



Diving Medicine Ten Foot Stop Newsletter

[April 30, 2004 Newsletter](#)

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-Note from scubadoc-

Expired Air Resuscitation

Dr. Partick Farrell, a physician in the UK, has written commenting about expired air resuscitation [EAR] and it's effectiveness in the in water rescue of a diver.

"Have you folk ever discussed expired air resuscitation in water? As I understand it adults rarely have respiratory arrests but normally VF [ventricular fibrillation] or emd [electromechanical dissociation] so expired air resuscitation is a waste of time & may put the rescuer at risk due to the effort of towing & trying to do EAR. Yet all the training organisations teach it. Worth a thread?"

We sent this query to several of our consultants with some interesting comments.

[Dr. Edmond Kay](#), Diving Medical Officer, University of Washington and Medical Director, Divers Institute of Technology (DIT - Seattle).has this to say:

"This is a very timely question as we at the University of Washington have recently had just such an in-water incident. On a 60 ft dive (this week), a relatively new diver had trouble with her regulator and lost consciousness while trying to initiate buddy-breathing. Her partner dropped her weights and made an emergency ascent. Upon reaching the surface she was apneic and cyanotic. Rescue breathing was initiated and by the time they got back to the boat she was incoherent and coughing, but alive and breathing on her own.

Another resuscitation I personally participated in happened off a boat in California. A diver had gone down the anchor line to free up a snag when his regulator got away from him. He passed

out before he could retrieve it. Luckily he was near the boat and was hoisted aboard quickly for resuscitation. This second diver was apneic, cyanotic and vomited in my face as he regained breathing reflexes. I wish I had been in the water for that one! I must say I prefer in-water rescue-breathing!" Dr. Kay's web site <http://faculty.washington.edu/ekay/>

Dr. Allen Dekelbom, one of our ENT consultants and a scuba instructor notes the following:

"Granted, a large majority of adults do have VF or emd, but near drowning is also of concern and expired air resuscitation is helpful for that condition; the victim might even respond while towing him/her in. All SCUBA instructors are required to perform a one-on-one rescue in full SCUBA gear, including rescue breathing and towing the victim to the beach, or at least they did when I became an instructor - and it was a pass or fail exercise. **If you are trained to perform rescue breathing, then it should be done, but lacking that training and/or experience, getting the victim to shore or to a boat as rapidly as possible is of prime importance.**"

Dr. Richard Moon, Duke University [DAN], offers these comments in favor of using in water expired air resuscitation.

"EAR by itself is unlikely to resuscitate the average unconscious adult (who typically loses consciousness due to a cardiac arrhythmia), but there are always exceptions. For instance, a post-ictal diver who may have suffered a convulsion due to AGE or O2 toxicity. Other than the possible risk of infection transmission, there is little down-side to attempting EAR. **Furthermore, even if full CPR and AED are to be used, 'airway' and 'breathing' are appropriate first steps.**"

An opposing point of view can be found on the web site of the South Pacific Undersea Medical Society. Here is what they have to say:

"SPUMS Position on EAR.

Expired air resuscitation in the water should never delay the recovery of a diver to a diving platform or ashore. There are sufficient doubts about the safety and efficacy of EAR in the water at present (April 1997) to prevent the general recommendation of this technique."

http://www.spums.org.au/SPUMS_Initia_Manage_policy.htm

Dr. John Lippmann, DAN SEAP, has the following comment:

At DAN SEAP we advise that people should land the diver as soon as possible and generally not lose time trying to assess breathing and doing in-water EAR. It is often very difficult to assess the breathing in the water and attempts at in-water EAR are usually have a poor outcome. However, if you have an unresponsive diver and are waiting for a boat to pick you up and cannot land the diver quickly, it can be worth a try. I still believe that in-water EAR is not a bad skill to teach rescue divers but to do it effectively you are far better off using a resuscitation mask and ventilating from behind the victim's head. However, one should never lose sight of the priority of quickly landing the diver, putting them on their side to help drain the airway and then taking appropriate action. The in-water EAR is a skill exercise and should only be attempted "in anger" if conditions are right and the diver cannot be landed for some time.

We sent the question to **Dr. Omar Sanchez** in Argentina for his comments. He is a Cardiologist, is ACLS, ATLS qualified and since 1994 medical examiner of the Argentina Dive Institute.

"My experience on this topic is limited to the practices of the Rescue Diver Course. In the year 2001 we used the manikin BRAD (CPR manikin <http://www.simulaid.com/images/2801.jpg>) to do this practice in the pool.

It was necessary to rescue Brad and to take it 50 meters with respiratory assistance (expired air resuscitation). During the practice water always entered Brad's airway, the average was of ~ 10 cc., but in several cases was ~ 50 cc.

Another disadvantage was the sudden mobilization of the neck in the first classes, in two opportunities Brad suffered "cervical dislocations". When we proved to do it with the Philly cervical collar the water airway entrance was most important.

The other finding was the relation between the size of the rescuer body and the water quantity that we find in the airway, the smaller rescuer finished with more water in Brad's airway.

The conditions were: swimming-pool with conditioned [heated] water, with fins, without current and waves. Brad is a very light doll (+ floatability), and without arms and legs, offering less resistance than any victim.

Dr. Ed Golembe, Director, Hyperbaric & Wound Healing Center, Brookdale University Hospital and Referral Physician, Divers Alert Network (DAN) had these cogent remarks:

“Expired air still has the majority of its original oxygen content, as has been demonstrated by the numerous successful cases of mouth-to-mouth resuscitation. One can only suggest that the guidelines for rescue are followed. First, the rescuer should not place himself in jeopardy of loss of his own life. Next, one should do whatever appears to be required to effect a rescue. One or two breaths may be all that is required.

So, should EAR be taught? My answer is yes, keeping in mind that the more tools one has at his disposal, the greater the options.”

[Dr. Nick McIver](#), in the UK, with worlds of experience in commercial diving rescue provides us with some interesting history. He remembers “seeing an item on UK terrestrial TV (a series called I believe "999"), where a young female was trapped at the bottom of some type of swimming pool drain by her hair. The lifeguard on duty saved her life while she was freed by taking lungfulls of air repeatedly down to her and giving her EAR on the bottom (? about 10 feet). I believe she made a full recovery from "near drowning".

There was a meeting at Heathrow Airport UK organised by Prof Lambertsen and one of the US Gas Companies in the mid-1970s called "The Human Factor in Diving". Surgeon Rear Admiral Sir John Rawlins RN chaired a session on resuscitation in the Bell (SDC) in a commercial diver. I do recall that the conclusion was that no effective closed chest compresion could be delivered. EAR was considered the only chance. But once the diver had been recovered into the SDC. I have witnessed this taking place in 1000 fsw off Norway in 1978. The biggest problem was getting the unconscious diver into the bell but he came to and had not arrested.

I later tried using my Don Whillans climbing seat harness and we found it helped when performing the exercise in the dry later - with Dan Caldwell (Medical Manager of Taylor Diving from New Orleans) at Taylors yard in Great Yarmouth, to have the diver coming in face up to get started on EAR. The Comex Swan neck valve flooding system was I believe the best means of recovery but needed special engineering in construction of the bell.

Georges Arnoux (formerly of Comex Aberdeen) was much involved in devising the system for recovering the unconscious diver into the bell using the bell-flooding mechanism and a Maasdam Hoist. I know they too addressed the matter of subsequent resuscitation.”

Finally, we have a study on the subject by [Dr. Glen Egstrom](#).

“I did some research on this issue many years ago. Took a number of divers, including instructors and worked with neutrally weighted manikins with resusitation bags (resusi ?). Following a few quick breaths, which may or may not have constituted exchange, the efforts went

downhill rapidly. Mouth to snorkel is very skill dependant and few are able to use it with even the appearance of effectiveness, even then there are a host of mechanical issues that most individuals will find they are unable to cope with the environmental and physiologic demands. When a BC is inflated there is some gain on the problems but very little, especially if the environmental conditions are unfavorable. In the case of cardiac arrest the 1-3% survivability even with good cpr that is found on land is further complicated with a reduced chance of success in the water environment. It is probably worth a shot to extend the neck and give a couple of quick breaths. Getting to a boat with an AED may offer a slightly better chance for survival but nowhere near the success rate most people attribute to these maneuvers. **Sad as it is in water resuscitation has not been proven effective.** “

So – it would seem that the procedure is quite skill related and difficult to carry out even in the best of situations. It's use should never cause a delay 'in landing' the victim – a factor that several have pointed out to be of the first importance.

However, since we have no data [that I can find] that shows it to be effective one way or the other I find it difficult not to recommend it for the unconscious diver, particularly since the rescuer generally does not know the cause of the problem and given a heart that's beating any expired air contains enough oxygen to aerate the brain before anoxic encephalopathy occurs.

My personal thoughts are that "it depends" - on several variables; where you are in the water, how far you have to go to get help, if there is any help, what kind of physical condition you're in [rescuer], is this a cardiac event, near drowning or diving related, e.g., decompression illness, envenomation, barotrauma. **There are two over riding considerations: oxygen has to be supplied to the brain as quickly as possible; and, the victim needs to be out of the water on a boat or land as quickly as possible. Melding these two factors into a successful rescue is the goal.**

Obviously, a pulseless individual will not benefit even from 100% O2 and chest massage is impossible in water without special equipment or help. If there is a pulse, even the reduced O2 in expired air might save some brain cells. However, obtaining a faint carotid pulse with numb, cold hands might be difficult and a waste of time and **the rescuer should proceed as if this is an accident that would respond to EAR.**

In my rescue diver course I found that towing the individual, administering adequate breaths and doing all the things that the certifying agencies require is damn near impossible. This is compounded by current and wave action, distance, type of exit from the water, etc. Using a snorkel or pocket mask can facilitate the breathing – if the rescuer has these skills and the pocket mask available.

Effective EAR and chest compression (which obviously should not be attempted in the water) can be life-saving and should be tried in the unconscious diver, regardless of the cause of the injury.

Techniques should not vary between the diver who has drowned and the diver who has

been envenomated, had a seizure or become unconscious from any other source, nor should it be altered for a hypothermic diver (in whom it must never be abandoned until after re-warming has been completed).

The utility of expired-air-resuscitation (EAR) in the water, either directly or via a snorkel, is clearly debatable. Certainly there is a significant difference between conducting EAR in a swimming pool and in the ocean in this context, effective in-water EAR is only possible with continual practice in the ocean and, in general, an injured diver's best interests are usually served by protecting their airway and getting them out of the water as quickly as possible. <http://www.scuba-doc.com/dvacc.htm> .

What do you think?

Write scubadoc@scuba-doc.com

► Dr. Jolie Bookspan and her husband Sensei Paul Plevakas have been named the International Martial Arts Association Man and Woman of the Year, 2004-2005.

Jolie was named for innovative teaching in martial arts, undefeated full-contact competition record, and research that has resulted in reducing injury while increasing training capacity for military, law enforcement, and martial arts practitioners.

Jolie and Paul were named together for their devoted teaching career together, and are both International Black Belt Hall of Fame honorees.

[Dr. Bookspan](#) is a valued consultant for Diving Medicine Online.

Please visit our forum and participate by asking and answering questions, or commenting on the questions and answers. [http://scuba-doc.com/Diving Medicine/](http://scuba-doc.com/Diving%20Medicine/)

-Hyperbaric Oxygenation-

The synergistic effect of sympathectomy and hyperbaric oxygen exposure on transcutaneous PO₂ in healthy volunteers.

<http://snipurl.com/5tu5>

Links

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[Recent HBO](#)

[References](#)

HBO for Acute One-sided Deafness

Kessler R.

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<http://snipurl.com/60je>

Links

[HBO in Acute Deafness](#)

[HBO for Sudden Deafness](#)

Clinical hyperbaric oxygen therapy, wound perfusion, and transcutaneous oximetry.

Niinikoski JH.

World J Surg. 2004 Mar;28(3):307-11. Epub 2004 Feb 17.

<http://snipurl.com/60ja>

Links

[Related Articles, Medline](#)

[HBOT, JAMA Article](#)

Hyperbaric oxygen therapy for reduction of secondary brain damage in head injury: an animal model of brain contusion.

Palzur E, Vlodavsky E, Mulla H, Arieli R, Feinsod M, Soustiel JF.

J Neurotrauma. 2004 Jan;21(1):41-8.

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[Brain Injury](#)

Hyperbaric oxygen therapy for multiple sclerosis.

Bennett M, Heard R.

Cochrane Database Syst Rev. 2004;(1):CD003057.

<http://snipurl.com/60j0>

Links

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Hyperbaric oxygen therapy for chronic wounds.

Kranke P, Bennett M, Roeckl-Wiedmann I, Debus S.

Cochrane Database Syst Rev. 2004;(2):CD004123.

<http://snipurl.com/60iv>

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-Mailbox Potpourri-

DAN Unveils Revamped Research Section on Website

Divers Alert Network (DAN®) has launched a revamped version of the research section of its website that now makes it more user-friendly and up-to-date than ever before. The new Research section home page is www.DiversAlertNetwork.org/research.

It includes:

- Progress reports on ongoing projects – Studies done in the laboratory (e.g., U.S. Navy Flying After Diving) and in the field (Project Dive Exploration, also known as PDE) receive an overview of their objectives, qualifications and procedures, and names organizations and businesses who support the studies.
- Information on completed studies – The same as above, with final results added, for such projects as ascent rate, breath-hold and diabetes and diving.
- Publications database – Documents written and / or edited by DAN Research staff since 1988 can be searched by keyword, author's last name, title, category and year of publication. This bibliography includes abstracts, magazine articles, journal articles, conference papers and reports.
- Downloadable materials – Forms and brochures related to PDE, the DAN Research Internship Program and the U.S. Navy Flying After Diving study are available for printout here on PDFs.
- Staff biographies – Includes Research employees at DAN Headquarters in Durham, N.C. and adjunct staff in the anesthesiology department at Duke University Medical Center.
- News and events involving DAN Research.

In addition, the Research section now is listed within its own category (previously, it had been part of the Diving Medicine section of the website). Another new feature is a constantly updating count of participants involved in PDE dive profile collection, now standing at more than 83,000 dives.

“This revamped section required months of extensive cooperative planning, discussion and writing by the Research and IT (Information Technology) departments,” said Dr. Richard Vann, Vice President, DAN Research. “I am pleased with the results and hope all DAN Members and supporters find it a convenient and informative tool to use regarding our work.”

“We are happy to report that the new Research section on the DAN website is now live,” said Panchabi Vaithianathan, Vice President, DAN Chief Information Officer. “Research and IT worked cooperatively on this project. Specifically, I commend the efforts of Peter Winkler, Donna

Uguccioni, Jeanette Moore and Wesley Hyatt for making this happen.”

Winkler is web developer for DAN who designed and developed the look and layout of the Research section. Uguccioni, DAN Research Coordinator, and Moore, DAN Research Staff Assistant, provided the content for the section. Hyatt, DAN Senior Editorial Assistant, worked with all parties in reviewing content, spelling, grammar and syntax.

DAN is the leading recreational scuba diving health and safety organization in the world. For more information about it, visit the website at www.DiversAlertNetwork.org

Diving With Kidney stone

My wife (28yrs old) and I have been scheduled to go diving next weekend. She has recently been diagnosed with a small kidney stone. It isn't painful. She also hasn't passed the stone as yet.

Is this okay or contraindicated to diving?

Answer by Dr. Ed Kay

I am one of Dr Campbell's diving consultants. I understand that your wife has a kidney stone. I presume that she has seen a medical professional to make and confirm this diagnosis, and it would help if I knew how and why it was found. I will have to make some assumptions as I do not know how it was diagnosed, but I do understand that it is not painful. This seems to imply that the stone is up in the kidney, and a stone high up in the urinary tract tends not to hurt UNTIL it migrates down the ureter, heading towards the bladder. While it is safe to dive if one is not in pain, the presence of the stone means it could migrate at any time. The pain of a migrating stone can be severe and it can cause nausea and vomiting, and obviously could cause a diver to abort a dive. If this stone causes episodic pain, then there is a danger it may migrate and obstruct the ureter. I'm not sure you know, so I'll cover the worst case scenario. If a diver becomes acutely nauseated and vomits into their regulator, it could be fatal and there are recorded diving fatalities from vomiting into a regulator.

If your wife is experiencing episodic pain, she should not dive until the stone is passed.

If she never has had pain, and the stone was detected as a incidental finding, then I believe it is unlikely that a severe event would occur. It seems reasonable to allow diving that does not involve decompression stops (no long, deep dives). I would also not recommend going on a long trip to a remote location as she might need medical care should the stone decide to migrate. I hope that helps.

Good Luck!

More about the kidney and diving at <http://scuba-doc.com/kidprbs.htm>

Accutane and Diving

I was recently on your website and was wondering if you could answer a question for me. I am going to be getting certified to Scuba Dive in the upcoming weeks and am also contemplating taking accutane for acne. I was wondering if you could tell me any associated risks with the combination of the two, or any advise on this matter. Would it be best to hold out until I after I get certified to start this treatment?

Thank you for your time.

Answer:

Depression with suicidal tendencies is the most serious side effect of accutane. If you have not had any depressive problems prior to taking the medication - the risk would be small and apparently dose related. This would not be brought on or affected by diving. The National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMSD) says you should carefully consider the disadvantages of Accutane. In addition to being linked to birth defects, it can cause other side effects, such as:

- Inflammation of the lip and mucous membrane of the eye [diving relationship with regulator]
- Dry mouth, nose or skin [diving relationship]
- Itching [confusion with symptoms of DCS]
- Nosebleeds [diving relationship, possibly worsened by barotrauma]
- Muscle aches [be aware of confusing this with DCS]
- Photosensitivity, and rarely, decreased night vision [diving is a sun related sport activity - use adequate sun block]

Other more serious side effects include increased blood cholesterol, lipid and triglyceride levels and abnormal liver enzymes, according to the NIAMSD. Because of those side effects, doctors usually do periodic blood tests as a way of monitoring a patient.

Finally, evaluation of the risk[s] would show this to be quite small and there should be little in the way of alteration of your diving habits except for the caveats noted above. To be completely free of risks however, you might wait until you finish your certification so that there won't be any question about the drug.

- Question of the Week -

Magnets and Diving?

Question:

I have a bad back, L4 & L5 are bulging. I have found unbelievable results with magnets. A company called Nikken makes them for all parts of the body. My question is, are they safe to dive with? Will nitrogen be attracted to the spot of the magnet? How will magnets affect off gassing?

Answer:

Interesting query! I cannot find any good answers to your question. The abstract below in the Russian literature is the only one that addresses magnets and gases, and this probably would include nitrogen.

The physical mechanism of the effect of low-intensity electromagnetic radiation on biological cells
Biofizika. 1999 May-Jun;44(3):555-8.

[Article in Russian]

Emets BG.

Kharkov State University, Ukraine.

The presence of dissolved air and air in the free form (bubbles) was taken into account in the study of electromagnetic radiation on biological cells. It is shown that, upon movement in a temperature gradient field, some bubbles increase in size due to the dissolving of others and the coalescence of bubbles during collisions. As a result, the concentration of dissolved air decreases, which leads to cell responses. It is shown that the temperature gradient needed for substantial degassing can be generated by electromagnetic fields of low intensities.

Here is an interesting web page that I found concerning magnetic fields.

<http://snipurl.com/5zza>

Without more information, I cannot advise you any further about your use of the magnets in the peri-diving period. Obviously, you can wear the magnets up to the time of your dive, removing them during and for a period of time after the dive while you off gas. [See bubble coalescence reported above].

Utilize other back preserving methods, such as in water gearing up and off; asking for help during exits and avoidance of lifting, climbing and other activities that exacerbate your back pain. I have personally found that the antigravity effects of the water benefit my back problems immensely. [HNP L4, 5, S1; compression fractures T12, L1, 2, 3]

Carefully record all of your symptoms and neurological deficits so that you and a doctor can differentiate between the effects of your discs and possible DCS.

More on back problems at

- Interesting Links -

New Pages on Our Web Site

We haven't put them on line yet but we are in the process of revising our fitness to dive pages to fit a problem-oriented template. Here is an example of the problem oriented method that will be used. The example is for a cerebral hemorrhage. http://scuba-doc.com/fittodive_cerebralbleed.html

Efficacy of ice packs in the management of epistaxis [nose bleeds].

[Not so good!]

<http://snipurl.com/5ttb>

Links

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Newspaper Article about Cousteau

<http://snipurl.com/5u5e>

From Omar Sanchez, MD

The video of the **last ten minutes of Audrey Mestre** (12 -Oct- 2002) in Flash version available at :

http://www.masdebuceo.com/videos/mestre/video_mestre.swf

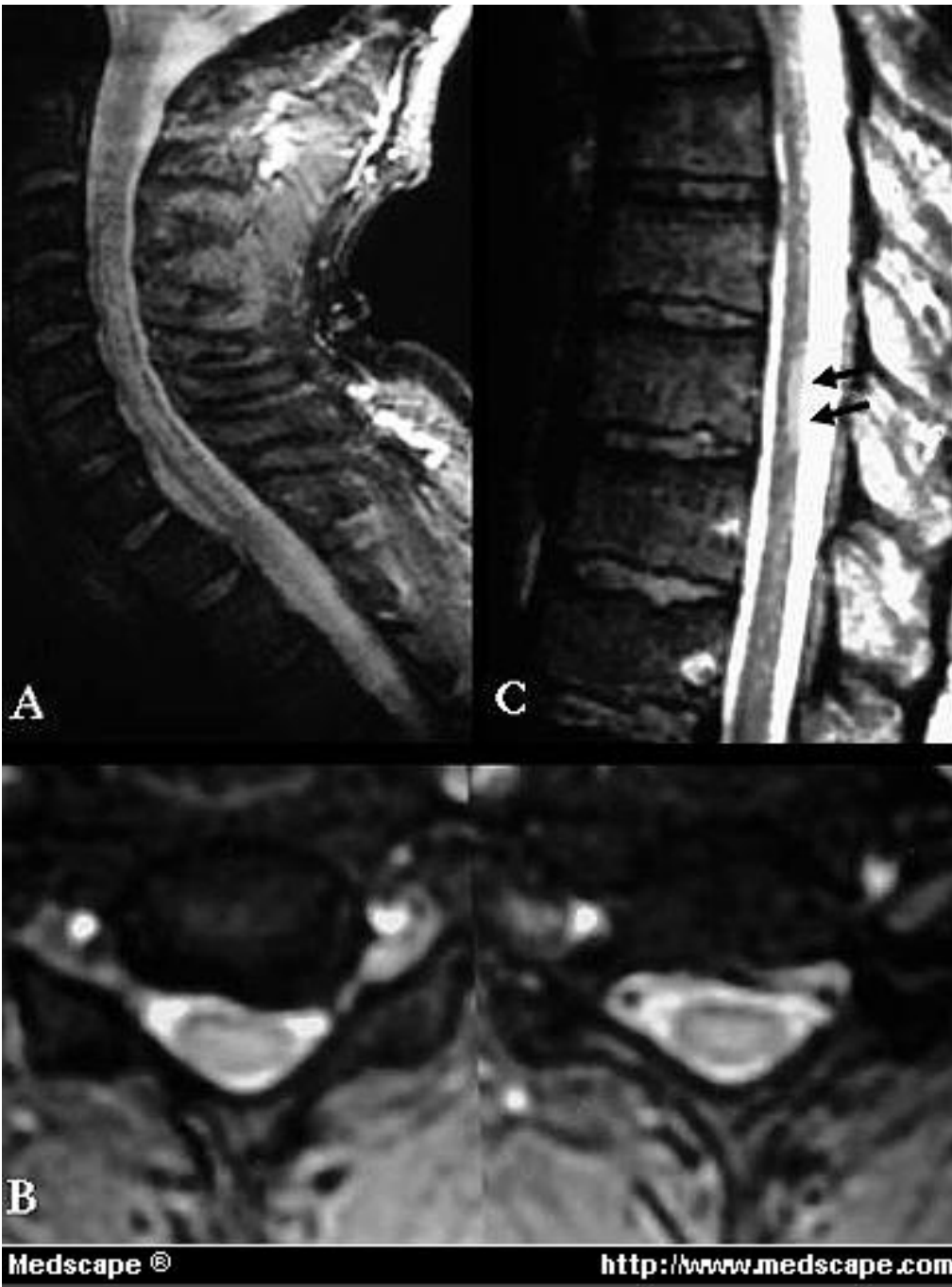
-Meetings, Courses and Conferences-

The latest news in this area can best be obtained by going to the respective web sites of the agencies involved. These are listed on our web page at <http://scuba-doc.com/meetcrse.html> .

Ed Walker writes that the British Hyperbaric Association Annual Conference Starts October 27 2004 in Grand Cayman. Very attractive flight/accommodation packages from the UK.

Further details from gerardladen@aol.com.

-Photo Quiz-



Pick the correct answer:

- a. gas embolism, brain
- b. dcs, spinal cord
- c. inner ear barotrauma
- d. demyelinating disease

Answer below.

- Cool Scuba Tip Of The Day! -

Diving after Flying and Surface Intervals at Altitude

Do you have any data on the risks associated with diving soon after long flights (6-12 hrs) at sea level and altitude?

Another question centers around surface interval times at altitude (7,000 - 10,000) versus at sea level. Do you think the standard 1hr surface interval at sea level should be extended at altitude to 2 hrs, especially with divers who usually dive at sea level? In otherwords, do you think that there is any difference at off-gasing at altitude versus sea level?

Answer:

DAN has this to say, " If there were a relationship between diving after flying and DCI, we would expect to see a great deal of decompression illness on the very first day of diving -- indeed, some data suggests that there are more accidents on the first day of a planned multiday dive trip. Of the 88 cases reviewed from the Caribbean for 1994, 33 -- or 37.5 percent -- occurred on the first day. The remainder occurred on days two through seven. Given that there are thousands of tourist divers who fly to Caribbean and Pacific dive sites, these numbers are far too small to establish a cause and effect."

<http://snipurl.com/5yqx>

Here is the answer about SI from Dr. Bruce Wienke, one of our consultants:

"

There are two answers -- one based on old Haldane stuff in these and my altitude books, and the more recent one behind the newly released NAUI altitude tables.

1) -- Haldane answer to stuff in Taylor and Ware (all out of Wienke Altitude Diving) is NO modification to SIs (only considers dissolved gas means not so good at altitude).

2) -- phase RGBM model answer to SIs is REDUCE SI by 2/3 for diving 2,000 - 6,000 ft elevation, and REDUCE SI by 1/2 for diving 6,000 - 10,000 ft elevation, as far as entering sea level Tables. Phase mod takes bubble growth into effect. This also gives more conservatism."

It might be helpful for you to read our section about flying and altitude after diving at <http://www.scuba-doc.com/flyafdv.html> . In it we have a link to the Buhlmann Altitude tables which will also help you get the information that you need about SI at altitude. It can be downloaded at <http://www.scuba-doc.com/download/balt.zip> .

Hope this is helpful!

Saba and Altitude Concerns

From the Sea Saba Website

Reprinted with permission from DAN

ULTRASONIC DOPPLER MEASUREMENT OF SPORT DIVERS AT ALTITUDE. C.J. Wachholz, R. Dunford, P.B. Bennett, Divers Alert Network (DAN), Box 3823, Duke University Medical Center, Durham, NC

-Humor-

Cajun Ghost Story

This happened about a month ago just outside a little town in the bayou country of Louisiana, and while it sounds like an Alfred Hitchcock tale, it's real.

This guy was on the side of the road hitchhiking on a real dark night in the middle of a thunder storm. Time passed slowly and no cars went by.

It was raining so hard he could hardly see his hand in front of his face. Suddenly he saw a car moving slowly approaching and appearing ghostlike in the rain. It slowly crept toward him and stopped. Wanting a ride real bad the guy jumped in the car and closed the door, only then did he realize that there was nobody behind the wheel. The car slowly started moving and the guy was terrified, too scared to think of jumping out and running. The guy saw that the car was slowly approaching a sharp curve, still too scared to jump out, he started to pray and begging for his life; he was sure the ghost car would go off the road and in the bayou and he would surely drown, when just before the curve, a hand appeared thru the driver's window and turned the steering wheel, guiding the car safely around the bend.

Paralyzed with fear, the guy watched the hand reappear every time they reached a curve. Finally the guy, scared to near death, had all he could take and jumped out of the car and ran to town. Wet and in shock, he went into a bar and voice quavering, ordered two shots of whiskey, then told everybody about his supernatural experience. A silence enveloped and everybody got goose bumps when they realized the guy was telling the truth and not just some drunk.

About half an hour later two guys walked into the bar and one says to the other:

"Look Boudreaux, ders dat idiot that rode in our car when we was pushin it in the rain."

LAST CHILD SUPPORT CHECK

Today is my daughters 18th birthday.....
I'm so glad that this is my last child support payment.
Month after month, year after year, those payments!

I called my baby girl to come over to my house, and when she got there, I said to her, "Baby girl, I want you to take this last check over to your Mama's house; you tell her that this is the last check she's ever going to get from me, then I want you to come back here and tell me the ___expression she had on her face."

So my baby girl took the check over to her. I was so anxious to hear what the witch had to say and what she looked like.

As my baby girl walked though the door, I said, "Well now .. what did she have to say?"

"She told me to tell you that you ain't my Daddy."

Hazardous Marine Life?

Rob is a commercial saturation diver for Global Divers in Louisiana. He performs underwater repairs on offshore drilling rigs. Below is an E-mail he sent to his sister. She then sent it to radio station 103.2 on FM dial in Ft. Wayne, Indiana, who was sponsoring a worst job experience contest. Needless to say, she won.

Hi Sue,

Just another note from your bottom-dwelling brother. Last week I had a bad day at the office. I know you've been feeling down lately at work, so I thought I would share my dilemma with you to make you realize it's not so bad after all. Before I can tell you what happened to me, I first must bore you with a few technicalities of my job. As you know, my office lies at the bottom of the sea. I wear suit to the office. It's a wet suit.

This time of year the water is quite cool. So what we do to keep warm is this: We have a diesel powered industrial water heater. This \$20,000 piece of equipment sucks the water out of the sea. It heats it to a delightful temperature. It then pumps it down to the diver through a garden hose, which is taped to the air hose.

Now this sounds like a darn good plan, and I've used it several times with no complaints. What I do, when I get to the bottom and start working, is take the hose and stuff it down the back of my wet suit. This floods my whole suit with warm water. It's like working in a Jacuzzi.

Everything was going well until all of a sudden, my butt started to itch. So, of course, I scratched it. This only made things worse. Within a few seconds my butt started to burn. I pulled the hose out from my back, but the damage was done. In agony I realized what had happened.

The hot water machine had sucked up a jellyfish and pumped it into my suit.

Now, since I don't have any hair on my back, the jellyfish couldn't stick to it. However, the crack of my butt was not as fortunate. When I scratched what I thought was an itch, I was actually grinding the jellyfish into the crack of my butt. I informed the dive supervisor of my dilemma over the communicator. His instructions were unclear due to the fact that he, along with five other divers, were all laughing hysterically.

Needless to say I aborted the dive. I was instructed to make three agonizing in-water decompression stops totaling thirty-five minutes before I could reach the surface to begin my chamber dry decompression. When I arrived at the surface, I was wearing nothing but my brass helmet. As I climbed out of the water, the medic, with tears of laughter running down his face, handed me a tube of cream and told me to rub it on my butt as soon as I got in the chamber. The cream put the fire out, but I couldn't poop for two days because my butt was swollen shut.

So, next time you're having a bad day at work, think about how much worse it would be if you had a jellyfish shoved up your butt. Now repeat to yourself, "I love my job, I love my job, I love my job."

- Poetry from DrSnakebelly -

explain your emotions

just when things were looking up
messengers of forgiveness
now fill me with anger
explain your emotions
without further questions
without making any more mistakes
your action will change the world
it had to end this way

it's remarkable

as i wonder where i left my brain
it begins to rain
whenever your memory is worse than mine
you keep exceeding my expectations
it's remarkable
sometimes just being alive is enough
nothing exists without you

clowns

who move by night
can't perform any more
they all steal your ideas
and surround you
it's almost time
but you announce
nothing exists without you

haiku 1

one lingering star
seems to brush against the waves
on my pilgrimage

haiku 2

as a small blue tang
tacks in the shim'ring sunlight
its eyes seem to shine

haiku 3

brightly, the half-moon
lights up the rivers of sand
...between the coral!

Let me know if you have any announcements, tips, links, articles or responses to any of the material in our newsletter.

Best regards for safe diving!

Ernie Campbell, MD, FACS

Diving Medicine Online

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DAN Physician Consultant



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Answer to photo quiz. Decompression sickness, dorsal tract, cervical spinal cord

Read More about neurological DCS

1. [Chronic Neurological Adverse Effects of Diving](#)

in divers who had DCS and in long-term divers. References /!-- Register ... no history of DCS is due to their diving ... neurological damage from DCS accidents, patent foramen ovale and

<http://www.scuba-doc.com/chrneur.htm>

2. [Long-term Effects of Sport Diving](#)

damage to the spinal cord, brain, and other tissues ... are decompression sickness (DCS) and alveolar rupture or cerebral ... affecting the brain, spinal cord, eyes, and lungs. SCUBA

<http://www.scuba-doc.com/LTE.htm>

3. [Decompression Sickness, Part I \(Medscape\)](#)

Introduction Abstract Decompression sickness (DCS) results from gas coming out of ... gas embolism (AGE). DCS, AGE, and all of their ... common complaint in DCS, especially in the elbow, shoulder

<http://www.scuba-doc.com/DCSPartI.html>

4. [Decompression Sickness Part II, Medscape](#)

Introduction Abstract Decompression sickness (DCS) results from gas coming out of ... gas embolism (AGE). DCS, AGE, and all of their ... common complaint in DCS, especially in the elbow, shoulder

<http://www.scuba-doc.com/DCSPartII.html>

5. [Online Board Preparation: Decompression Accidents: PathophysiologyII](#)

causal relationship to DCS A.) Embolic intravascular B.) Autochthonous ... tendons II. CNS DCS A.) Spinal Cord 1.) Usually has rapid ... C.) Mechanisms - Spinal Cord 1.) Punctate

<http://www.scuba-doc.com/brdprp2.html>

6. [Online Board Preparation: Decompression Accidents: Pathophysiology](#)

and decompression sickness (DCS) or alveolar rupture ("Pulmonary Overinflation ... gas embolism

[AGE]). DCS, AGE, and all of their ... recompression. However, DCS symptoms may occur after
<http://www.scuba-doc.com/brdprp1.html>

8. [Board preparation for Decompression Accidents:Treatment](#)

Medical Management of DCS and AGE Early response at ... if there is spinal cord DCS. Intubation, aggressive resuscitation and chest ... there is neurological DCS; dexamethasone 10 to 20
<http://www.scuba-doc.com/brdprpDCSrx.html>

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