Annual Dive Incident Report 2008

Report on dive incidents in the province of British Columbia.

Prepared by the Dive Safety Group of BC Dive Community

Chapter I. Introduction

This report contains the year 2008 diving incidents in the province of British Columbia. It has been produced the Dive Safety Group of BC Dive Community in order to provide data on the number and nature of dive incidents thus providing a learning document that ultimately will enhance dive safety.

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How to read this report: The report is laid out in a way that the reader can see a general description of the incident

Data:

No names, places and organizations involved in the incident are mentioned for reasons of privacy protection. The data is gathered from sources like members of BC Dive Community, Coast Guard, RCMP, and others. We thank these individuals and organizations for their efforts in helping the Dive Safety Group assembling this report.

Statistic Overview

In the year 2008 the **T**otal **N**umber **R**eported **D**ive **I**ncidents (TNRDI) was 5. As this is the first year this report is issued we have less data to compare with. This means that the percentage of incidents was N/A % compared to year 2007; this means an N/A% increase/decrease in the total number of dive incidents. In the following pages there is a short statistical analysis of the overall data. Small discrepancies in percentages are due to rounding of the numbers

Break down of the total number of reported dive incidents in number and percentage of TNRDI:

Fatalities: 1	this is 20 % of TNRDI
Decompression Illness: 2	this is 40 % of TNRDI
Illness/Injury: 1	this is 20 % of TNRDI
Equipment: 1	this is 20 % of TNRDI
Dive Technique: 0	this is 0 % of TNRDI
Planning: 0	this is 0 % of TNRDI
External factors: 0	this is 0 % of TNRDI
Other:	this is 0 % of TNRDI

Activities during diving incident: in number and percentage of TNRDI:

Recreational diving*: 3	this is 60 % of TNRDI
Commercial work diving:	this is 0 % of TNRDI
Scientific: 1	this is 20 % of TNRDI
Search and Rescue: xxx	this is 0 % of TNRDI
Military: xxx	this is 0 % of TNRDI
Recovery: xxx	this is 0 % of TNRDI
Other: 1	this is 20 % of TNRDI

* includes recreational dive training

Statistic Overview (continued)

Break down of the main or initial causes of the reported dive incidents in number and percentage of TNRDI

Buoyancy: 0	this is 0% of TNRDI
Dive planning: 0	this is 0% of TNRDI
Illness/Injury: 2	this is 40% of TNRDI
Equipment: 1	this is 20% of TNRDI
Dive Technique: 0	this is 0% of TNRDI
Aquatic life: 0	this is 0% of TNRDI
External factors: 0	this is 0% of TNRDI
Other / unknown: 2	this is 40% of TNRDI

Breakdown of causes other than the initial causes contributing to the dive incident in number and percentage of TNRDI:

Buoyancy: 1	this is 20% of TNRDI
Dive planning: 0	this is 0% of TNRDI
Illness/Injury: 1	this is 20% of TNRDI
Equipment: 0	this is 0% of TNRDI
Dive Technique:	this is 0% of TNRDI
Aquatic life:	this is 0% of TNRDI
External factors: 0	this is 0% of TNRDI
Other/ unknown: 3	this is 60% of TNRDI

Further page to follow will describe in summary style the incidents per category

Fatalities:

November 23rd 2008:

An instructor was doing a training dive with a number of students. At some point an ascent to the surface was commenced and the instructor was unconscious at the surface. Local EMS services tried to revive the diver but he did not survive. This incident is currently investigated by local authorities and any outcome will be published in next years report.

Decompression illness:

June 1st 2008:

After a day of diving on May 31st 2008 a group of 10 divers does a shore dive at 10:00 AM. The buddy teams were 3 teams of 2 divers and one group of 4 divers. The diver involved, age 30, was diving with 3 other divers. Their dive was an easy dive, 50feet+ visibility, and no current. Bottom time was 39 minutes for a maximum of 89 feet and an average depth of 60 feet. The divers in the group were all experienced divers. They used a dry suit and dived on compressed air. The dive was done after a briefing including environment and safety features of the site. At 10:39 the 4 divers came to the surface and the female diver complained about a headache. She then went to the side of the dock and vomited. A diver who had not gone into the water went to her and asked if she was oké. She told him that she just wasn't feeling too well but otherwise oké. The diver prepared the medical oxygen kit for deployment and told her if the symptoms continued or worsened, she was to tell him. Approximately 10-15 minutes later she asked to be given oxygen as she had tingling feeling in her hands. The time she started to breath oxygen was 10:51.

The Coast Guard was contacted and asked for an evacuation to the nearest town. The Coast Guard contacted BC Ambulance and it was decided that a fast response boat was to be deployed. This boat arrived at 11:19 AM. All the time the diver was on oxygen and indicated that she was feeling better, headache gone and tingling lessened. A registered nurse who was part of the dive group monitored her vitals. The case was discussed amongst the people involved. The diver did not want to leave and indicated that she was fine, despite reassurance that everyone was willing to help and it would be good to see a doctor as a precaution. At 12:00 she indicated that the headache had returned and this was after she had been talking to the Coast Guard people off the oxygen for 20 minutes. The Coast Guard called a doctor in the nearest town and the decision was made to bring her into the hospital.
At 12:09 the party left and another diver, who opted to not do the second dive of that day accompanied her. The dive computer was taken to the hospital.

During the evacuation the symptoms of the diver worsened anew she had nausea again. She was re-evaluated at the hospital and was evacuated by helicopter for hyperbaric treatment.
At the hyperbaric chamber she received a 6 hour treatment for type 1 DCI and the symptoms disappeared. She was released with a note that, after reviewing all the information, this was a completely undeserved DCI hit.

Conclusion:

This was one of the rare cases where a diver did not go beyond any limits yet was still hit with DCI. The immediate administration of oxygen certainly was the right thing to do and may have prevented more severe symptoms/effects.

Recommendations:

1) Always have a "ready to go" oxygen kit at hand and people who know how to operate the equipment and know how to administer oxygen.

2) Recognize a potential situation and do not hesitate to call for assistance

3) Realize that many patients feel embarrassed by the situation and stall or want to cancel help. Try to avoid this.

October 10th 2008:

On October 8, 2008. a buddy team of research divers did a boat dive that commenced at 12:07 hr and finished at 12:43 hr - Total bottom Time 36 minutes. Maximum depth reached 29 feet, with the majority of the time spent at the 20-foot depth. The last 5 minutes of the dive was spent at 17 to 10 feet of water. One of the divers used an AGA mask and was in constant communication with the surface support people. The dive was the last dive of the day. The divers had been rotating so no diver did more than two dives a day. However one diver did 3 dives on some days.

The diver involved in the incident did not dive at all on October 9, 2008 has he indicated he felt a flu coming on and a "bit queasy". The diver had one a dive on October the 7th, 22 hours before his dive on the 8th. That previous dive had a max. depth of 69 feet (majority at around 45 feet) with a total bottom time of 40 minutes. A 5 minute safety stop was executed at the end of the dive. The divers used the DCIEM tables and had a computer for backup.
On Oct 10 at approx 7:30 AM the diver noticed tingling in his right hand and a sore elbow. The other divers on the same dives did not report any symptoms.

Treatment: At approximately 08:20 hr. the diver commenced breathing 100% oxygen and continued until 10:15 hr.

Assessment:
At approximately 08:25, on Oct 10, 2008, the diver telephoned DAN - Divers Alert Network, and consulted with a Diving Hyperbaric Specialist. This diving specialist concluded that decompress sickness was unlikely due to the dive profiles, surface intervals and length of time for the onset of symptoms, however, he did not rule out the possibility of an undeserved DCS event. He recommended that then diver consult a physician to see if there were other medical issues.

Transport:
The diver and his buddy were taken by water to the local hospital.

Hospital:
The divers arrived at the at approximately 13:00 hr., Oct 10, 2008; and was assessed by a physician. The physician had diving experience and was certified as a PADI Rescue Diver.
He concluded that it was difficult to determine if this was a Decompression Sickness Incident, or a combination of flu symptoms and lifting heavy objects, (scuba Equipment), which could easily create similar symptoms.
At this point the diver was already starting to show signs of the flu/cold.

The physician recommended rest, taking ibuprofen and refraining from diving until assessed by a Health Canada diving physician.

Follow Up:
The diver eventually developed the flu and determined that he was sleeping with his wrist and elbow bent, which may have caused the tingling in his hand.
The tingling sensations in the right hand gradually decreased over the next day. However, flue symptoms increased.

Conclusion:

Although not determined in a definitive way it seems likely that this might not have been a DSI case at all. The administration of oxygen certainly and contacting DAN was the right thing to do under the assumption that I might have been a DCI case.

Recommendations:

1. Always have a “ready to go” oxygen kit at hand and people who know how to operate the equipment and know how to administer oxygen.

2. Recognize a potential situation and do not hesitate to call for assistance

Illness / injuries:

May 25th 2008:

After two dives in the morning a dive couple ended their dive day. Their first dive was to a maximum of 84' for 60 minutes total including safety stop and the second dive was to a maximum of 76' again for a total of 60 minutes. Their surface interval was 1 hour and 15 minutes and both dives were done with nitrox 32 gas mix. The prior day they made 3 dives. Dive 1: 43 minutes @ 60'maximum depth nitrox 32%. Surface interval 2 hours 17 minutes. Dive 2: 44 minutes @ 85'maximum depth nitrox 32%. Surface Interval 2 hours 26 minutes. Dive 3: 40 minutes @ maximum depth 50'.

On the Sunday after having packed up their gear, a small private boat was used to get them to their point of departure. They departed at 2:50 from the dive operation. After 30 minutes into the boat ride one of the divers started to complain about a tingling feeling in his right hand. He had previously complained about pain in his elbow but he claimed this to the fact that the day before he had hurt his elbow hitting a metal bar.

Since the divers were on a private boat that has nothing to do with diving, medical oxygen was not available. The boat driver contacted the local Coast Guard Radio (CGR). Due to the geographical situation the radio contact was bad. Another private vessel relayed the information and paramedics were requested at the first available marina. The vitals of the patient were fine and the patient was conscious and lucid. CGR deployed a fast responder boat with oxygen on board. The vessel passed the boat on its way to a geographical point that was the first reported position on the initial radio call. The boats never met up most likely due to the poor radio contact. The private boat arrived in the marina at 16:10 and the patient walked to the paramedics. He was then put in the ambulance with his buddy to the local hospital for evaluation. Consequently he was evacuated by helicopter to Vancouver General Hospital for hyperbaric treatment. Strangely the diver did not feel much better after hyperbaric treatment. The next day he went to his doctor and got some medication for his gout and 1 hour after taking this medication he was fine.

Conclusion: The pre existing medical condition of gout most likely caused signs and symptoms similar to DCI and the treatment with oxygen did not resolve nor harmed the situation. The conservative worst case scenario approach was appropriate.

Recommendations:

No recommendations

Equipment and planning:

Equipment:

October 17,2008

A diver was to check out a residential water intake and do some maintenance on the valve. The initial dive was at a maximum depth of 22 feet (6 meter) for 20 minutes. The diver concluded that the inlet valve had failed and a new valve was fetched to be installed. Also the diver was to lift the tripod on which the valve rested and extend the feet. After a surface interval of 2 hours and 7 minutes the diver descended directly to 22 feet and replaced the valve. When lifting the tripod the diver partially inflated his dry suit and BCD to create lift to offset the weight of the tripod. When pressing the button of the BCD whilst holding on to the tripod he heard the inflator being stuck in the open position. This resulted in the diver being too positive. The diver released air from the quick release valve on the back of his BCD whilst swimming downwards. He then released all air from his suit too and sunk to the bottom. On the bottom he wiggled the button on the inflator and was able to stop the airflow in the BCD. He finished the dive and at the surface the BCD was inspected. It turned out that the pin that presses on the valve to allow air into the BCD had salt buildup and thus could not function properly. The mechanism was cleaned reassembled and tested. Everything worked fine and the work underwater was finished.

Conclusion:

Improper maintained equipment may not only fail but create severe buoyancy problems. This in its turn could lead to serious injuries

Recommendations:

1. Rinse all the scuba gear including suit valves after diving with fresh water
2. Follow the manufacturers maintenance recommendations
3. Have maintenance done by trained people or authorized dealers
4. do not use suits or BCDs to lift objects

Other:

No reported cases