



# THE SAFETY STOP

COJO's MONTHLY NEWSLETTER

On Location from: Sea Street, Eastport, Maine

ISSUE 36

## What's New

Happy New Year and welcome to the January 2014 edition of The COJO Diving Safety Stop Newsletter.

December was crazy with courses and parties!! COJO had the Customer Appreciation night, Solo Dive training, Underwater Christmas Tree Decorating just to name a few! WOW what a Christmas!!

Towards the end of December it was getting ridiculous trying to get out because of the roughly 1 Million feet of snow this month but COJO did manage a couple dives!! Joe is currently in Eastport, Maine diving his guts out!!



We have updated our 2014 Training Calendar. Just go to [www.cojodiving.com](http://www.cojodiving.com) and then to [Training Calendar](#) and see what is new!! If you don't see something you are interested in let us know. We have several instructors that are able to teach anything you are interested in!!

Doc Octo is back again with another awesome column on Diving and Hypothermia. It is an awesome article and, a must read for anyone diving in this weather!! Don't miss it!!

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 Completed During December

During **December**, COJO completed the following courses:

- **PADI** Self-Reliant Diver Course
- **PAID** Enriched Air Nitrox Course

As well as working on a **TDI** Advanced Nitrox / Decompression course and completing some of the Dive Master Skills to bring this serial of the **PADI** Dive Master Course closer to a close.

## Courses To Come

Here is a brief look at the first bit of our **2014 course calendar**. Note that there are several courses in January!! **Don't forget to dive!!**

- **2 to 5 January** – **TDI** Advanced Nitrox / Decompression course
- **7 Jan** – **COJO** Drysuit Orientation course
- **9 – 12 Jan** – **PADI** Ice Diver course
- **18 – 19 Jan** – **PADI** Ice Diver make up dives (In case of bad weather)
- **20 – 23 Jan** – **PADI** Equipment Specialty course (Contact for details)
- **27 – 28 Feb** – **NSS / CDS** Cavern / Basic Cave (Florida)
- **10 to 13 Apr** – **COJO** Underwater Rigging course
- **10 to 13 Apr** – **PADI** Search and Recovery course
- **24 to 27 Apr** – **PADI** Sidemount Diver course
- **30 Apr to 4 May** – **TDI** Advanced Nitrox/Deco Pt 1
- **7 to 11 May** – **TDI** Advanced Nitrox/Deco Pt 2
- **13 to 14 May** – **PADI** Digital Underwater Photography course
- **15 to 18 May** – **PADI** Advanced Open Water/Enriched Air Nitrox course
- **22 to 25 May** – **PADI** Deep Diver specialty
- **5 to 8 Jun** – **COJO** Technical Sidemount Workshop
- **12 to 15 Jun** – **TDI** Intro to Technical Diving Pt 1
- **20 to 22 Jun** – **TDI** Intro to Technical Diving Pt 2
- **20 to 22 Jun** – **PADI** Rescue Diver course
- **26 to 29 Jun** – **COJO** Kayak Diver course (**BRAND NEW!!!!!!**)
- **2 to 6 July** – **COJO** Reels / Navigation in an Overhead Environment course



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### Excursions During December

For **December** Connie and Joe brought the excursions here with the **2013 Annual COJO Customer Appreciation Christmas Social!!** There were **over 25 divers** here from all over!! A special thanks to all who were so generous to bring gifts especially **Hailey Whitten** who baked Joe a **Birthday "Shark" Cake!!!** WOW what an awesome surprise!! Thanks for all the support in 2013 and **we look forward to serving you again in 2014!!**

We also hosted the annual **Underwater Christmas Tree Decorating** again this year!! The temperature was **-36° F** with the wind chill but COJO rented a Large Panel Van for the excursion to keep everyone warm!! A very special thanks to **Greg Best** for the **Hot Chocolate and Donuts** that he brought to the event!!!



### EXCURSIONS TO COME

#### Cave Diving Excursion

**That's right!! COJO** is headed back to **Cave Country** to do some awesome **cavern** and **cave training!!** This year we will be completing a few **Cavern** certifications as well as some **Intro To Cave** with a few students!!! Our awesome Southern Connection, **Jim Wyatt** will be heading up the training and Joe will be there to carry his gear and get his picture taken!! Joe may even get in a couple dives at **The Eagle's Nest** and **Blue Heron Bridge!!** It promises to be an awesome **March Break Trip!!!!**



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## NEWFOUNDLAND 2014!!!

That's right, we are planning another trip to **Newfoundland** for July 20 to 27, 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 still in the planning stages and we have collected deposits. **There are still 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!!

We have an information night scheduled for 19 November and as always if you are interested, send a note to [info@cojodiving.com](mailto:info@cojodiving.com) for details!!







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# Ask 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-type of person I knew in first grade who once told me "You aren't the brightest thing God ever my buckles, hoses and C wind-chill, I wondered water this cold. How without the benefit of a that Connie and Joe chocolate? Turns out Estimates of time to based on historical data. of the Titanic disaster report minutes, but most within frigid water and what coolest (yes, I wrote



spun guts for". Secondly, as all of snaps started to freeze in the -32 how long it would take to die in long would it take to die dry-suit, the nice warm truck had supplied and Greg's hot it wouldn't take long. death in frigid waters are usually For example, eyewitness accounts some passengers died in as little as 2 10-15 minutes. So why do we die in exactly happens? As usual the that) part of the story is the science.

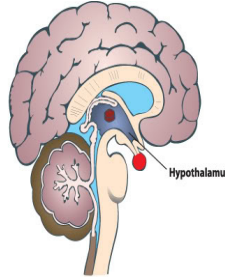
As you may know your internal body temperature is tightly regulated. You expend an enormous amount of effort keeping your core temperature between 36.5 C and 37.5 C. That's just 0.5 C above or below the set-point of 37 C. As you might expect, there are good reasons for all this effort. The metabolic 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.



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So you can see why your body, efforts, works so hard to temperature range.



often despite your best maintain this narrow

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 bags 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 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.

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.



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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. 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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### January's Featured Course

### PADI Ice Diver Course

If the spirit of ADVENTURE and UNUSUAL, challenging diving appeals to you, try diving under the ice. During the course, you dive with a PADI Professional in one of the most extreme adventure specialties recreational diving offers. Explore the unique aquascape found only under ice!!

You can be one of the few that have ever dived under a solid ceiling of ice!!

You will complete a minimum of THREE ICE DIVES for your certification. Dives are typically done as a group working with support personnel, divers, tenders, and safety divers.



**ONLY \$300.00!!!!**





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### JANUARY'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



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### Photo of the Month

Our January Photo of the month was sent in by Maurie Libner, a COJO Diver from Maine!!! ...

*I just got back from a trip on a live-aboard off Belize (Agressor/Dancer II) and took some pictures with my cheapo dive camera. I attached two. I think the sunset photo is pretty awesome. We spent most of the week between Lighthouse Reef and Half-Moon Cay.*

*Maurie Libner*

Thanks Maurie!! For this awesome sunset, Maurice has won two free Nitrox fills up to 36%.

GREAT JOB!!!



Keep sending in those pictures!!



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### Other News

Our book "[Sidemounting for the Recreational Diver](#)" is available online or in our store. We kept the costs low and there are some fantastic lessons in it for all divers, not just Sidemounters.



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

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, [Happy New Year!!](#)

Looking forward to diving with you soon!!

Connie and Joe!!