

Translate This Page



German



French



Spanish



Italian



Portuguese

# Divemed/TenFoot Stop

Newsletter for November 15, 2003



---

\*This material should not be used as a basis for treatment decisions, and is not a substitute for professional consultation and/or peer reviewed medical literature.

[Newsletter Archives](#)

and

[Archives](#) [pdf]

---

## Note from Scubadoc



**Review of article, “In Harm’s Way”, by Carl Hoffman in ‘Adventure’ Magazine, September 2003, pp. 69-72, 85-86.**

While sitting in a medical office recently, thumbing through the National Geographic magazine ‘Adventure’, I was immediately intrigued by an article about the Wave Dancer disaster in Belize. For anyone who has been on another planet for the past several years – the Wave Dancer was live aboard dive operation that capsized in Hurricane Iris in October of 2001, drowning 20 divers. This was particularly interesting to me because I had spent a delightful week of diving several years ago on the Wave Dancer with my son on a Medical Seminars trip with Helen Davis. During that trip we were accompanied by Peter Hughes, with whom we had dived many times previously on Bonaire but never on any of his ship operations. As usual, his operation was run quite professionally for a group of very experienced divers. However, this was not during a hurricane, not with the same ship captain and not with the group of divers who were involved in the accident.

News reports at the time of the disaster were quite straightforward but the author, Carl Hoffman, delves deeply into the story and points out a rather complex situation that should be read and used as a warning for all divers – that the wreck of the Wave Dancer was not a single, sudden event but a chain of cascading errors by the ships captain and by the divers themselves. Not realizing the devastating power of a hurricane, they thought themselves safe in the comfort of the ship and “relied on the advice of the captain rather than their own common sense”. In many respects, the accident is comparable to a single diving accident where events are initiated by a single mistake and snowball into a life threatening disaster.

The author does a very good job of interviewing the survivors (divers and locals who were employed on the boat) and painting a word picture of a terrifying experience – one which really requires going through a hurricane to understand fully the awesome power that this force of nature applies to a relatively small area. Of course, blame is placed on all involved – from the captain on down to the divers themselves and this has resulted in some 23 lawsuits from those killed and injured.

I recommend to all of you that you try to get a copy of the article and read it – mainly for the educational value as to what you should do if ever faced with a similar situation. Living on the US Gulf Coast we are continually aware of the great risks and dangers of hurricanes – both from the wind and from the water surge. Apparently, neither the Captain of the Wave Dancer or the scuba divers themselves took seriously the warnings they received about the risks involved. Of course, this viewpoint can be disputed.

The article is printed on the Web at this address:

<http://snurl.com/2ywj>

---

Here are two more articles on our web site by Jolie Bookspan, PhD.

#### **Propulsive Lift and You**

<http://scuba-doc.com/propuls.html>

#### **Exercises for the Abs**

<http://scuba-doc.com/ExAbs.html>

---

#### **'Alcohol, Nicotine and Divers'**

Your attention is directed to the December issue of 'Dive Training' magazine, p. 37, in which there is an article of particular interest. Alex Brylske, Editor of the excellent magazine discusses the increased risks of diving in association with drinking alcohol and smoking. He provides information for divers to make reasonable decisions about their own personal habits and safety. We consider Brylske as one of the premier writers on just about any subject related to diving safety.

Information from our web site is referenced in the article.

More information about these subjects on our web site at <http://www.scuba-doc.com/alch.htm> and <http://www.scuba-doc.com/smkndvng.htm>.

---

Our thanks to DAN for sending a copy of their new publication, "**The DAN Guide to Dive Medical Frequently Asked Questions (FAQs)**". Our articles on Psychological Issues in Diving were included as Section 13, p. 159. These are reproduced on our web site at <http://www.scuba-doc.com/psych.htm>

---

## Diving Medical Examiners

We are still considering ways to set up a program for listing qualified physicians who are performing diving medical examinations. Our problem is not to set ourselves up as a qualifying agency - but only as a data bank for divers needing a physical examination. It will most likely be that we will require evidence of attendance at courses specifically directed toward 'Fitness to Dive' considerations, such as the courses offered by David Elliott, Fred Bove, DAN, the UHMS, Medical Seminars and NOAA.

Other qualified physicians, such as HSE qualified physicians, military diving officers, medical directors of hyperbaric facilities and those who have received specific diving medical training in scientific organizations will be considered. In other words - we will list you if you have some certification from a licensing agency.

I welcome your suggestions as to the methodology of getting this needed service online without experiencing any personal liability exposure.

---

Thanks for your support for our newsletter!

Best regards and good things to all!

Ernie Campbell, MD, FACS  
Ono Island, Alabama  
(scubadoc)



## Pearl of the Day!



### Oro-antral fistula

(Sinus perforation following an extraction of an upper second molar, diving?)

The following is a posting on [Scuba Board](#) which was answered by our dental consultant, Larry Stein, DDS. Published with his permission.

Question:

I'm hoping one of the great doctors on board could help:

I just had my upper tooth extracted - the one before the wisdom tooth - and the dentist said it created a hole into my sinus the size of his pinky. He said that my upper teeth have their roots inside of the sinus, with only soft tissue covering. He put 2 stitches on the site diagonally to help keep the clot in place, but said that unless miracle happens I'll need surgery to cover the hole.



I have a live aboard trip in exactly 1 month. What are my options?

Answer:

(By Dr. Larry Stein, DDS)

Sorry to hear about your problem.

The roots of the upper molar, bicuspid and, rarely, the canine teeth can border the maxillary sinus.

While the roots are usually separated from the sinuses by bone, sometimes the bone is as thin as tissue paper and on occasion, all that separates the two is the sinus membrane the Schneiderian Membrane. It a whitish, glistening membrane that is normally found surrounding the sinuses.

In infected teeth, the infection may have penetrated this membrane and nothing is between the tooth and the sinus. A difficult extraction may result in a perforation and, on occasion, broken root tips can be forced into the sinus cavity.

An extraction of such a tooth can lead to the perforation of the affected sinus. From the size of the hole that you described, my guess is that the infection had already penetrated. If the tooth was intact following the extraction, then you shouldn't have to worry about broken root tips.

A good post operative test is for the DENTIST to pinch the nose and have the patient breath out of the nose. If air or bubbles are noted in the extraction site, then there is a perforation.

If the patient notices a change in the sound of their voice, air escaping while talking, liquids draining out of their nose while drinking, they they have developed an Oral-Antral Fistula (Oro-Antral Fistula). The perforation and the fistula are actually different ... the perforation may exist but the socket heals and seals the site. Only when the site communicates into the mouth is it a fistula.

Post operative instructions usually consist of warnings about blowing one's nose hard, blowing the nose with both nostrils open, opening the mouth during a sneeze. In addition, in the event, as yours, of a perforation, it is wise to go onto an antibiotic and a decongestant.

Should a fistula develop, the site must be closed by swinging a flap of skin from the surrounding area and covering the opening.

Most small perforations occurring during surgery will close spontaneously if you are careful. A large one like yours can be packed with Gelfoam or a Collaplug, sutured and actually has a good chance of closing.

If an actual fistula forms, this is more difficult to close and I would recommend an oral surgeon. Getting a fistula to close secondary to surgery can be more difficult. Follow all post operative instructions carefully.

As far as diving, first, the fistula must be closed and second, soft tissue and/or bone must start to fill the site.

I would certainly expect an minimum of 6 weeks for a successful closure before starting to dive again. You don't want to be forcing air into the sinus during a dive and risk blowing out the sinus. You also don't want to reintroduce oral contents into the sinus.

If you had a successful post extraction closure, then you will be very close on this one. I cannot recommend that you dive. Your doctor should evaluate the site and repeat the x-ray before clearing you for your dive trip. Your sinuses should also be symptom free as well.

Good luck. Feel free to ask more questions.

Laurence Stein, DDS

---

## '?' Question of the Week



### Diabetes and Diving

In your lead item in the November 1 Divemed/Ten Foot Stop Newsletter, you mention diabetes as a contributing factor in dive accidents. Could you explain this in further detail in a future newsletter? My son, who has his AOWD rating, is an insulin dependent diabetic. My research since he has been certified leads me to believe that with careful blood glucose management (e.g., the DAVI protocol) there is no significant additional risk from his diabetes. Am I wrong?

Answer:

You're right that careful management of blood sugar is important and vital to the well-being of a diver.

There are many factors involved and these are set out on my web pages at

[http://www.scuba-doc.com/endmet.html#Diabetes\\_and\\_Diving](http://www.scuba-doc.com/endmet.html#Diabetes_and_Diving) .

Of course, the major risk is from decreased consciousness from low blood sugar while underwater- leading to other risk factors such as drowning and pulmonary barotrauma while ascending in that state.

DAN (Divers Alert Network) suggests that some diabetics may dive safely in controlled settings. The Diabetes and Diving Committee of the Council on Exercise of the American Diabetes Association notes that there are currently a substantial number of diabetics, in the United States and elsewhere, who dive. Here are some criteria for diving with the condition:

- good control of blood glucose levels
- freedom from severe secondary complications of diabetes (eyes, kidneys, blood vessels)
- an understanding of the relationship between the disease and exercise

Diabetics who shouldn't dive are those who:

- have had a serious hypoglycemic episode within the past 12 months
- have advanced secondary complications of the disease
- have poor control of their blood sugar

- are unaware of the early warning signs of hypoglycemia
- lack insight into the relationship between diabetes and exercise

British recommendations are similar, though more rigorous. A questionnaire must be filled out by the prospective diver, and a separate one completed by the diver's physician. In addition, the [UK Sport Diving Medical Committee](http://www.uksdmc.co.uk/standards/Standards-%20diabetes.htm) have developed guidelines concerning what additional gear and supplies diabetic divers should carry, and proposes a pre- and positive plan in order to minimize risks.

<http://www.uksdmc.co.uk/standards/Standards-%20diabetes.htm>

One should not take oral medication the night before or day of planned SCUBA dives, unless directed to do so by the diver's personal physician. In addition, one should not be taking other medication that might have a hypoglycemic (low blood sugar) effect, such as beta blockers. Prolonged low blood sugar is the very real danger with oral hypoglycemics. Hyperglycemia (high blood sugar), although important over a several day period, would not be of major concern while omitting the drugs for diving.

The YMCA has an extensive diving protocol for [diabetic scuba divers](http://www.ymcascuba.org/ymcascub/diabetic.html). It carefully differentiates the divers with mild diabetes and those with frequent changes in blood sugar levels and hypoglycemia.

<http://www.ymcascuba.org/ymcascub/diabetic.html>

Here is information for contact sources for the YMCA:

YMCA of the USA  
SCUBA Program  
101 N. Wacker Drive  
Chicago, IL 60606  
(800) 872-9622  
(312) 977-0894 fax  
E-Mail: [scuba@ymca.net](mailto:scuba@ymca.net)

Best regards and good things!

---

## Hyperbaric Oxygenation

[ <http://scuba-doc.com/hbo.html> ]



Here are a series of recent Medline citations concerning HBOT, cytokines, macrophages, tumor necrosis factor and hematopoietic apoptosis

[Benson RM](#), [Minter LM](#), [Osborne BA](#), [Granowitz EV](#). Hyperbaric oxygen inhibits stimulus induced proinflammatory cytokine synthesis by human blood derived monocyte-macrophages.  
Clin Exp Immunol. 2003 Oct;134(1):57-62.



[Lahat N, Bitterman H, Yaniv N, Kinarty A, Bitterman N](#). Exposure to hyperbaric oxygen induces tumour necrosis factor alpha (TNF-alpha) secretion from rat macrophages.  
Clin Exp Immunol. 1995 Dec; 102(3):655-9.

[Ganguly BJ, Tonomura N, Benson RM, Osborne BA, Granowitz EV](#). Hyperbaric oxygen enhances apoptosis in hematopoietic cells.  
Apoptosis. 2002 Dec; 7(6):499-510.

---

### **New England Journal of Medicine article on HBO and Carbon Monoxide**

Conclusions Three hyperbaric oxygen treatments within a 24hr period appeared to reduce the risk of cognitive sequelae 6 weeks and 12 months after acute carbon monoxide poisoning. (Full article)


<http://snurl.com/carbonmonoxide>

### **The Database of Randomised Controlled Trials In Hyperbaric Medicine**

<http://www.hboevidence.com/>

---

## **Interesting Links**

 **Want to take off and escape your stressful medical practice?** How about a tropical island, studying the reefs and providing medical care for divers and scientists? Check into this by visiting this web site:

<http://www.coralcay.org/>

Coral Cay Conservation's award winning program of reef and rain forest expeditions. Real adventure, real science, real results.

- \* Adventure – dive uncharted coral reefs; trek through virgin jungle.
- \* Science – record rare species, map coral islands.
- \* Results - help create World Heritage Sites, marine reserves, wildlife sanctuaries.

You pay your way there and they provide room, board and a medical kit. **See this article in the British Medical Journal:**

<http://snurl.com/coralreef>

---

### **Sjogren's Syndrome**

There is an article in the ADA News, "UCSF to study Sjogren's Syndrome", that might be of interest.

Patients with Sjögren's Syndrome, in which the immune system attacks the salivary and lacrimal (tear) glands, may soon participate in a  
<http://scuba-doc.com/nl111503.html> (7 of 14) [11/14/2003 7:10:41 AM]

five nation study on the chronic disease. The University of California at San Francisco School of Dentistry will establish an international registry network to study the immunologic disorder. Four clinics outside the U.S. will participate.

<http://snurl.com/Sjogren>

See also our web page on Sjogren's syndrome and diving at <http://www.scuba-doc.com/sjogren.htm> .

---



### **The management of tinnitus (in PDF format)**

Name of Journal: New Zealand Family Physician

Brief Summary: Seventy-nine per cent of people with tinnitus obtain their first information about it from their family doctor. The information they receive at this consultation can be a contributing factor to whether their tinnitus becomes a significant problem or a minor annoyance. <http://snurl.com/tinnutis>

---



### **Another article on the treatment of tinnitus with ginkgo.**

Name of Journal: New Zealand Family Physician

Title of Article: Patient Oriented Evidence that Matters (POEMs)

Brief Summary: This month's POEMs provide good evidence that antioxidants are not effective in preventing heart disease, that paroxetine is useful for menopausal flushes (menopausal flashes just doesn't sound right to an antipodean) and they hammer another nail into the coffin of long-term HRT. We have also included a POEM, with not quite the same high level of evidence, on treating tinnitus with ginkgo

<http://snurl.com/ginkgo>

---



### **Impulsive behavior and barometric pressure?**

Does this mean that an increase in pressure causes a decrease in impulsive behaviors? Don't be too hasty.

Name of Journal: Canadian Journal of Psychiatry

Title of Article: Barometric Pressure, Emergency Psychiatric Visits, and Violent Acts

Brief Summary: Conclusions: While alternate conclusions can be drawn, we propose that the data support the interpretation that low barometric pressure is associated with an increase in impulsive behaviours. Additional investigation is warranted

<http://snurl.com/2yqy>

---



### **Does your dive boat have an AED?**

Name of Journal: Yahoo/Reuters



## Title of Article: Defibrillators Save Lives in Health Clubs

Brief Summary: Health clubs that have a defibrillator and properly trained personnel can dramatically reduce the risk of death from sudden cardiac arrest for their members. A yearlong study of 76 health clubs in Great Britain that had automated external defibrillators (AEDs) found that using the devices along with cardiopulmonary resuscitation (CPR) saved the lives of six of eight people who suffered sudden cardiac arrest

<http://snurl.com/defibrillator>

---

## Mailbox Potpourri



### UHMS VOTING MEMBERS:

Below you will find our Nominations form for Officers.

If you would like to use the online form, the link is as follows: <http://snurl.com/UHMSvote>

DEADLINE FOR SUBMISSION IS FEBRUARY 20, 2004.

If you have any questions, or problems, please contact me.

Sincerely,

Lisa Wasdin  
UHMS

---



### Foot Protection from stingray injury?

I was searching the web for info on sting rays, and found your sit. My interest in sting rays began on Oct. 12th when I met one up close and personal! He introduced himself with a pointed announcement!

I'm not a diver, I'm a surfer, and this meeting has put me out of action for the last 4 weeks. I'm now painfully aware of how much damage these things can do. I have been trying to found out all I can about rays in general, and sting rays in particular since this meeting. So far I have found out very little, other than about the wounds they can inflict and how to take care of it.

I have been trying to figure how to come up with a surf bootie that will give protection from the sting. What an under statement, "sting",

it's more like getting stabbed with a serrated edge steak knife, and the infection, man it damn near put me in the hospital! People make light of stings from a sting ray, but it's damn serious!

Well what I'm looking for is info that will help me figure out what I'm up against, and how to stop the barb from penetrating. What does the barb look like ? What is it made of ? How sharp is it ? How much force can it be driven with ? What kind of material can stop it ? Will hard neoprene, like the stuff used for the soles of booties stop it, or should I be thinking "kevlar"?

Well thank you for your consideration,

Answer:

No tests have been done to answer your queries about force, etc. Hard neoprene might do the trick - depending on the angle of strike, size of the stingray, location on the ankle or foot. The stingray barb is hard and covered by a sheath of proteinaceous material. It is this material that causes the problem if not removed.

Armortex makes a Kevlar wading boot - but it's a clunker and would probably not suit your purposes. <http://snurl.com/2yt6>

Another set of boot waders made from neoprene and Kevlar might be adapted at <http://snurl.com/2yt5>

The best remedy is to shuffle your feet as you walk in the sand.

Here is a picture of a barb. <http://www.emedicine.com/aaem/topic421.htm>

Hope this is helpful!



## **DCS in space, bubbles**

Dear Dr. Campbell,

Being one more "colleague", diver and hyperbaric physician, I'd like to express my sincere congratulations for your excellent site.

It was a great help, both in educational and in treatment / prevention scuba related accidents.

I'm interested in DCS appearance in astronauts, under no gravity circumstances, and I wonder if you may propose any studies or links for "bubbles" (silent or active) behavior, circulation or detection in lack of gravity.

Please remind me also, if, there are any reports for the bubbles size detection, through Doppler, in arterial or venous circulatory system. in any of your previous letters.

Thank you in advance

Answer:

Thanks for your kudos and nice words!

Here are a series of Medline References that will lead you too some of your answers.

Decompression sickness in space.

<http://snurl.com/2ys8>

<http://snurl.com/2ysb>

<http://snurl.com/2ysc>

Bubbles

<http://snurl.com/2yse>

---



### **Question re Nitrogen Narcosis**

I am currently a Marine Biology student at the University of Miami. A research project is due for the class at the end of the month and I am most interested in writing about nitrogen narcosis and how it affected early scientific diving. I want to get at least three solid examples of how nitrogen narcosis affected the results of an experiment during a dive. I want to then talk about the evolution and need for mixed gasses to help prevent narcosis. My problem is that I only found one type example and it is very vague. I have searched the internet for the past week now and I am coming short of my goal. I was wondering if you knew of a source for the specific information I am looking for.

Answer:

Haldane made some early experiments as described here:

<http://snurl.com/haldane>

Recovery of the USS Squalus was complicated by bouts of N2 narcosis.

Prompted the use of mixes of gases.

<http://snurl.com/Squalus>

<http://www.cisatlantic.com/trimix/other/squalus.htm>

<http://snurl.com/Momsen>

Deep Thoughts, from Alert Diver

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

Here are some Medline citations:

<http://snurl.com/2yul>

## **Meetings, Conferences and Courses**



Meetings, courses and conferences on our web page

<http://scuba-doc.com/meetcrse.html>





Temple University Underwater Medicine  
2004 Schedule of Educational Trips  
<http://www.scubamed.com/educ.htm>

---



Journe'es Internationale de Medicine d'Urgence du Pacifique  
[www.urgences-polynesie.pf](http://www.urgences-polynesie.pf)  
[www.emergency-tahiti.com](http://www.emergency-tahiti.com)

"2nd International Meeting of Emergency Medicine in the Pacific region"  
**23 to February 25 2004 in TAHITI**

**Dr Yann TURGEON**

**Président de l'association A.P.A.M.U.**

**BP 111.180**

**98709 Mahina**

**Tahiti**

**Polynésie française**

**[info@urgences-polynesie.pf](mailto:info@urgences-polynesie.pf)**

**Internet site in English on [www.emergency-tahiti.com](http://www.emergency-tahiti.com)**

**It will be possible to subscribe on our newsletter to regularly receive last information on the organization of the congress:**

**[www.emergency-tahiti.com/newsletter.php](http://www.emergency-tahiti.com/newsletter.php)**

\*\*\*\*\*



Preliminary Notice, SPUMS Meeting

SPUMS 2004

Annual Scientific Meeting

Noumea -New Caledonia

Venue - Le Meridien Noumea

May 30th – June 6th 2004

Dr Guy Williams

P.O. Box 190

Red Hill South, Victoria, 3937 AUSTRALIA

Tel +61 3 59811555

Fax +61 3 59812213

[guyw@surf.net.au](mailto:guyw@surf.net.au)



UKSDMC meeting, "Diving Medicine 2003" to be held 27th-28th November. This will be hosted by London Hyperbaric Medicine and the Whipps Cross Hospital and will be a joint conference of the UK Sport Diving Medical Committee and the Institute of Naval Medicine. The conference will be of interest to all involved in diving medicine particularly those involved in the assessment of fitness to dive.

Those interested can contact Dr. Phil Koczan, at Churchill Medical Centre, [phil@churchillmedicalcentre.co.uk](mailto:phil@churchillmedicalcentre.co.uk) or London Hyperbaric Medicine at the Whipps Cross Hospital, Phone numbers. Telephone +44 208 539 1222 and fax is +44 208 539 1333.

---



MAPS Diving Certification Board invites commercial divers and diving experts to take part in the next Underwater Safety Technologies Issues, which will be held November 24-28, 2003, at MAPS Diving Center in St-Petersburg, Russia.

For information and registration contact Chairman:

Prof. K.Logunov, M.D., Ph.D., Dr.Sci., at +007-812-2516152; fax +007-812-2512385

or e-mail to: [divemed@maps.spb.ru](mailto:divemed@maps.spb.ru) ; or to: [genpr@maps.spb.ru](mailto:genpr@maps.spb.ru)

---



#### Undersea and Hyperbaric Medical Society Annual Scientific Meeting 2004

The Undersea and Hyperbaric Medical Society (UHMS) are holding their 2004 Annual Scientific Meeting in Sydney from Tuesday 25th May to Saturday 29th May 2004.

The Hyperbaric Technical Nurses Association (HTNA) Conference will run concurrently with the UHMS Annual Scientific Meeting on Thursday 27th May 2004.

The Meeting is being held at the Four Seasons Hotel Sydney – formerly known as The Regent, superbly situated right in Sydney Harbour historic Rocks area. The Four Seasons Hotel Sydney is only a short walk from Sydney's major shopping and business districts and affords dramatic views of the famous Opera House and Sydney Harbour Bridge.

The Conference Program will feature a number of outstanding local and international speakers, concurrent sessions, poster presentations and site visits around the Sydney area. The Conference attracts researchers and practitioners from all around Australia and overseas and provides a wonderful opportunity to meet and extend contacts.

For more information on the UHMS Annual Scientific Meeting or the HTNA Conference, please visit the conference website [www.iceaustralia.com/uhms2004](http://www.iceaustralia.com/uhms2004) or contact the conference organizer ICE Australia on (+61-2) 9544 9134 or email: [uhms@iceaustralia.com](mailto:uhms@iceaustralia.com)

---

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

Sign up to receive Humor from scubadoc!

[http://mail.scuba-doc.com/mailman/listinfo/humor\\_scuba-doc.com](http://mail.scuba-doc.com/mailman/listinfo/humor_scuba-doc.com)

Best regards for safe diving!

Ernie Campbell, MD, FACS

Diving Medicine Online

<http://scuba-doc.com>

[scubadoc@scuba-doc.com](mailto:scubadoc@scuba-doc.com)

DAN Physician Consultant



Ernest Campbell, MD

scubadoc

---

Diving  
Medicine  
Online

Updated regularly  
Online Q & A

---

[DiveMed Email Logon](#) || [Newsletter](#) || [Websearch](#) || [Medline](#) || [Bookstore](#) || [Conferences](#) || [Email Us](#) || [Contact Us](#) || [Glossary](#) || [Dictionary](#) || [Translate](#) || [Links](#)