



THE SAFETY STOP

COJO's MONTHLY NEWSLETTER

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

ISSUE 47

What's New

Hello, **Merry Christmas** and welcome to the **Dec 2014** edition of The **COJO Diving Safety Stop Newsletter**.

November was a very quiet month for COJO because **Connie** was at beautiful **Blue Heron Bridge**, West Palm Beach, Florida and **Joe** was at beautiful **Air Strip One**, Gagetown, New Brunswick!! While Connie dived with sea horses, Joe was in mud up to his knees!! Kind of the "**Gold Mine – Shaft**" sort of situation!! Anyway, COJO still managed to get a few courses done in November!!



Just a reminder, COJO is now on **WINTER HOURS**. This means we will not be open on Fridays. Our hours are **MONDAY TO THURSDAY FROM 6PM TO 9PM!!** BUT we are still able to open if you need us. **Just give us a call!!**

It is that time of the year again!! The **COJO Diving Christmas Party!!!** Woo Hoo!! Don't miss the **free gifts and great food!!** It is on **12 December** at the **COJO World Headquarters!!**

Doc Octo is back with re-run on Winter Diving "**Baby It's Cold Outside**" just to kick off the winter dive season!! This is an awesome article and should be (probably will be) run **every year** about this time to get people thinking about **winter diving** and tips to make it safe and enjoyable!!

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



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Courses During October

As mentioned earlier, Connie and Joe were both away for most of November however, during the month, COJO still managed to run a couple courses:

- **COJO** – Dry Suit Diver course
- **DAN** – Emergency Oxygen for Diving
- **SDI** – Solo Diver Course



Things are starting to slow down now for the winter season. That means **NOW IS THE TIME!!** If you have training you would like to do, let us know and we can find a place on the calendar to book it!!

Courses To Come

Coming up **this winter**, we will be running the following courses

- **6 to 8 Dec - PADI** Rescue Diver Course
- **TBC - TDI** Technical Sidemount Diver
- **DAN** Dive Emergency Management Provider (DEMP) Course
- **PADI** Equipment Specialty Course
- **PADI** Open Water Diver Course
- **COJO** Underwater Rigging
- **PADI** Search and Recovery
- **TDI** Intro to Technical Diving
- **TDI / IANTD** Normoxic Trimix course

We are getting ready to run the **PADI Dive Master** course!! We have pushed it into the new year because a couple people wanted to start in January 2015 but it promises to be totally awesome!! We only have two spots left!! If you would like more information on this, or any, course please e mail us.

cojodiving@gmail.com



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Excursions During November

Blue Heron Bridge Singer Island, Florida

That's right!! Connie and Claire had an awesome trip to [Blue Heron Bridge](#) which is now an **ANNUAL EXCURSION!!** Apartment lodging at [Sunshine Shores](#) is close to everything and reasonably priced. Gear rentals and support from nearby **PADI** dive shop [Pura Vida Divers](#) meets all the needs for recreational and technical diving. With the dive site, dive shop, beach, restaurants and more within a **5min walk or drive**, this is an easy vacation dive destination. Check out the [Blue Heron Bridge promo video](#)! Contact us for more information about the 2015 trip!





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COJO's Annual Christmas Tree Dive!!

This year again, **COJO** hosted the annual **Underwater Christmas Tree Decorating** to kick off the **Christmas Season!!** It was a huge success and we had tons of divers out for the day!! **The crabs love licorice!!** I couldn't believe it!! **Awesome Day!!**



EXCURSIONS TO COME High Springs, Florida!!

Quite often in March, COJO and crew head down to Florida for some awesome cave diving. **This March will be no exception!!** Connie and Joe will be heading down to beautiful **High Springs, Florida** where they will dive their guts out in **Ginnie Springs** and all of the local cave hot-spots!! Also during that time, **Doc Octo** will be going to finish his cave certification!! It promises to be the **trip of the year!!** If you are interested in cave training don't hesitate to call now!! We have tons of room on the trip!!





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And Now, Doc Octo!! Cause Baby, its cold outside

While I was walking up the beach after a dive in mid-December, a few thoughts crossed my mind. The first was a memory of Billy Leone. Billy was a miserable little prick I knew in first grade who once told me "You aren't the brightest thing God ever spun guts for". Secondly, as all of my buckles, hoses and snaps started to freeze in the -32 C wind-chill, I wondered how long it would take to die in water this cold. How long would it take to die without the benefit of a dry-suit, the nice warm truck that Connie and Joe had supplied and Greg's hot chocolate? Turns out it wouldn't take long. Estimates of time to death in frigid waters are usually based on historical data. For example, eyewitness accounts of the Titanic disaster report some passengers died in as little as 2 minutes, but most within 10-15 minutes. So why do we die in frigid water and what exactly happens? As usual the coolest (yes, I wrote that) part of the story is the science.

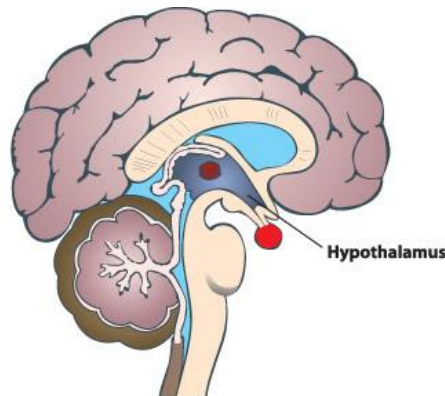




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As you may know your internal body temperature is tightly regulated. You expend an enormous amount of effort keeping your core temperature between 36.5 C and 37.5 C. That's just 0.5 C above or below the set-point of 37 C. As you might expect, there are good reasons for all this effort. The metabolic activities that allow you perform the amazing feats of living only operate efficiently within a narrow range of temperatures. Let me illustrate this idea by recalling a classic stupid stunt from my young adulthood. Remember the idea you had to swim in the Bay of Fundy on New Year's Day? Remember how alcohol may have been a factor? What you didn't remember (because you didn't know) is that in water 15C (and the Bay of Fundy is colder than that) within 5-15 minutes you lose a large amount of muscle function. That's right, in the middle of the ocean in all your glory, you will start to drown because once core temperatures drops your muscles just don't work. Clearly since I'm writing this I was saved by dumb luck, but you get the point. Something else I also didn't know then, is that once core temperatures falls a host of other organs and functions also stop. So you can see why your body, often despite your best efforts, works so hard to maintain this narrow temperature range.



The part of your brain that does all the heavy lifting in controlling body temperature is called the hypothalamus. Blood temperature, as well as sensors in the skin, spinal cord and internal organs send information to the hypothalamus which functions as the master-thermostat for temperature regulation. If the core temperature of the body drifts down past the set-point of 36.5 C several self-preservation processes kick-in. The first is constriction of blood vessel to the skin. This mechanism makes intuitive sense. Why run blood to an area of the body exposed to the cold? The second important survival mechanism is to increase metabolic heat production. Shivering is one commonly experienced and very effective process. In short, shivering generates heat by frequent and uncontrollable muscle contractions. During long term cold exposure the body can also turn up other metabolic processes like fat metabolism or thyroid hormone function. However, the most important survival mechanism the hypothalamus initiates is



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an urgent search for heat and shelter. The power of all of these mechanisms is impressive; just look at some of the hostile environments and conditions in which humans can flourish. Just how well do these heat production mechanism work? Well, for an environmental drop of 27 C your core temperature will only drop 1C. As you might expect however, even the best systems have their limits and things can always get worse.



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As I mentioned, hypothermia begins once the core temperature drops below 35 C. That's when vasoconstriction, shivering and shelter seeking behaviors really shine. However, when core temperatures fall below 32 C things start to get weird. At this temperature the hypothalamus doesn't work, shivering stops and mental confusion really takes off. Here, unless something drastic is done, death is not far away. For example, bizarre behaviors like "paradoxical undressing" can begin. These people with already dangerously low core temperatures feel overheated and start stripping off their clothes. Another odd behavior is called "terminal burrowing". A nonfunctional hypothalamus cause those close to death to stop seeking help and instead look for little holes in which to curl up and die.

Now while these features of moderate to severe hypothermia are kind of interesting and definitely creepy, they usually don't apply to recreational diving. In most recreational diving situations our buddies, good dive plans and emergency resources are seldom far away. However, there is a very dangerous and often overlooked consequence to even mild hypothermia in a dive setting. What I didn't mention earlier is that the first function to be profoundly affected in even mild hypothermia is mental processing. Studies done in the 1980s show that mental function, especially memory and vigilance decreased by up to 70% with a core temperature drop in the 35 C range.



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Remember, the normal body temperature range is about 36.5 to 37.5 C, and hypothermia technically starts at 35 C. This means that divers who are shivering are no longer learning or remembering much about their dives. Under these conditions teaching is futile; since divers are making mistakes and not learning from them. More significant than impaired memory is a drastic reduction in your ability to stay on task. Impaired vigilance means not checking buddies, gauges or computers. Impaired vigilance also means missed decompression or safety stops, poor navigation and failure to recall details of dive plans. Add impaired mental function to increased cold weather task-loading, narcosis, stress and a dark and uncomfortable environment and trouble is not far away. So that's the simple take home point; if you get cold end or turn the dive. At that point diving is no longer safe, fun or even memorable. Personally, I have no intention of proving Billy right.



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December's Featured Course

Divers Alert Network

Basic Life Support / Emergency Oxygen for SCUBA Diving Injuries Course



Basic Life Support: CPR and First Aid

The DAN Basic Life Support: CPR and First Aid (BLS: CPR&FA) course offers entry-level training in providing basic life support to adults with life-threatening injuries while activating emergency medical services.

This program meets 2010 International Liaison Committee on Resuscitation and American Heart Association guidelines on Cardiopulmonary Resuscitation and Emergency Cardiac Care.



Emergency Oxygen for Scuba Diving Injuries

The DAN Emergency Oxygen for Scuba Diving Injuries course is designed to train and educate interested individuals in the techniques of using oxygen as first aid for a suspected dive injury. In addition, this course will introduce the fundamentals of recognizing diving injury warning signs, response and management. This program also provides an excellent opportunity for experienced divers and instructors to continue their education.

Course Cost:

\$99.00+HST each course

--- or ---

**\$168.30 + HST for both together
(Extended through December)!!!**



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DECEMBER'S FEATURED PRODUCTS

DRY SUIT SALE

Trade in Your Wetsuit (**any condition**) for an amazing drysuit package!

Special valid until **December 23rd, 2014**

Packages starting at \$1099+HST

CLICK THE LINK FOR MORE DETAILS!!!

http://www.cojodiving.com/product_images/uploaded_images/drysuit-ad.jpg?t=1411817860

"GET IN OUT OF THE COLD"

TRADE IN YOUR WETSUIT FOR AN AMAZING DRYSUIT PACKAGE DEAL**

** Any Condition! Special valid until October 15, 2014



SPECIAL \$1199+HST

(\$1745+HST value)

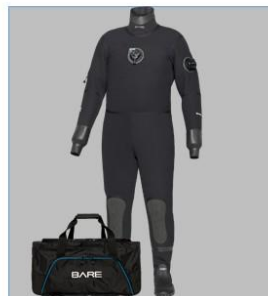
- Trilam Tech Dry (Black-M, Pink-W)**
- Front Entry, lightweight
 - Neoprene or latex neckseal
 - Latex wrist seals
 - Attached neoprene Bare boot
 - Dry Hood, Wet Gloves/Mitts
 - Drysuit Course (Class & Dives)



SPECIAL \$1099+HST

(\$1645+HST value)

- Trilam Pro Dry (Black-M, Pink-W)**
- Back Entry, lightweight
 - Neoprene or latex neckseal
 - Latex wrist seals
 - Attached neoprene Bare boot
 - Dry Hood, Wet Gloves/Mitts
 - Drysuit Course (Class & Dives)



SPECIAL \$1099+HST

(\$1615+HST value)

- D6 Pro Dry (Black-M)**
- Back Entry, 6mm neoprene
 - Neoprene or latex neckseal
 - Latex wrist seals
 - Attached neoprene Bare boot
 - Dry Hood, Wet Gloves/Mitts
 - Drysuit Course (Class & Dives)

Upgrade Options:

- Custom Sizing – add \$250
- Colour Options – Add \$50
- Dry Gloves – Add \$200

Offer Valid In-Store Only



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Photo of the Month

This photo was taken by **Claire LeBlanc** at **Blue Heron Bridge, West Palm Beach, Florida**.

This is a photo of a Polka-Dot Batfish. One of the odd-looking fish that we (Claire and Connie) found at BHB! It hardly moves so great for taking pictures!

For her picture, Claire wins 2 free Nitrox Fills!!

Awesome picture Claire!! Keep up the great photography!!



Keep sending in those pictures!!



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Other News

We would love for you to follow us on Facebook. Become a friend of COJO Diving at <http://www.facebook.com/COJODiving>

Our book "Sidemounting for the Recreational Diver" is available either In Store or by e-mail. For information about the most awesome way to dive send a note to info@cojodiving.com !!



Our new book, "The Technical Tao of Joe" will be out any time now!! Don't miss out!! This book gives you insights on Joe's ways of teaching. Awesome for anyone taking a course through COJO or anywhere!!

Come in and visit us at the [COJO Diving World Headquarters!!](#) We have a beautiful facility with a nice fireplace to sit and warm up at after a cold day of diving. There is always lots of coffee and hot chocolate and Joe usually has fresh popcorn on!!

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

Connie and Joe!!