



# THE SAFETY STOP

COJO's MONTHLY NEWSLETTER

On Location from: COJO Diving World Headquarters  
158 Garden Grove Road, Lincoln, NB, Canada

ISSUE 39

## What's New

Welcome to the **April 2014** edition of The **COJO Diving Safety Stop Newsletter**.

**March** was an awesome month!! Joe met up with John (Doc Octo) Prendergast down in **Cave Country**. While there, John and Alex (Mc Diver) Brett dove out of **Cave Country Dive Shop**!! **Congrats to John** for completing his Cavern/Intro to Cave and Apprentice Cave **and to Alex** who completed his Cavern Course!! **Awesome work guys!!**



While there, Joe completed his **Trimix Instructor** with **COJO's Southern Connection, Jim Wyatt**!! What an awesome time!! Joe got a couple dives in the Eagle's Nest and had a blast learning from the **best in the South**!!

March was also **BOSTON SEA ROVERS** Month!! On the way back from Florida, **Joe** stopped in Danvers Mass to visit the **Ocean Quest** booth and help out **Rick Stanley**!! What a blast that was and thanks to Rick for all the fun!! COJO can't wait to get to Newfoundland this summer!!

Doc Octo managed to get an article out this month on Nitrogen Narcosis. COJO actually felt really bad because he could barely type it up due to his fingers being "Bloody Raw" from Ginnie Springs!! (Picture to Follow!!)

COJO encourages you to send in your pictures for the **Photo Of The Month**. If your picture gets chosen, your picture and name will be published in the Safety Stop and you could win a coupon redeemable for merchandise or services at COJO Diving.

If you would like to stop receiving this newsletter please reply to this e mail with "Unsubscribe Me" in the Subject Line

Thanks and Safe Diving!!  
Connie and Joe  
COJO Diving



## THE SAFETY STOP

COJO's MONTHLY NEWSLETTER

During **March**, COJO didn't run many courses because Joe was away all the time taking courses!! However we do now offer the complete line of courses from one of the world's most reputable Technical Diving agencies, The **International Association of Nitrox and Technical Divers (IANTD)!!!**

Congratulations to **Alex Champion** on completing his **Drysuit Orientation Course!!**  
Great Job Tiny!!



## Courses To Come

For **April and beyond** here is a quick look at what is coming up!!

- 1 to 6, Apr 14 – **TDI** Intro to Technical Diving
- 3 Apr 14 – **PADI** Enriched Air Diver
- 11 to 13 Apr 14 – **PADI** Advanced Open Water with Enriched Air
- 18, 19 Apr 14 – **IANTD / TDI** Advanced Recreational Trimix / Helitrox  
(Pool and Equipment Workshop)
- 24 to 27 Apr 14 – **SDI** Sidemount Diver
- 1 to 4 May 14 – **IANTD / TDI** Adv Rec Trimix / Helitrox  
(Classroom and Dives, Session 1)
- 8 to 15 May 14 – **IANTD / TDI** Adv Rec Trimix / Helitrox  
(Classroom and Dives, Session 2)

If you are looking for a specific course you don't see here, give us a call!!



## THE SAFETY STOP

COJO's MONTHLY NEWSLETTER

### Excursions During March

For **March** Joe made his way back from **High Springs Florida** to meet up with one of COJO's best buddies from the rock!! **Ocean Quest's Rick Stanley**. Joe and **Rick** manned **Ocean Quest's** booth at **Boston Sea Rovers** where they met up with all kinds of people and had a total blast!! **Rick Screeched in about 50 people – PERSONALLY!!**



Rick screeching in Jessica



Rick screeching Daisy and Jerry



Daisy LOVES Screech!!



**BY THE END, RICK WAS TANKED**



## THE SAFETY STOP

COJO's MONTHLY NEWSLETTER

### EVENT ON THE HORIZON!!

Coming up in **May**, **COJO** will be teaming up with **Akona Rep Michelle Richards** to bring you some Fun in the Sun!! That's right, Michelle will be here to present some of the latest and greatest **adventure gear** that **COJO** has to offer!! **Kayaks**, **Stand Up Paddle Boards** and all kinds of fun stuff like that!! Don't miss it!!



### EXCURSIONS TO COME

## WRECK DIVING – HMCS SAGUENAY 9 TO 10 AUG 14

Come on out for an awesome weekend of wreck diving on the **HMCS Saguenay** in **Lunenburg Nova Scotia**!! This is a fantastic wreck and a favorite to all who dive her!! Don't miss out, last year we were **PACKED**!! We will be offering a **Basic Wreck Course** that weekend as well if anyone is interested.







## THE SAFETY STOP

COJO's MONTHLY NEWSLETTER

### NEWFOUNDLAND 2014!!!

That's right, we are planning another trip to **Newfoundland** for July 19 to 26, 2014!!! If you have never been to Newfoundland and haven't been on these wrecks **now is the time!!** If you have been there, nothing more needs to be said!! It is **World Class Diving** and will be a **World Class Trip**.

We are well into the planning and we have collected deposits. **There are just 3 spots available** so if you are interested, let us know. This is the trip of a lifetime!! We will be offering several courses such as **Advanced Nitrox and Decompression Procedures**. Don't miss out!! If you are interested, send a note to [info@cojodiving.com](mailto:info@cojodiving.com) for details!!



### ASK DOC OCTO...

That which does not kill you,  
makes you dumber



The other day I heard someone refer to a nasty case of herpes as "Cupid's measles". I started thinking that simply giving something a cute name doesn't stop it from being a rotten experience. The same can be said of nitrogen narcosis. Narcosis has often been romantically referred to as "the rapture of the deep" or "the martini effect". It makes getting "narked" sound like something that should happen at 3 a.m. while listening to Miles Davis. But on reflection, anything that makes me stupider at depth probably isn't all that cool. As you recall, nitrogen narcosis is a mental impairment caused by an increased partial pressure of nitrogen in the brain. In short, the deeper you go, the dumber you get.





# THE SAFETY STOP

COJO's MONTHLY NEWSLETTER

Take a look at this youtube link of a diver getting "narked" as he goes well below the recommended recreational limits of 40 meters or 130fsw (**beware language**). <http://youtu.be/CKzW9qvcs> | **NOTE THERE IS A COMMERCIAL FIRST but it is awesome...**

After watching this clip, I'm not sure what's creepier; the whole dumb stunt, the look on the diver's face or the cheesy music. The video does however beg one question. Just how stupid are you when narked? Well, apparently this is an easy question to answer. It turns out that if you tell sailors that you are doing a study where the end-point is getting them "f\*\*\*ed-up," you have no shortage of volunteers. One particular US Navy study measured the time to complete mental tests and tabulated the number of errors, both on the surface and at various depths (Bove and Davis 2004). At **125 feet** there was a 21 fold increase in the extra time to solve problems with a 2.3 fold increase in errors. That's how dumb you get just at recreational limits, you should see the data for greater depths! It is also interesting to note that while some divers claim to become acclimated to narcosis; their test scores still remain poor. The recognized symptoms of narcosis are well known and listed in the table below (Lippmann and Mitchell 2005).

Signs and symptoms of narcosis (breathing air)

Pressure (bar)	Depth (m)	Depth (ft)	Comments
1-2	0-10	0-33	Unnoticeable minor symptoms, or no symptoms at all
2-4	10-30	33-100	Mild <b>impairment</b> of performance of unpracticed tasks Mildly impaired reasoning Mild <b>euphoria</b> possible
4-6	30-50	100-165	Delayed response to visual and auditory stimuli Reasoning and immediate memory affected more than motor coordination Calculation errors and wrong choices Idea fixation Over-confidence and sense of well-being Laughter and <b>loquacity</b> (in <b>chambers</b> ) which may be overcome by self-control Anxiety (common in cold murky water)
6-8	50-70	165-230	Sleepiness, impaired judgment, confusion <b>Hallucinations</b> Severe delay in response to signals, instructions and other stimuli Occasional dizziness Uncontrolled laughter, <b>hysteria</b> (in chamber) Terror in some
8-10	70-90	230-300	Poor concentration and mental confusion <b>Stupefaction</b> with some decrease in <b>dexterity</b> and judgment Loss of memory, increased excitability
10+	90+	300+	Hallucinations Increased intensity of vision and hearing Sense of impending blackout, euphoria, dizziness, <b>levitation</b> , <b>manic</b> or <b>depressive</b> states Disorganization of the sense of time, changes in facial appearance Unconsciousness, Death



## THE SAFETY STOP

COJO's MONTHLY NEWSLETTER

I don't know about you, but I find there is a certain cruelty to the timing of specific symptoms. Narcosis starts with euphoria and over-confidence followed by physical and mental impairment. Of course, the irony is that when you most need to be focused and have a sound assessment of your skills, your judgment is shot. This lends much support to the view that "nature hates you". Similarly, if this describes perhaps something you have seen or done yourself at the 20-20 club, you can also see why narcosis is called the "martini effect". As we all know, these symptoms and the depths at which they occur vary from individual to individual and dive to dive. Some divers are particularly sensitive to narcosis, while others seem impervious. Factors which make narcosis more likely to occur again fall under the "nature hates you" rubric. For example; cold, stress, heavy work, fatigue, and carbon dioxide retention all increase the risk and severity of narcosis (Hesser et al. 1978). So basically, when diving conditions are at their worst (such as poor visibility, cold, heavy task loading and heavy workloads) that's when we are most vulnerable. Why nitrogen (or any gas) causes narcosis depends on how much that gas likes fat. It has been known for over 100 years that gases that readily dissolve in lipids (those fatty molecules that make up cell membranes) are the most likely to cause narcosis. You should know that while "Nitrogen goes for fat like a fat kid goes for cake", some gasses are better and worse. The table below shows the lipid solubility and consequent narcotic potency of these gases.

Some components of breathing gases and their relative narcotic potencies:<sup>[2][FN 1][3]</sup>

Gas	Relative narcotic potency
He	0.045
Ne	0.3
H <sub>2</sub>	0.6
N <sub>2</sub>	1.0
O <sub>2</sub>	1.7
Ar	2.3
Kr	7.1
CO <sub>2</sub>	20.0
Xe	25.6



## THE SAFETY STOP

COJO's MONTHLY NEWSLETTER

There are several important points to take away from this table. First, oxygen is in fact more narcotic than nitrogen. So if someone told you Nitrox would reduce your risk of narcosis because your mix has less nitrogen, they lied. Secondly, carbon dioxide is over 30 times more narcotic than nitrogen. Therefore, breath-holding behaviors or high workloads (making lots of carbon dioxide) are much more likely to cause narcosis. Third, since helium has very little narcotic property it is the ideal diluent for gas mixes intended to be used at depth. Again ironic, the gas that makes you sound the most messed-up, is the least likely to do so. Since its almost time for you to give the bathroom up to someone else, here are the take-home points;

1. Dive within recreational limits of 130 feet, unless on trimix.
2. Minimize dive conditions or practices that promote narcosis (depth, cold, poor visibility, high workloads, stress, breath holding, prior use of intoxicants).
3. If the symptoms of narcosis appear, move to shallower depth and decide on the wisdom of continuing the current dive plan.

***"It seemed that I performed better sober than drunk. Who knew?" Craig Ferguson***

**Another awesome article by Doc Octo!!**

## HANDS DOWN







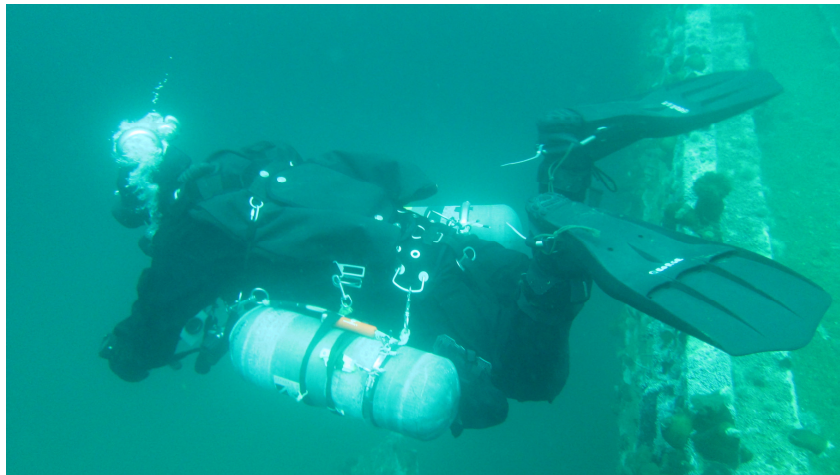
## THE SAFETY STOP

COJO's MONTHLY NEWSLETTER

### April's Featured Course

### **PADI Sidemount Diver Course (24 to 27 April)**

The Sidemount Diver Course is designed to train certified divers how to safely utilize side-mounted primary cylinders as an alternative to the traditional back-mounted configuration. We offer Sidemount certification as a stand alone course, or it can be combined with any specialty certification as a training option.



**Course Cost: \$250.00+HST**



## THE SAFETY STOP

COJO's MONTHLY NEWSLETTER

### APRIL'S FEATURED PRODUCTS

#### COJO Chammyz Jackets!!

Chammyz are soft, yet durable garments, designed to provide the utmost in warmth and comfort — offering the highest level of protection against rapidly changing weather conditions. Their unique design promotes maximum water absorption from your body. Our resilient line of active gear is worn and endorsed by boaters, lifeguards, surfers, water skiers, swimmers, divers, winter sports and outdoor enthusiasts throughout the world.

- ☐ **Moisture Wicking – Absorbs and Evaporates**
- ☐ **Fabric Dries Quickly – Keeps You Dry**
- ☐ **Breathable – Maximum Comfort**
- ☐ **Lightweight – Comfortable and Breathable**
- ☐ **Blocks UVA/UVB rays – Sun Protection: Rated at 50+**



1 SURF BOMBER - \$79.00



2 CLASSIC PULLOVER - \$67.00



## THE SAFETY STOP

COJO's MONTHLY NEWSLETTER

### Photo of the Month

Our April Photo of the month was taken by Jerome Alberts. It is **Zack's first Selfie!!** Dominique Gobeil and Jerome Alberts' brand new baby, Zack was getting ready to leave the hospital and come straight to COJO to do a Discover SCUBA Diving!!

Congratulations to Dom and Jerome and welcome Zack!!

Baby Zack won, one free COJO Diving Toque to keep him warm after that **9 month long saturation dive!!** Welcome Zack!!!



**Keep sending in those pictures!!**





## THE SAFETY STOP

COJO's MONTHLY NEWSLETTER

### Other News

A very special Thank you to **Jim Wyatt** of **Cave Dive Florida** and **Cave Country Dive Shop** for teaching me the **Trimix Instructor course**. Thanks to Jim, COJO now can offer any and all levels of Trimix either here or in Florida. We have also put in a **brand new Trimix Blending Station!!!**

Thanks Very Much Jim!!

Joe!!



Thanks and we are looking forward to diving with you soon!!

Connie and Joe!!