwards. Delayed occurrence of symptoms is rare, but it does occur, especially if air travel follows diving.



January 20th-La Jolla Shores. Image by Herb Gruenhagen © 2008

Bottom Bunch Dive Club
www.bottombunchdiveclub.com

E-mail your newsletter
submission to:
hgruenha@nethere.com

Safety first then Fun!

The Bottom Bunch dive club started out as a Chula Vista Club more than 20 years ago. The Club motto is safety first then fun. The club loves to dive and loves to be safe too. Weekly dives are planned as well as Channel Islands boat trips, beach picnics, yearly Christmas party and many other activities. Please come and join the Bottom Bunch Dive Club and meet your next dive buddy who loves to dive as much as you do!

We meet the 1st Wednesday of each month at the Casa Machado on the Montgomery Airfield in Kearny Mesa. Bottom Bunch Dive Club yearly dues are only \$24 per person.

Committee Members:

Guest Speaker: Volunteer
Entertainment: Volunteer
Black Beards: Don Albares
Sales/Audio: Al Barnes
Welcoming: John Wagner
Historian: Karin Filijan
Newsletter: Herb Gruenhagen

2008 Officers:

President: Greg Morris

Vice Pres: Rickie Kean

Treasurer: Karin Filijan

Secretary: Tracy Mues

Local Dive Coordinator: Mark
Pidcoe

Dive Boats: Karin Filijan

Web Site: www.bottombunchdiveclub.com

Casa Machado
MEXICAN BAR & GRILL
3750 John J. Montgomery Dr.
San Diego, CA 92123
Tel: (858) 292.47.16 fax: (858) 292.70.60

Storm Drain-1 of 50 Ways to Save the Ocean

Throw all trash in garbage cans. Don't drop gum, paper cigarette butts, or other waste down a storm-drain grating or even on the pavement.

Use soap sparingly when washing your car.

Use a broom to sweep your driveway rather than watering it down, and put everything you sweep up into a garbage can.

If you use chemicals on your lawn, don't spray them on a windy day (so that they are blow into water-

ways) or just before rain is predicted (so that they are carried away by runoff). Better yet, learn how to maintain your lawn and garden without chemicals.

Control erosion from your property by planting ground cover, especially native plants, to secure to soil.

Don't change your oil in your driveway, and never dump oil or oily wastes on the street or down a storm drain. Recycle your oil, and immediately fix any oil leaks

In your car. One gallon of oil can pollute 250,000 gallons of seawater.

When you walk your pet, scoop up the waste and dispose of it in a garbage can. Some 15 tons of pet waste end up in our oceans every day, adding pathogens and bacteria that can sicken both marine animals and people.

Learn about storm-drain stenciling from the San Diego Oceans Foundation.