



# UNDERCURRENTS

Newsletter of the Bluegrass Dive Club / [www.bluegrassdiveclub.com](http://www.bluegrassdiveclub.com)

August 2016

Volume 46, Number 08

## August Club Meeting

**Date:** Tuesday, August 9th  
**Time:** 7:30-PM (business)  
Social at 7  
**Location:** The Racquet Club  
3900 Crosby Rd.  
**Program:** St. Lucia Trip; Doug Geddes and Tracey Combs

## President's Message

*By Tracey Combs*



Summer is almost over, but there is still some great weather for diving and of course getting together with your fellow divers.

Our Annual Pig Roast will be Saturday, August 13th, 4:00 pm at Mike and Sherry McCann's home. Bring your chair, swim suits and your game face for the volleyball match. Please bring a dish to share with 10-12 people. The pig and sodas will be provided by the Club. Details and directions are available on the website.

We have some great new trips up on the website. Make sure you check them out and sign up today. If you are interested in joining the Dive Trip Committee, please contact Doug Geddes or me. If you have any suggestions for upcoming trips, please let us know!

Our next meeting is at the Racquet Club on August 9th. Everyone is welcome. 🚩

## The Editor's Notes

*By Bart Bertetto*



Hi everyone. Well, you might be wondering what happened to the July newsletter. Well, it was never issued and I apologize for that. I've included July's meetings minutes in this issue so there is no gap there. I was on a month long 10,000 mile motorcycle trip to Alaska and back. Now that I'm back in the real world, of course I'm thinking about diving!

Sounds like the St. Lucia dive trip was awesome and on a beautiful isle. Thanks to Doug Geddes for the nice write-up and photos. I'm setting my sights on an upcoming trip to relax, dive, and hangout with the club in the wonderful Caribbean. Join us. Cheers 🚩



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## 2016 BGDC Officer's

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Tracey Combs, President	621-4066
Corrine Mulberry, Vice President	913-0892
Mike Sullivan, Secretary	266-4516
Dan Miller, Treasurer	948-5133
Doug Geddes, Trip Director	621-3178
Rick Stephan, Safety Info Dir.	223-3719
Mike McCann, Webmaster	255-3937
Bart Bertetto, Newsletter Editor	502-299-3656



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## Vice President's Report

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*By Corrine Mulberry*



**Program:** August Program will feature underwater and topside photos from the recent trip to St. Lucia. Hearty thanks to Doug Geddes and Tracey Combs for the program - much appreciated!

If you have diving information that you would like to present at a Club meeting (past or potential dive trip, etc.), I would love to hear from you. Please contact me so that we can put you on the calendar. 913-0892 or mulberry1@gmail.com

**Nominations for BGDG Officers (2017):** It's that time again. Please take a few moments to think about the upcoming nominations for calendar year 2017. Perhaps you or someone you know might be interested. Elected positions include:

- President
- Vice President
- Secretary
- Treasurer
- Trip Director
- Safety Information Director
- Newsletter Editor
- Webmaster

All elected positions are open to nominations.

**We are particularly recruiting for the Webmaster position!** After many years of dedicated service, Mike McCann really (REALLY) wants to turn over the reins. [This is the exact same sentence from the 2015 newsletter. Please....anyone?] If you have web experience and would like to contribute to the Club (as well as earn Dive Bucks that you can apply towards trips), please contact me or



Mike McCann. We can fill you in on details about the position and what the Board does.

Our President, Tracey Combs, is in the process of appointing a Nominations Committee to develop a slate of proposed nominees for elected Board positions. The slate will be presented to the Board in October and members will vote during the regular November meeting. If you are interested in learning more about elected positions, or have any thoughts, ideas or suggestions for potential nominees, please contact the Nominations Committee Chair, Corrine Mulberry, at [mulberryc1@gmail.com](mailto:mulberryc1@gmail.com) (859-913-0892).

Nominees for elected positions must be in good standing (dues paid), have been a member for at least one full year and be at least 21 years of age. 🚩

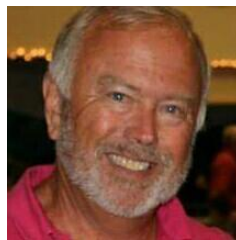


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## Trip Director's Report

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*By Doug Geddes*



### ST. LUCIA (COMPLETED)

ST.LUCIA was better than expected. The diving in the marine park rivals anywhere in the Caribbean. Lots of small critters and large barrel sponges. Coral was very healthy in most places and is even being grown. Dive operation was very easy to work with and the dive guides were very friendly and good at their jobs. The resort was about what we expected but had no air conditioned rooms; we did have fans that helped most nights. The climb up and down the hill sometimes was a challenge if you didn't want to wait for the shuttle, but still wasn't that bad. In all, it was one of my best experiences overall in the Caribbean in a long time. Similar to Dominica but a more secluded.

### ROATAN 2016

We have 10 people so far on this late addition trip in September. This is a buy one get one free diver opportunity. You have to make a \$200 non-refundable deposit in order to book this trip. Check it out on our website and get your reservation in ASAP. We only booked 5 rooms, but may be able to get more, but they might not have AC.

### CAYMAN 2016

We now have 4 persons that have committed to this November trip to the East side of Grand Cayman. This has been one of our favorite dive locations, but we are doubling it with Pirate Fest week. Go to the website and check it out and sign up if you have an interest.

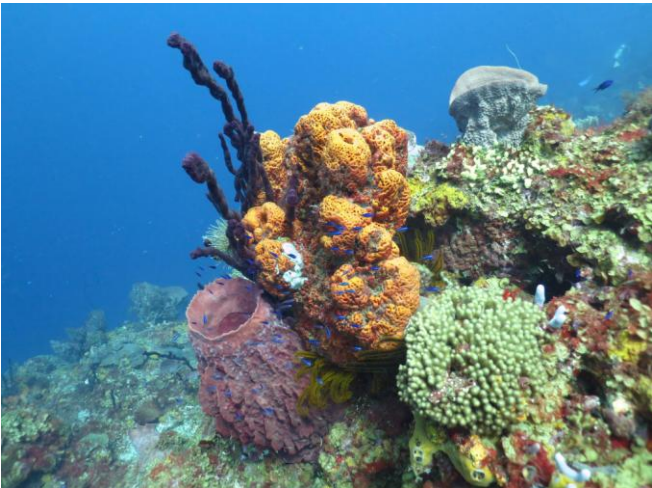
### DOMINICA 2017

Our website will be updated to include this Feb. 4-11, 2017 dive trip. We went there in 2012 and had a great experience and decided to

return rather quickly. We will be staying at Fort Young Hotel right in the middle of town. The dive operator that services the hotel is Buddy's Diving (Bonaire) We have decided not to combine a side trip to Saba due to lack of interest and the availability of the resort we wanted to use.

**AFRICA 2018**

Yes, we are still working on this fabulous trip and are getting closer to a final itinerary and pricing. Once we get it resolved we will get in posted on our website. Start saving today for this trip of a lifetime 🚩



**From the Treasurer**

*By Dan Miller*



**2016 Membership Dues**

- Student (High School or College ID) ...\$10.00
- Single & Family (1 diver) .....30.00
- Family (non divers).....30.00
- Family (2 or more divers) .....40.00

**Renewal:** Please send payment to the address listed below, please make sure there is a correct indication of your mailing address, phone number and it is very important to indicate an email address.

**Contact / Mail to:** Bluegrass Dive Club c/o  
Dan Miller  
824 Gunpower Drive  
Lexington, KY 40509

**New Members:** Visit the website to fill out an on-line form or to access a Microsoft Word printable form. [CLICK HERE](#). 🚩





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## From The Secretary

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*By Mike Sullivan*



### General Meeting Minutes June 14, 2016

- I. CALL TO ORDER 7:35 PM
  - a. Tracey is absent and Corrine is acting as President tonight.
  - b. There are 17 members present.
- II. OFFICERS AND DIRECTORS REPORTS:
  - a. TREASURER MILLER
    - i. Treasurer's Report for April and May.
    - ii. The Bonaire trip is closed-out.
  - b. VICE PRESIDENT MULBERRY
    - i. Corrine thanked Doug and Susan for hosting the Derby Party.
    - ii. Corrine thanked Lynn Thomson for the Derby betting pots.
    - iii. Door prizes were won by John Geddes, Jim Freudenberger, and Shannon Gahafer.
  - c. SECRETARY SULLIVAN
    - i. No Comments.
  - d. TRIP DIRECTOR GEDDES
    - i. Absent.
    - ii. A return trip Roatan is planned for September with the 2 for 1 special. The current airfare is approximately \$863
    - iii. The Grand Cayman trip 12 – 19 November 2016 still has plenty of slots open for members.


- iv. The Saba/Dominica trip is scheduled for 4-14 Feb 2017.
- v. The trip committee is looking at a possible trip to Tobago for May 2017.
- vi. The trip committee is looking at a possible trip to Belize in September or October 2017.
- vii. The Club is in the early planning for a trip to Africa in May 2018. One week would be on a safari in Tanzania, and one week diving on the island of Zanzibar. Details will be furnished later.
- e. WEBMASTER McCANN
  - i. Absent
- f. NEWSLETTER ED BERTETTO
  - i. Absent
- g. SAFETY INFO DIR STEPHAN
  - i. The article this month is about dive safety, buoyancy, and trim.
- h. PRESIDENT COMBS
  - i. A DVD of the 2016 BGDC trip to Bonaire was presented by Stephanie Swope.
  - ii. The Pig Roast will be held on August 13, 2016 at Mike & Sherry McCann's house at 3557 Gloucester, Lexington . See website for directions.

ADJOURNMENT 8:35 PM



**Board of Directors Meeting Minutes  
June 28, 2016**

- I. CALL TO ORDER COMBS
  - a. Meeting began at 7:49 PM
- II. APPROVAL OF AGENDA McCANN
- III. OFFICERS AND DIRECTORS REPORTS:
  - a. TREASURER MILLER
    - i. Treasurer's Report as of 6-28-2016.
    - ii. Trip Refunds go out this week for members that went to St. Lucia.
    - iii. Check is going out for Dominica Deposit
  - b. VICE PRESIDENT LOWE
    - i. The program for July is the Club Social to begin at 6:00 PM.
    - ii. August program is St. Lucia DVD courtesy of Doug & Tracey.
    - iii. September program is the Swap Shop.
    - iv. October program is a promotional video of some future dive destination.
    - v. November program is the Club Elections.
    - vi. December program is the Club Christmas Party.
  - c. SECRETARY SULLIVAN
    - i. No comments.
  - d. TRIP DIRECTOR GEDDES
    - i. The Roatan trip currently has 8 people.
    - ii. The Cayman trip has 4 people paid.
    - iii. The Dominica trip will be up on the website shortly, 4-11 Feb 2017.
    - iv. Since the Saba trip is tacked-on after the week in Dominica, Saba has been deleted since it is only 3 days of diving.

- v.
- vi. A trip to Belize is being considered for the Fall of 2017.
- vii. A safari trip to Tanzania and a week diving on Zanzibar is being considered for 2018.
- viii. A Trip Committee Meeting is scheduled for August 16, 2016.
- ix. Doug reports the St. Lucia trip was awesome and enjoyed by everyone. The diving was great.
- e. SAFETY INFO DIR STEPHAN
  - i. The article will be about drug interactions and diving.
- f. NEWSLETTER ED BERTETTO
  - i. Absent
- g. WEBMASTER McCANN
  - i. The Dominica Trip will be on the website shortly.
- IV. NEW BUSINESS COMBS
  - a. The Club Pig Roast will be August 13<sup>th</sup> at the McCann's House.
- V. MEETING ADJOURNED AT 9:28 



**General Meeting Minutes  
July 12, 2016**

- I. CALL TO ORDER 7:35 PM
  - a. There are 20 members present.
- II. OFFICERS AND DIRECTORS REPORTS:
  - a. TREASURER MILLER
    - i. Dan is absent
    - ii. Tracey indicated that the current balance is \$18,930.13.
  - b. VICE PRESIDENT MULBERRY
    - i. A DVD presentation of the St. Lucia Trip was shown courtesy of Doug and Stephanie.
    - ii. Door prizes were won by Gwen Neace Clancy, Doug Geddes and Alex Fassas.
  - c. SECRETARY SULLIVAN
    - i. Absent
  - d. TRIP DIRECTOR GEDDES
    - i. A return trip Roatan is planned for September with the 2 for 1 special. The current airfare is approximately \$863.
    - ii. The Grand Cayman trip 12 – 19 November 2016 still has plenty of slots open for members.
    - iii. The Dominica trip is scheduled for 4-11 Feb 2017.
    - iv. The trip committee is looking at a possible trip to Tobago for May 2017.
    - v. The trip committee is looking at a possible trip to Belize in September or October 2017.
    - vi. The Club is in the early planning for a trip to Africa in June 2018. One week would be on a safari in Tanzania, and one week diving on the island of Zanzibar or Pemba. Details will be furnished later.

- e. WEBMASTER McCANN
  - i. No Comments
- f. NEWSLETTER ED BERTETTO
  - i. Absent
- g. SAFETY INFO DIR STEPHAN
  - i. The article this month is about drugs and diving
- h. PRESIDENT COOMBS
  - i. The Pig Roast will be held on August 13, 2016 at Mike & Sherry McCann's house at 3557 Gloucester, Lexington at 4:00 PM. See website for directions
  - ii. A committee will be formed to solicit nominees for the Club Board Positions in November
  - iii. The Trip Planning Committee will meet August 16<sup>th</sup>

ADJOURNMENT 8:35 PM





## Board of Directors Meeting Minutes July 26, 2016

- I. CALL TO ORDER COMBS
  - a. Meeting began at 7:00 PM
- II. APPROVAL OF AGENDA GEDDES
- III. OFFICERS AND DIRECTORS REPORTS:
  - a. TREASURER MILLER
    - i. Absent
    - ii. Tracey has the receipts for the Club Social.
  - b. VICE PRESIDENT MULBERRY
    - i. Absent
  - c. SECRETARY SULLIVAN
    - i. No comments.
  - d. TRIP DIRECTOR GEDDES
    - i. The Roatan trip currently has 10 people.
    - ii. The Cayman trip has 4 people paid.
    - iii. The Dominica trip will be up on the website shortly, 4-11 Feb 2016.
    - iv. A trip to Belize is being considered for the Fall of 2017.
  - e. SAFETY INFO DIR STEPHAN
    - i. Absent
  - f. NEWSLETTER ED BERTETTO
    - i. Absent
  - g. WEBMASTER McCANN
    - i. The Dominica Trip will be on the website shortly.
- IV. NEW BUSINESS COMBS
  - a. The Club Pig Roast will be August 13<sup>th</sup> at 4:00 PM at the McCann's House. See the website for directions.
  - b. Corrine will coordinate the Nominating Committee activities for the November election.
  - c. The trip planning committee will meet on August 16<sup>th</sup> at 6:00 PM.
- V. MEETING ADJOURNED AT 7:31

## Safety Corner

By Rick Stephan



*Remember, safe diving is fun!*

**Note:** This month's article is from DAN. Due to my recent (bad) experience with a supposedly docile and harmless medication, I thought this might be a good time to revisit potential problems with medications and diving.

I remember on the Truk trip someone had a symptom of something, and pretty much half our crew jumped up and said "I've got some medication for that!" Well, we all know the bad experiences of giving up dives due to a cough or stopped up nose. We even sometimes get a prophylactic dose of antibiotics to avoid some mean bugs at our destination, that we are very susceptible to catching.

So, what is safe, what is not? What can you mix? I'm not a doctor nor a pharmacist, so I can't answer the questions. (Actually, without proper information, even a doctor on your dive trip is probably not qualified to answer them, as each of us may react differently.) This article goes over some types of often used drugs, and gives some insight. Be aware, but also ask your own physician to get the best answer for your own personal situation.

Make sure you are safely using your medications, understand the potential problems of taking them and diving, and remember that alcohol is another drug to take into account. Be safe above and below the surface. Remember, safe diving is fun!

### Taking medications when you dive

#### If You're Using Any Medication, Make Sure You're Informed About Drugs and Diving Before You Take the Plunge

By Bryan G. Levano, M.S., R.Ph.

This article addresses some of the more common questions divers have about medicating minor ailments experienced during scuba diving. It is not meant to serve as a replacement for consultation with a healthcare provider. In all situations, readers should follow



the labeled instructions of the medication they are taking. The information presented here assumes the diver has no serious medical condition and is fit for diving activities. Address specific questions to your physician, pharmacist or DAN. Some generic names and chemical names may differ in other countries. The names presented in this article are in accordance with to the United States Pharmacopoeia nomenclature system.

At times divers may experience some form of discomfort - dizziness, diarrhea, an upset stomach, nasal congestion, headache - which can interfere with the enjoyment of a dive. Over-the-counter products (OTCs) are often the most immediate source of relief available to them.

OTCs are medications designated by the U.S. Food and Drug Administration as safe for the short-term treatment of ailments that can be self-diagnosed by the consumer. However, with literally hundreds of products available to consumers, the choice of the best agent is often a difficult one. The active ingredient available in a manufacturer's proprietary product may also be in many other preparations as well.

To add to the confusion, many products combine two or more agents to relieve multiple symptoms, as we often see on cold and allergy products.

The most common OTCs - and of greatest interest for recreational divers - fall within the following categories:

- antihistamines;
- decongestants;
- anti-motion sickness preparations; and
- analgesics and anti-inflammatory agents.

## **ANTIHISTAMINES Allergic Rhinitis**

The nose is the start of the respiratory system.

Its function is to warm, filter and humidify the air we breathe. Because of the delicate nature of the cells of the lower respiratory tract (which are involved in gas exchange), the upper respiratory tract is lined with specialized cells that provide a defense mechanism to trap and expel bacteria and foreign matter as a part of the body's immune system.

In 10 to 15 percent of the U.S. population, the immune system becomes sensitized to airborne allergens, such as dust, pollen and molds. The result is a heightened response known as allergic rhinitis or as seasonal allergies and hay fever. The allergen or foreign substance triggers a response by the immune system directed at isolating and ridding the body of this substance - an allergic reaction.

Major contributors to allergies are the mast cells, the predominant storage site of histamine in the body. Mast cells are found in great abundance in the skin, the bronchial tree and intestinal mucosa. During an allergic response, these mast cells release histamine and other immune system modulators, which in turn bring on the symptoms associated with allergies - runny nose, congestion, sneezing, itchiness, tearing of the eyes, and a cough with post-nasal drip.

### **Treatment**

Antihistamines are drugs that weaken the allergic response by blocking the effects of histamine. They can be used before or after an allergy attack has begun.

Although they can modify an allergic response, antihistamines are not without drawbacks in the form of side effects. The most common side effects include: drowsiness, dry mouth, blurred vision, urinary retention and increased heart rate.

Drowsiness, one of the more troublesome side effects to divers, occurs because of the drug's effect on the brain. Additionally, drowsiness can be heightened by nitrogen narcosis, putting a diver at greater risk.

Note: It is important to recognize that all individuals react differently to medication. When trying a new medication, begin taking it in an environment where unwanted or unexpected side effects will not be a problem. Only after verifying that no undesirable effects occur should you take the drug when participating in activities that require alertness, such as scuba diving.

Since one of the actions of antihistamines is to reduce secretions (tearing, runny nose), dry mouth can be another bothersome side effect. This can be made worse by breathing through a regulator. Making sure you are adequately hydrated during the dive trip can lessen this effect. Sucking on hard candy between dives can increase salivation and provide some temporary relief, and saline mist sprays can alleviate nasal dryness as well.

When symptoms of allergic rhinitis become persistent or unresponsive to OTC treatment, or if you require medication to dive or clear your ears and sinuses, consult a physician experienced in diving medicine.

In some cases, a doctor may prescribe inhaled steroids. Because you spray the medicine in the nose, it acts locally, thus avoiding systemic side effects. The drawback is that these medications must be used continuously, one to four times daily during allergy season. They also require some time before they start to work.

Are sprayed drugs washed out when you dive and swim? Not usually: the nose is highly vascularized - it's loaded with blood vessels - so any medications sprayed into the nose are absorbed quickly and effectively. But you should wait at least a half hour between applying the spray and diving to allow for proper absorption of the medicine.

**New Non-Sedating Agents**  
In the late 1980s, a second generation of non-sedating, longer-lasting antihistamines became available.

In December 1997, the first of these, terfenadine (Seldane(r)) was voluntarily withdrawn because of the increased reports of cardiac side effects. There are still a handful of non-sedating antihistamines with better safety profiles available on the market. These agents, such as loratidine (Claritin(r)), cetirizine (Zyrtec(r)) and fexofenadine (Allegra(r)), are available by prescription only. **(Note: many of these are now available in certain doses over the counter.)**

Some nasal sprays are available for congestion related to allergies. Recently, cromolyn sodium (Nasal crom(r)) has been made available as an OTC product. Though not an antihistamine, non-sedating Cromolyn works by stabilizing mast cells: i.e., it prevents the release of histamine. Since its action is limited to these specific cells, it does not have the side effects associated with antihistamines. Cromolyn sodium only works by preventing allergic attacks, however, so it must be taken prior to exposure to the allergen.

## DECONGESTANTS Sinus Congestion

The human body has four pairs of sinus cavities. Responsible for lightening the weight of the cranium, these inner spaces also act as resonance chambers for speech. These cavities drain into the back of the throat.

When we have a cold, the body reacts by mobilizing its defense mechanisms. It begins when blood vessels dilate, to deliver more bacteria-fighting cells to the respiratory system. These blood vessels also become "leaky" to allow these cells, antibodies and fluids to accumulate in the tissue. As the intracellular tissue compartment expands with fluid, they close off the normal drainage passages for the sinus cavities. The pressure forming in them causes discomfort and pain. Divers can experience this discomfort when they are unable to equalize.

## Treatment

The drugs used to treat congestion are called sympathomimetic agents, and may stimulate

the release of norepinephrine. This causes blood vessels in the nose to shrink, and it reduces any swelling there. The major side effect of these drugs is their ability to increase heart rate and blood pressure. These agents usually have a short duration of action - about four to six hours - and may wear off during a dive, causing a rebound effect and a reverse squeeze on ascent.

Divers concerned about drugs with systemic side effects may choose topical nasal sprays to avoid the jitteriness and rapid heart rate seen with other sympathomimetics. Some of these sprays even have an extended action (8-12 hours). The drawback, however, is that these agents should not be used for more than three days at a time: tachyphylaxis (rapid drug resistance) occurs, requiring an increased amount of the drug to be effective.

Saline mist sprays are another option for those concerned with drug side effects. They may be used as often as necessary and will not result in tachyphylaxis.

Pseudoephedrine, a key ingredient in Sudafed(r), is a commonly used decongestant by divers. A recent study\* highlighted its effectiveness. The study compared pseudoephedrine to a placebo in its ability to prevent middle ear squeeze in novice divers. It concluded that a 60-milligram dose of pseudoephedrine administered 30 minutes before the dive was effective. This study was conducted to a depth of 40 feet / 12 meters, with objective data gathered only through otologic (ear) exams. Symptoms of side effects were collected in a questionnaire.

## **ANTI-MOTION SICKNESS PREPARATIONS**

### **Motion Sickness**

Like ear squeeze, motion sickness is one of diving's most common maladies. Motion sickness can be brought on by the overstimulation of the semicircular canals of the inner ear. Visual mismatching may also bring on vertigo. This information is then passed on to the brain. The vomiting reflex,

one of the most common signs of motion sickness, is a complex reaction involving the central nervous and the gastrointestinal systems.

Anti-emetics are antihistamines or drugs with chemical structure similar to antihistamines that work by stabilizing the membranes of the vestibular canal in the inner ear. They also affect nerve transmission to the brain.

Divers may also experience vertigo once in the water. Alternobaric vertigo occurs during descent and ascent when unequal middle ear pressure stimulates the semicircular canals asymmetrically. This has nothing to do with motion sickness and usually requires no therapy.

### **Treatment**

Unfortunately, once it occurs, motion sickness can seldom be treated with medication; anti-emetics must be taken prior to embarking on a boat. OTC anti-emetics are all a subset of the antihistamines, and these medications have a greater ability to cross into the brain. Because of this, however, they also have a greater sedative property, which can be a problem during diving. This is particularly true when combining medications to treat both allergies and vertigo.

Many people who suffer from motion sickness are familiar with the scopolamine patch (Transderm Scop<sup>(f)</sup>), an effective preventative to motion sickness. It was unavailable for a short time - the drug tended to crystallize in the patch, which reduced its efficacy. This problem has been remedied, and the patch is available once again by prescription. The patch must be applied at least four hours prior to exposure to motion. Its side effects may present problems for divers - namely, drowsiness and mental confusion, although these effects are usually minor.

### **Non-Drug**

### **Therapy**

There are non-drug therapies for vertigo that have met with varying success. Among these are Seabands<sup>(f)</sup> and Travelaides<sup>(f)</sup>. These



remedies work according to acupressure principles via stimulation of the Neiguan point, located three finger breadths from the wrist joint on the inner arm, between the two central flexor tendons.\* The person using Seabands or Travelaides wears specially made elastic bands around the wrist. A plastic dome is attached to the bands, pressing on the acupressure point. Some users have suggested that these bands can stop nausea, even after it has started.

## **ANALGESICS AND ANTI-INFLAMMATORY AGENTS Pain**

Pain is a stimulus that works as a protective mechanism: It's our body's way of warning us of illness or injury. Drugs used to treat pain may act centrally or locally at the injury site. The centrally acting agents, such as the opioids (synthetic narcotics that simulate the effects of opium, like morphine and codeine), effectively stimulate receptors in the brain to alter the perception of pain and its emotional response. However the side effects - drowsiness, mental and respiratory depression, nausea, constipation, euphoria and dysphoria - make these agents unsuitable for diving.

### **Treatment**

Oral OTC pain relievers are found in three categories:

- acetaminophen
- salicylates (such as aspirin) and
- non-steroidal anti-inflammatory drugs (NSAIDs).

When injury occurs, the body produces prostaglandins, active, multifunctional substances that have actions throughout the body. They have important actions in mediating inflammation (edema, redness) and pain. The salicylates and NSAIDs inhibit the production of the prostaglandins, which alleviates pain and reduces swelling.

The NSAIDs have seen a recent boom since they have been moved from prescription- to

OTC-status drugs. Acetaminophen also helps in reducing pain but is not as effective as salicylates and NSAIDs as an anti-inflammatory drug.

The most significant side effects of the salicylates and NSAIDs is an upset stomach and gastrointestinal ulceration. High doses of aspirin can cause tinnitus, or ringing of the ears, and may also produce bleeding problems. Some people report drowsiness occurring with ibuprofen, but this is uncommon.

Topical pain relievers are also available as creams and ointments. These agents usually contain salicylates, menthol or camphor and work as counterirritants - that is, they cause a mild irritant effect that is more tolerable than the initial injury. Because they are topical, these products don't have systemic side effects. Their drawbacks are that they cannot be applied to broken skin, are a bit messy to use, may carry an odor and are only moderately effective.

Besides these drawbacks, the reason for needing painkillers may affect fitness to dive. An injury, however medicated, can affect the full range of motion and increase the risk of the dive. Also, the effects of pressure on an inflamed tissue are unknown. As an added caution, medication may obscure the signs and symptoms of decompression illness.

*"Pseudoephedrine for the prevention of barotitis media: A controlled clinical trial in underwater divers," by Brown M., Jones J. and Krohmer J. Ann. Em. Med. 1992; 21(7): 849-52*

*\* Seabands have been shown to reduce nausea associated with morning sickness in pregnant women (DeAloysio D, Penacchiani P. Morning sickness control in early pregnancy by Neiguan point acupressure. Obs Gyn 80(5):852-4, 1992).*

However, the effectiveness of acupressure in treating motion sickness is controversial. One study showed no effect (Warwick-Evans LA. Masters FJ Redstone SB. A double-blind

placebo-controlled evaluation of acupressure in the treatment of motion sickness. *Aviat Space Environ Med* 62(8):776-8 1991).

Another study showed that a device called the Relief Band, which presses on the Neiguan point, improved symptoms of motion sickness (Bertolucci LE, DiDario B. Efficacy of a portable acustimulation device in controlling seasickness. *Aviat Space Environ Med* 66(12):1158-8,1995).

## **PHOTOSENSITIVE REACTIONS WITH DRUGS**

A tropical location, limited exposure protection and extended time in the sun enhance the risk of sunburn - and so can some medications. Many people are not aware that some drugs can increase the skin's sensitivity to sunlight. The reactions caused by the interaction of the drugs and sunlight - ultraviolet A (UVA) and ultraviolet B (UVB) radiation - can manifest themselves as either photoallergies or phototoxicity.

A photoallergic reaction occurs when ultraviolet light alters the structure of the drug. This process causes the body to react by forming antibodies to the modified structure. The result is a skin reaction appearing as an eczema-like condition that can spread to areas not exposed to the ultraviolet light.

Of the two photosensitive reactions, phototoxicity is more common. It does not affect the body's immune system. Instead, the drug absorbs the UV light and releases the energy into the skin, causing cell damage. The extent of the damage is usually limited to areas directly exposed to the UV light. Both reactions can occur immediately or have a delayed onset.

How can you protect yourself from the sun when you're on medications? Don't forget that the effects of any drug linger after you have stopped taking the medication. The best advice is to avoid or limit your exposure to the sun whenever possible. This shouldn't be a

problem if the drug therapy regimen is short-term.

Sunscreens can offer some protection. Most sunscreens will block only UVB light, however, and it is UVA light that is often implicated in these reactions. Titanium dioxide can block both the UVA and UVB. Try to avoid sunscreens containing bergamot oil, sandalwood oil, benzophenones, PABA, cinnamates, salicylates, anthanilates, PSBA, mexenone and oxybenzone. These ingredients themselves can elicit a photosensitivity reaction.

## **NUTRITIONAL SUPPLEMENTS AND NATURAL PRODUCTS**

I would like to offer a word of caution about a group of products often overlooked by healthcare providers - natural products. Gaining wide popularity, this group of medicinals includes products that are derived from natural sources such as roots, leaves, bark and fungi, which have been acclaimed in the media as having the ability to treat or cure ailments ranging from the benign to the most serious.

It is unknown how most of these agents interact with each other, with other drugs or with the body when under pressure. Be vigilant in tracking the effects of the medications and supplements you are taking, particularly those new to you. If you have questions, consult your doctor or pharmacist.

## **WRAPPING IT UP**

The decision to use any medication prior to a dive deserves careful consideration: the risks must be weighed against any expected benefit. A word of advice: before using any medication during the dive, try it out beforehand to familiarize yourself with its effects. This is especially true of drugs that have noted side effects like drowsiness. In order to make a proper decision, you must have all the facts available, so consult with those medically trained and familiar with the effects of diving

and medications. Talk to your doctor, or call DAN's Dive Safety and Medical Information Line with questions.

During our open-water diving classes we all heard that drugs and diving just don't mix: This advice stems from the fact that the effects of pressure on the pharmacodynamics of drugs deserve more study. Remember that diving is fun, but missing a day's diving is better than spoiling an entire trip or putting yourself and your buddy at risk. Err on the side of caution: dive conservatively so you can extend your diving pleasures for many years to come.



## Bluegrass Dive Club 2016 Calendar

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|------------------------|---------------------------|
| ▪ January 10           | Board Budget Meeting      |
| ▪ January 12           | General Meeting           |
| ▪ January 26           | Board Meeting             |
| ▪ <b>Jan 23-Feb 6</b>  | <b>Philippines Trip</b>   |
| ▪ February 9           | General Meeting           |
| ▪ February 23          | Board Meeting             |
| ▪ March 8              | General Meeting           |
| ▪ <b>March 13-20</b>   | <b>Bonaire Trip</b>       |
| ▪ March 29             | Board Meeting             |
| ▪ April 12             | Board Meeting             |
| ▪ April 26             | Board Meeting             |
| ▪ <b>May 7</b>         | <b>Annual Derby Party</b> |
| ▪ May 10               | General Meeting           |
| ▪ May 31               | Board Meeting             |
| ▪ June 14              | General Meeting           |
| ▪ <b>June 11-18</b>    | <b>St. Lucia Trip</b>     |
| ▪ June 28              | Board Meeting             |
| ▪ July 12              | General Meeting           |
| ▪ July 26              | Board Meeting             |
| ▪ August 9             | General Meeting           |
| ▪ <b>August 13</b>     | <b>Annual Pig Roast</b>   |
| ▪ August 30            | Board Meeting             |
| ▪ September 13         | General Meeting           |
| ▪ <b>Sept 24-Oct 1</b> | <b>Roatan</b>             |
| ▪ September 27         | Board Meeting             |
| ▪ October 11           | General Meeting           |
| ▪ October 25           | Board Meeting             |
| ▪ November 8           | General Meeting           |
| ▪ <b>Nov 12-19</b>     | <b>Grand Cayman Trip</b>  |
| ▪ November 29          | Board Meeting             |



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## **Dive Committee Members**

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Doug Geddes – Chairman	621-3178
Tracey Combs	621-4066
Ralph Covington	621-3862
Mike Sullivan	266-4516
Ed Sullivan	C@Meeting
John Geddes	223-7926
Corrine Mulberry	913-0892