

# The British Sub-Aqua Club



## NDC Diving Incidents Report

# 1998

*Compiled by*

*Brian Cumming*

*Diving Safety and Incidents Advisor*

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Diving Incidents Advisor*

### Introduction

This section contains the 1998 Diving Incidents Report, produced by The British Sub-Aqua Club (BSAC) in the interest of promoting diving safety. It is important to note that it contains details of UK diving incidents occurring to divers of all affiliations, plus incidents occurring world-wide involving BSAC members.

#### Report Format

The majority of statistical information contained within this report is also shown in graphical form. Please note that all statistical information is generally produced from UK data only and does not include Overseas Incidents unless noted as 'All Incidents'.

The contents of this report are split into an overview of the year, details of nine incident categories plus some historical analyses. The various sections can be found as shown below;

- i) [Overview](#)
- ii) [Fatalities](#)
- iii) [Decompression Incidents](#)
- iv) [Injury / illness](#)
- v) [Boating & Surface Incidents](#)
- vi) [Ascent Problems](#)
- vii) [Technique Problems](#)
- viii) [Equipment Problems](#)
- ix) [Miscellaneous Incidents](#)
- x) [Overseas Incidents](#)
- xi) [Numerical & Statistical Analyses](#)

Within each category the incidents are listed in the order of their occurrence, not necessarily that of Incident Reference. They are laid out in the following form:

<b>MONTH/YR OF INCIDENT</b>	<b>INCIDENT REF.</b>
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Brief Narrative of Incident.....	
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The nature of many diving incidents is such that there is usually more than one cause or effect. Where this has happened the incident has been classified under the more appropriate cause or effect. For instance an incident involving a fast ascent, causing decompression illness will be classified under 'Decompression Incidents'.

*Brian Cumming,  
BSAC Diving Incidents Advisor,  
November 1998, Updated January 1999*

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## Acknowledgements

The nature of this report requires that data is collected from several different sources. I would like to extend my thanks and appreciation to the following for their assistance in its production and in ensuring its completeness:

- The British Hyperbaric Association
- The Institute of Naval Medicine

- **Phil Wren, Coastguard Sport Diving Liaison Officer**
- **Peter Bradley, The Sea Safety Liaison Officer, Royal National Lifeboat Institute**

and, in particular, all of those divers and other sources who have taken the trouble to complete Incident Reports and share their learning experience with others.

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### **Incident Reports**

If you would like to add to, correct or place a different interpretation upon any of the incidents in this report please put your comments in writing and e-mail them to [safety@bsac.com](mailto:safety@bsac.com) or post to the following address:

The Incidents Advisor,  
The British Sub-Aqua Club,  
Telford's Quay,  
Ellesmere Port,  
South Wirral,  
Cheshire, CH65 4FL.

For new incidents, the minimum information required consists of: **Date Of Incident, Location Of Incident** and the **Nature of the Incident**.

All of this information can be notified initially to BSAC HQ by Email to [divesafe@bsac.com](mailto:divesafe@bsac.com). A more detailed report can be set out on an Incident Report Form, sent on request or on receipt of a Preliminary Incident Report Card. All reports should be to BSAC HQ at the address shown above.

**All personal details are treated as confidential.**

### **Incident Report Forms**

These can be obtained free of charge by phoning BSAC HQ on **0151 350 6200**

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# NDC Diving Incidents Report 1998

## Overview

1998 has seen a continuation of the rise in the total number of incidents that have been reported. In the 1998 incident year (October 97 to September 98 inclusive) we have recorded 431 incidents, compared with 370 in the previous year. At least part of this increase will be due to the improved data capture that has been put in place. As the following chart shows 67% of these incidents have occurred in the summer period; this is entirely consistent with previous years. The only abnormality is the reduction in June and this coincides with a period of poor weather that probably resulted in a reduction in the amount of dives that took place.

This year marked the introduction of the new incident report form and a new database structure. These two changes have allowed for more accurate data analysis and some of this new data is shown in this report, for example the information on depths at which incidents started, which can be found later.

### Fatalities

The report includes 22 UK fatalities of which 6 involved BSAC members. These numbers reflect the trend highlighted last year, namely that the ratio of non BSAC to BSAC fatalities has increased.

Last year 75% of the fatalities involved non BSAC members this year it is 73%. Over the last 20 years the number of non BSAC to BSAC fatalities has been almost equal. In the last two years this has risen rapidly to a

ratio of 3 to 1. Unless we accept the extremely implausible hypothesis that only 25% of UK diving is conducted by BSAC members then the logical conclusion is that, based on these data, there is significantly increased risk associated with diving outside of a 'club' environment. This conclusion is supported by an analysis of the details of the fatalities where a number can be seen to be due to the inexperience of those involved and where it is probable that in a 'club' situation more experienced companions might have prevented a tragedy.

The causal factors behind the UK fatalities can be summarised as follows:-

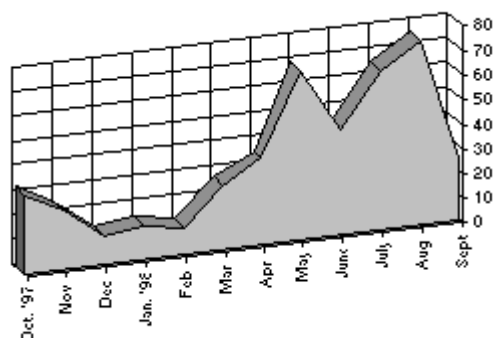
Five of the fatalities (23%) involved people who were diving alone, having entered the water alone or deliberately separating and continuing their dives once underwater. In two of these cases divers apparently re-entered the water, alone (one to recover a mask the other a stuck anchor), and with only 50 bar remaining in their diving cylinders. One of these may also have had his drysuit direct feed disconnected (Note - this comment updated from initial publication due to new information received).

Divers' inexperience was clearly implicated in four of the fatalities, people had placed themselves in situations for which they were not prepared. In all cases the dives in question were well within the normal spectrum of UK diving, but probably beyond the skills of the individuals in these cases.

Once again depth was implicated in fatalities. This year three divers died whilst conducting dives to depths greater than 50m. One was to 57m, one to 75m and the third was to 85m. The last two were using trimix. It is worth noting that only six incidents were recorded this year involving dives to greater than 50m, and 50% of these resulted in fatalities. The serious nature of deep dives has long been understood, this high fatality ratio simple reinforces the point.

Rebreathers are new to the statistics this year and the fatalities associated with them have received wide coverage. This incident report records three fatalities of rebreather users in the UK, and it is pertinent to note that a fourth fatality occurred in the Republic of Ireland. This fourth case is not to be found in this report since it was outside of the UK and did not involve a BSAC member. Additionally, another UK rebreather user became suddenly unconscious whilst underwater and was only saved by the quick action of others. All of these cases involved the same make of rebreather and much of this issue is currently subject to legal proceedings. Until the facts emerge divers are advised to treat this technology with great caution.

Two fatalities involved other activities that are contrary to recommended practice namely re-entry recompression and a high trainee to instructor ratio.



***Monthly Breakdown of All Incidents - 1998***

Three cases involved individuals who suffered major heart attacks whilst underwater. In all three cases the indications are that the individuals were unaware of potential problems and they were at risk of an attack whether they dived or not.

In several cases more than one of the above factors applies.

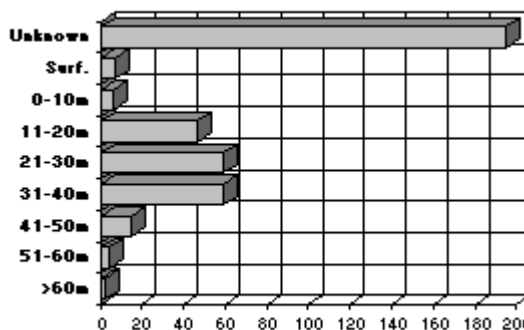
Lastly, in seven cases there is simply not enough information to make a conclusion on the causes of the death. It may well be that a number of the above factors were involved but we will probably never have the information to decided.

I will summarise this section with one simple conclusion. Of the fifteen cases, for which it is possible to make an assessment of the causal factors, only three were probably unavoidable from a dive practice perspective. Those three concern the individuals who had heart attacks. In the other twelve cases it would appear that one or more of the elements of safe diving practice were not being observed.

### Incident depths

The new report form and database format captures both the maximum depth of the dive and the depth at which the incident starts. The following chart indicates the maximum depth of the dive for which an incident has been reported. The pattern of these dives is similar to that reported last year with the predominance of incidents in the 11 to 40 metre range. It is believed that this reflects the amount of diving that takes place in these depths and the BSAC has initiated research to provide more information on this subject.

The next chart shows the depth at which the incident started. Inevitably the data is biased towards the shallower depths since many incidents happen during the ascent or at the surface. Critical among these are the DCI cases where almost always the casualty is out of the water before any problems are noted. This partially explains the large occurrence of 'surface' cases as this includes divers with DCI who have left the water.



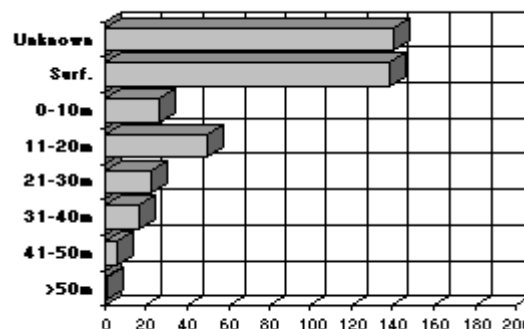
**Maximum Depth of Dive Involving an Incident**

Other surface incidents involve boats and boating incidents. This year saw 62 cases of dive boats with engine problems and another 14 cases of problems with the boat itself. In previous years I have commented on (and so have the Coastguard) the importance of divers carrying good surface location aids, so that if they are lost at the surface they can increase their chances of being spotted quickly.

If divers are underwater when the engine fails then lost divers are often the result since it becomes difficult for the boat to track their progress. It may be relevant to report that although there has been an increase in the number of reported cases of engine failure, the number of reports of lost divers has gone down. Could it be that divers are taking more care with surface detection aids and enabling their boat cover to find them rather than seeking assistance from the rescue services?

In at least one case a strobe light was used by divers to attract attention to themselves, just as it was getting dark. Without this light the result may well have been very different.

Whilst on the subject of divers lost at the surface, it is worth noting three cases where divers have been left in the water by diving trip boat operators. In all cases the divers were 'lone pairs' in a mixed diving party, involved in a day's diving trip, unknown to others in the party. In all cases their absence was not noted by the boat operators and they left the site assuming that they had recovered all of their customers. You will find one



**Depth at which Incident Started**

such case in this report, but I am aware of two other instances (these are not reported in the body of the report because they do not meet the criteria of UK or BSAC member).

In the case in this report the divers were picked up by a lifeboat.

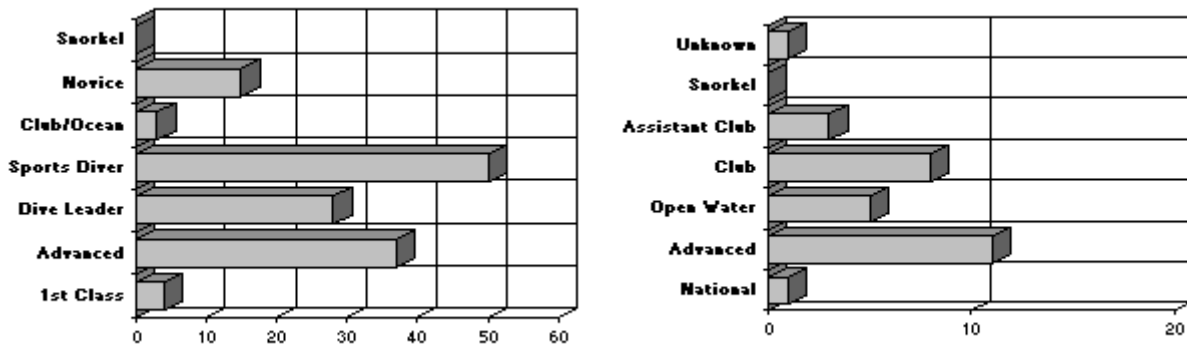
In one of the other cases the divers were spotted by others on the boat and the boat returned for them.

The third case is from Australia. Here the divers were only missed two days later. They had been diving some forty miles off shore and they were never found.

Divers' use of 'trip boat' dives of this nature is on the increase; just be sure when you enter the water that there is someone on the boat who is aware of your presence and will account for your return.

### Diver Qualifications

The next two charts show the qualification of those BSAC members who were involved in reported incidents.



### Qualification of the Divers Involved in Incidents   Qualification of Instructors Involved in Incidents

It is important to note that these divers were involved in the incident but this does not necessarily mean that they suffered the effects of it. Some were involved as rescuers or in some other indirect way.

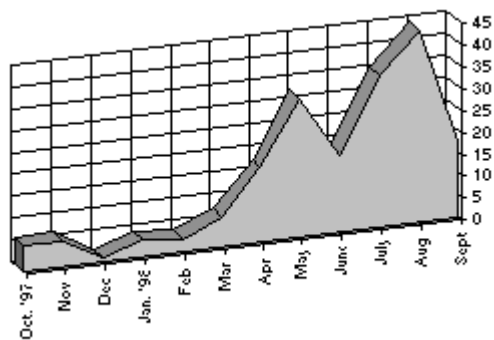
An analysis of incident by diver qualification shows that no grade of diver, from novice to instructor is immune to problems. It is all too easy to make the assumption that only inexperienced divers get into problems, but the chart shows that this is not so.

Although it suggests that divers at the level of Sports Diver are the most prone to problems one must be careful in the interpretation of these data. The picture is clearly distorted by the numbers of members that we have at each of these grades. It is very probable that the largest single group of members are Sports Divers, hence the high incidence of problems.

What is clear from this information is that about half of the incidents (69 out of 146: a little down on last year) where the diver's BSAC qualification is known involve divers with more than average experience. Given that this group is probably less than half of our membership it means that you are more likely to experience problems as your experience increases! One explanation for this, as you will read in the text of this report, is that as divers gain in experience so they push the limits of their diving, and this can lead them into difficulties.

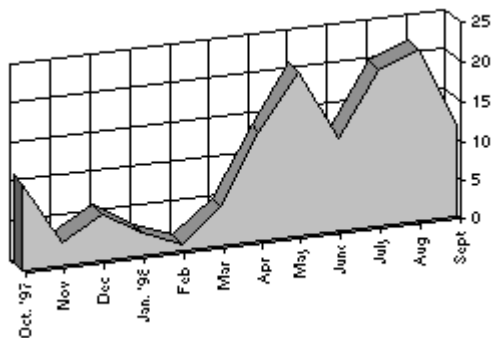
### Divers' use of the Emergency Services

Divers' use of the rescue services shows a monthly distribution aligned to the distribution of all incidents, and is clearly correlated with the number of dives that are taking place. Our demands upon the Coastguard service was typical for the year, as were our calls upon the services of the RNLI.



Total Coastguard Incidents: 191

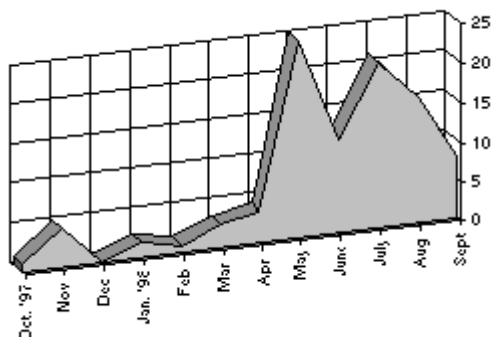
**UK Incidents involving The Coastguard Agency - Monthly Breakdown**



Total Lifeboat Launches : 130

**Diver's Use of RNLI Facilities by Month**

Also very similar to last year is divers' need for assistance by helicopter. There were two main reasons for this; firstly transport of divers with DCI to recompression facilities and, secondly, for the location of lost divers.



Total Helicopter Call Outs : 98

**Diver's Use of SAR Helicopters by Month**

**Decompression Incidents**

The BSAC database contains 104 reports of DCI incidents, some of which involve more than one casualty. When these multiple cases are counted the result is 120 incidents of DCI. 43% of these incidents involve diving to depths greater than 30m, 31% involve rapid ascents, 20% involve missed decompression stops, and 15% are associated with repeat diving. Some cases involve more than one of these causes. 16% are reported to have been within the limits of tables or computers.

The BSAC and the British Hyperbaric Association / Institute of Naval Medicine share data on an annual basis to seek a more complete picture of the numbers of DCI cases that have occurred. The BHA / INM database contains 131 cases of DCI in this period, 14 cases of omitted decompression and 46 cases where DCI was suspected and subsequently proved to be otherwise. Confidentiality issues prevent a full reconciliation of the BSAC and the INM / BHA data, but the best estimate that I can make of the total number of UK DCI cases is 190.

In their review of the data, the INM highlight an increasing trend in 'omitted decompression', and they postulate a link with the numbers of people undertaking 'extended range diving' and the use of large capacity twin sets.

**In Conclusion**

Please read the detailed reports in this booklet carefully and use them to learn from others' mistakes. It is a lot less painful than making the same mistake yourself.

Finally, if you must have an incident please report it on our **new** Incident Report form, available free from BSAC HQ. Your experience can help others to avoid the same problem, and your anonymity is assured – great care is taken to preserve the confidentiality of any personal information disclosed in BSAC Incident Reports

# NDC Diving Incidents Report 1998

## Fatalities

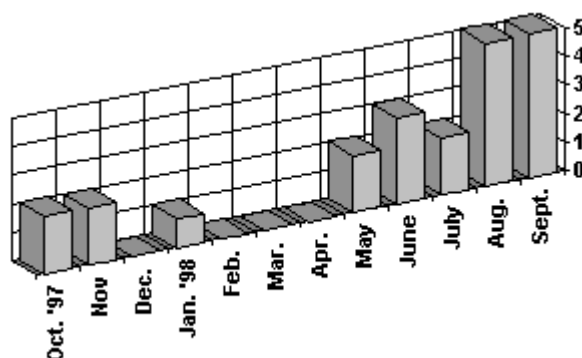
### October 1997 98/008

Two divers started a dive to 18m. At a depth of 7m the mask of one of them started to flood. After 15 mins they surfaced to clear the mask, which had been fitted over the diver's hood. They re-descended. At 18m the diver who had had the mask problem indicated that he was out of air. They started to ascend and the diver without air went up quickly. His buddy lost sight of him in the bubbles and sunlight. As the buddy ascended he saw a diver descending feet first but did not realise that this was his partner. At the surface he raised the alarm. The lost diver was recovered 15 mins later, unconscious, from 20m, by a search team. He was taken to hospital but failed to recover. It is believed that both divers had only five dives experience, and this was their first in UK conditions.

### October 1997 98/015

Two divers dived to a depth of 35m. One diver had only five previous dives. He panicked and became unconscious underwater. His buddy brought him to the surface. Resuscitation attempts were unsuccessful. (Newspaper report only)

### UK Fatalities - Monthly Breakdown From October 1997 to September 1998 incl.



### November 1997 98/025

Three divers entered the water having planned that two would dive to 40m and that the third would continue to 57m, on his own, to explore some caves. The dive continued as planned and the third diver continued down alone from 40m. The pair was engaged in taking photos when one of them saw the third diver slightly above him, 10m away, in distress, 'rolling and kicking'. The pair went to help and as they approached the distressed diver's regulator fell from his mouth. They tried to replace it but it was rejected. When purged no air flowed so they tried the distressed diver's second regulator, this was rejected and flowed only a small amount of air when purged. One of the pair offered their own pony cylinder, but by this time the distressed diver had become unconscious. The casualty was lifted to the surface using the buoyancy of one of the other divers, since the casualty's own direct feeds would not provide air. At the surface, other divers assisted to tow the casualty to the shore. Resuscitation was administered to the casualty until an ambulance arrived about 15 mins later. The diving pair had missed stops. They were given oxygen and flown to a recompression facility for treatment, although neither showed any symptoms. The casualty failed to recover. The casualty was using two 10l cylinders which had shown 210 bar and 80 bar during pre dive checks.

### November 1997 98/063

A diver was reported missing from a dive from a local charter boat. Three divers had undertaken a fairly shallow dive but one had experienced problems and surfaced with the more experienced one. The remaining diver did not surface and a search underwater proved unsuccessful. A lifeboat, ferry, Coastguard teams and many surface units failed to find the diver.

### January 1998 98/064

Two divers commenced a dive in a quarry to a depth of 27m. They conducted a thorough buddy check and another check at 5m. At 27m the regulator of one of the divers started to free flow. This diver was given his buddy's pony regulator and the buddy turned off the cylinder of the free flowing regulator to stop the confusion of bubbles. The diver giving air took charge of the ascent and neither took action to dump air from the sharing diver's BC. In the later stages of the ascent this diver became very buoyant and 'shot' to the surface. The



pony regulator was pulled from his mouth and he may have temporarily lost consciousness. Both divers arrived at the surface and decided to re-descend to make a slower ascent. The cylinder of the free flowing regulator was turned on but it continued to free flow so the second descent was made with the other diver's pony regulator. It is thought that their re-descent took them to 35m, and they decided to make an ascent up the slope of the quarry. After ascending only 5m the pony cylinder ran out of air. The sharing diver signalled this to his buddy. He remembers taking in water and then 'a strange pleasant sensation and everything going dark'. His next memory is being back at the surface. He believes that his buddy opened the cylinder on his BCD thus causing him to ascend. He also expressed concern that he may have kicked his buddy. He was flown to a recompression facility but was not recompressed. The buddy diver failed to return to the surface. The lost diver's body was recovered the following day by police divers from a depth of 35m. The coroner reported death by drowning. It is reported that this diver mask was in place but that his main cylinder was turned off (the latter from press reports). The water temperature was reported to be 8 deg C.

#### **May 1998 98/160**

A diver failed to surface after a Trimix rebreather dive to 75m. He started to dive with two others who were using open circuit equipment, but they separated during the descent. The two other divers surfaced without incident. Sub surface and surface searches were unsuccessful and a team of technical divers were called in. On the second day of searching they located and raised the diver.

#### **May 1998 98/162**

An instructor and four trainees were descending a shotline to a wreck in 30m of water. One of the trainees got into difficulties and he was taken to the surface by the instructor. One of the remaining three then became tangled in a distance line and, shortly afterwards ran out of air. Another diver gave him his octopus regulator but at some point the mouthpiece came away from the second stage. They then started to share a regulator. This was not successful and one or both started to panic. The instructor returned and recovered the diver who had run out of air, unconscious, from the seabed. He brought the casualty to the surface. Resuscitation attempts were made. All five were flown by helicopter to a naval hospital where the unconscious diver was pronounced dead.

#### **June 1998 98/175**

Two divers were diving to a depth of 20m. Once one of them was down to 100 bar they started back towards the surface as planned. At 15m one of the divers indicated a problem with her buoyancy. Her buddy put air into her suit. They continued to 11m where she indicated that she was having problems breathing. Her buddy offered his alternative air source but this was pushed away. The distressed diver started to panic. The buddy managed to get to the surface but the panicking diver sank. She was recovered by other divers within minutes from 20m, but resuscitation attempts failed.

#### **June 1998 98/181**

Three divers conducted a wreck dive to 34m. After about 17 mins and at a depth of 25m they agreed to start their ascent. At about 20m the dive leader could see the other two divers in front of him. He then reached for a pocket in his suit and deployed a delayed SMB. When he looked back from this one of the divers was missing. Neither of them had seen the third diver go. They looked all around and concluded that he had ascended. They completed their ascent. At the surface they were recovered into their boat and discovered that the third diver was missing. They conducted a search and then alerted the Coastguard. An extensive surface search involving 5 lifeboats, 3 helicopters and many other surface craft failed to find the missing diver. The strong current prevented other divers from returning to the wreck. Later navy divers searched the site, but the missing diver was not found. This diver had been using a rebreather, the other two normal open circuit air sets.

#### **June 1998 98/200**

Two divers conducted a shore dive. About 40m off shore one indicated that she had a problem with her mask. Once at the surface the buddy towed her to the shore. At the shore she had difficulty breathing and lost consciousness. Resuscitation procedures were started and the emergency services alerted. She was flown by helicopter to a hospital where she died. It was subsequently revealed that the casualty had had a heart attack. The cause of death; heart attack and partial drowning. (Newspaper reports only)

#### **July 1998 98/187**

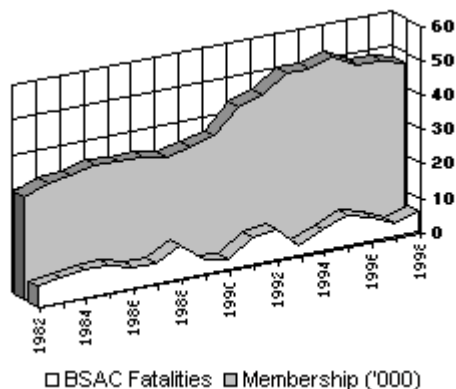
A diver entered the water, came to the surface, waved and then sank. It is thought that he then became snagged on a shotline a few meters below the surface. His buddies recovered him from the water, but he failed to respond to resuscitation techniques.

#### **July 1998 98/244**

Two divers on a drift dive descended to their target depth of 22m. As they went they paid out the SMB line. They exchanged OK signals during the descent. At the bottom one of the divers signalled OK to the other but got no response. He took hold of this diver and turned him round. His regulator was in place but he was not

breathing. There was no body movement, his face was blank. The diver put some air into his BC and brought the casualty to the surface. He signalled the boat for help and commenced artificial ventilation of the casualty. The boat was soon alongside but they were unable to get the casualty on board. AV was continued in the water. The Coastguard had been called and a helicopter launched. Another boat arrived and they managed to get the casualty on board. Resuscitation continued and he was evacuated by helicopter to hospital. He was declared dead on arrival. He had suffered a major heart attack during the descent.

#### **BSAC Fatalities Against Membership 1982-1998 - (UK Data only)**



#### **August 1998 98/250**

Two divers dived to a wreck at a depth of 50m. When they were 45 mins over due the diveboat skipper contacted the Coastguard. An extensive search was organised involving two helicopters, four lifeboats and a Royal Fleet Auxiliary ship. Navy and civilian divers searched the wreck. The divers were not found. The search was called off two days later.

#### **August 1998 98/257**

A diver had completed a dive on a wreck at a depth of 26m. Once out of the water he accidentally dropped his mask overboard. He re-entered the water to go down to retrieve the mask but he failed to re-surface. It is alleged that on re-entry he only had 50 bar in his diving cylinder, and he may also have had his BC direct feed disconnected. (Note - this comment updated from initial publication due to new information received) Other divers recovered the casualty and resuscitation attempts were made, but these failed.

#### **August 1998 98/264**

After a dive to a wreck, two divers exchanged the signal to surface. One of them failed to reach the surface. Other divers were unable to descend because of the increasing current. He was not found.

#### **August 1998 98/265**

After a dive to 30m a diver descended again to free a stuck anchor. He made this dive alone with 50 bar in a 15l cylinder. His bubbles were observed for 10 mins then ceased. A navy search team later found his, apparently ditched, aqualung. The body has not been recovered.

#### **September 1998 98/269**

Three divers completed a dive, one using a rebreather. As the dive was ending one of the divers dropped a reel, and the diver with the rebreather went down to recover it. He did not return and the emergency services were alerted. Other divers conducted a search but kelp and increasing darkness prevented them finding the missing diver. His body was recovered the following day from a depth of 3m. His mouthpiece was in place, the oxygen cylinder is reported to have been turned off. Death was found to be due to drowning.

#### **September 1998 98/317**

An ex-club diver had been checking his mooring in about 5m when he surfaced unconscious. A local fishing vessel took him aboard and transferred him to the lifeboat where the doctor on the lifeboat was unable to resuscitate him. (Coastguard report)

#### **September 1998 98/274**

A 999 call was received from a group of divers reporting one of their party missing. Two lifeboats and a Helicopter were tasked to search. One of the lifeboats took the divers back to scene where they conducted an underwater search. In the meantime the other lifeboat located the diver on the surface. The lifeboat took the diver back to shore where the Doctor pronounced him dead. (Coastguard report)

#### **September 1998 98/291**

Two divers completed a dive to 20m for 18 mins. 5 hours later they commenced a second dive. 5 mins into this dive at a depth of 15m they exchanged signals to ascend. One of the divers came rapidly to the surface

but the other did not surface. A search followed and the second diver was found minutes later in 26m with his regulator out of his mouth. He was brought to the surface but failed to respond to resuscitation attempts.

**September 1998 98/309**

Two divers conducted a wreck dive to 85m, one using open circuit trimix, the other a rebreather. After 21 mins they started their ascent up the shotline. It is believed that at 50m the diver on trimix experienced a malfunction of his BC and it started to inflate. He was unable to control this and made an ascent directly to the surface. At the surface he attempted to deflate his BC in order to conduct re-entry decompression. He could not deflate the BC. He passed out and was recovered into the boat. Resuscitation attempts were started and assistance requested from the Coastguard. The boat could not leave the site because the other diver was still underwater. Another boat arrived to cover the decompressing diver and the casualty was taken ashore but failed to recover. The other diver completed 83 mins of decompression and was recovered safely.

# NDC Diving Incidents Report 1998

## *Decompression Incidents*

### **October 1997 98/319**

A diver was engaged in a training course. A series of six dives were conducted over 2 days. During one of these dives decompression stops were missed because another diver became disorientated and conducted a buoyant ascent. The following day the diver felt ill and was taken to a recompression facility for treatment. Significant residual symptoms remain.

### **October 1997 98/325**

A rapid ascent from 10m led to an airlift for treatment for a diver. (Coastguard report)

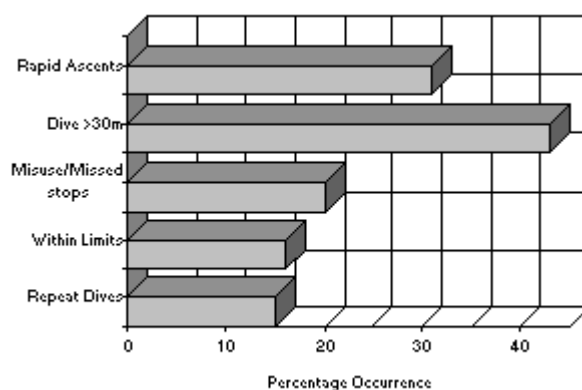
### **October 1997 98/326**

An urgency call was received reporting a diver with severe symptoms of DCI. The lifeboat intercepted the dive vessel and the diver was taken for treatment that lasted for 60 hours. Uncertain if total recovery will be made. (Coastguard & RNLI report)

### **October 1997 98/049**

At the end of a week's diving a diver conducted two dives, the first to 44m for 35 mins with 21 mins decompression at 6m, the second to 35m for 41 mins with 7 mins decompression at 6m. All stops were conducted with nitrox. 2 hours after the last dive the diver noticed a pain in his right shoulder. He placed himself on oxygen for 30 mins but no improvement was achieved. He underwent a medical examination and was flown to a recompression chamber. Treatment resolved all symptoms. After a further 20 hours he noticed pain in his left ankle and was again recompressed. After this final treatment no further symptoms were experienced.

***Percentage Analysis of Factors Involved in Cases of DCI***



### **October 1997 98/050**

A diver conducted two dives to a depth of 33m. The first for 20 mins with 2 mins decompression at 6m, the second, 5 hours 53 mins later, for 28 mins with 8 mins decompression at 6m. As he was returning to the shore he felt dizzy and could not walk unassisted. He reported a 'funny' noise in his right ear. He was sick. He laid down to sleep for the night. At 6.30 the following morning he still felt unwell and rang HMS Vernon for advice. He was advised to report to the local hospital for examination. The diver was given two periods of recompression over two days. He was advised that he may have had an inner ear barotrauma. He reports that this treatment made no difference to his condition and that further specialist advice is being sought. He was advised to refrain from diving for 6 months.

### **October 1997 98/062**

Three divers were diving together to a depth of 20m. Two were connected by a buddy line and the third holding hands with one of the other two. They started an ascent and one of the divers on the buddy line was incorrectly weighted and too heavy, and he put air into his BC to compensate. He then became too buoyant and made a rapid ascent from 6m to the surface, dragging the other diver up with the buddy line. The next day the diver who had been dragged to the surface experienced a tingling in his legs, he sought expert advice and was referred to a recompression facility. He was found to have no abnormal neurological conditions but was recompressed. This resolved the symptoms. The other divers were unaffected.

**November 1997 98/091**

Diver airlifted (100 miles) for treatment after a rapid ascent from 33 Metres. (Coastguard report)

**November 1997 98/093**

Recompression treatment was given to a diver following consultation with Aberdeen. This diver had suffered concussion 2 days before the dive was asthmatic and had a previous untreated bend. A brain scan showed a possible fractured skull and recompression treatment was carried out over 2 days. Dive was to 32 metres. (Newspaper report)

**November 1997 98/014**

Four divers went to a depth of 17m. After a short time at this depth they conducted the beginning of an assisted ascent, as a training drill. One of the divers closed the dump valve of his drysuit during this period. They then started a gradual ascent following a gently sloping bottom. The diver with the closed valve became buoyant and was unable to prevent himself being taken to the surface. The three buddies followed him. His computer recorded a fast ascent. Total dive time 15 mins. They re-descended to a depth of 7m and conducted mask and regulator clearing exercises. They practised a controlled buoyant lift and conducted another fast ascent with another computer warning. Total duration of this dive 5 mins. At the surface they practised towing and AV. After a 1 hour 40 mins surface interval they conducted another dive to 17m. They got lost underwater and surfaced to get their bearings. One of the divers again had difficulty controlling his ascent rate and got a third computer warning. They re-descended to 7m and completed the dive. Total duration on this occasion 21 mins. Later that day the diver who had made the fast ascents began to feel light-headed and unsteady. A little later he developed a tingling sensation of the skin on both hands. He took two aspirin. He went to the local hospital casualty department. The tingling developed in both legs. He was placed on oxygen and given a series of medical tests. He was transferred to a recompression chamber and recompressed of 2 hours 30 mins on oxygen. The symptoms persisted after recompression and took a further two days to fully resolve.

**November 1997 98/107**

After a series of dives over a weekend, a diver surfaced from a 24m dive. The dive duration was 38 mins including 2 mins decompression. 17 hours had lapsed since the previous dive. 2 hours later the diver felt unwell and vomited. The following day the diver still felt unwell. Two weeks later he still had aches and pains in shoulder and elbow. He reported to a hospital casualty department and was referred to a recompression facility. He received recompression treatment.

**November 1997 98/330**

A lady recently back from a diving trip to the Red Sea reported to Hospital with symptoms of DCI. The Coastguard was asked to assist in the evacuation to the recompression facility at Millport. (Coastguard report)

**November 1997 98/080**

12 mins into a dive and at a depth of 35m the inflation valve of a diver's drysuit stuck in the open position. The diver was forced into a rapid ascent to the surface. He quickly experienced a pain in the back of his legs and was recompressed. This resolved his symptoms.

**November 1997 98/073**

A diver conducted a dive to 16m for a duration of 25 mins. 2 hours 5 mins later he again dived to 15m for 17 mins. During this second dive the diver became buoyant and ascended rapidly from 6m to the surface. He was unable to dump air from BCD or drysuit, and believes that air was trapped in his drysuit, possibly below his weightbelt. 5 mins later he dived again to recover a shot weight that had become stuck. He carried / 'bounced' the shot weight (15kg) up a slope to a depth of 3m. Exhausted he swam ashore and dekkitted. Early the following morning he experienced a dull ache in his shoulder. He sought medical advice and was recompressed. Subsequent tests revealed no abnormalities. Some pain remained two weeks later.

**January 1998 98/100**

After a dive to 22m for 48 mins a diver was at 18m when he ran out of air. His contents gauge still showed 40 bar. He shared air with his buddy and they surfaced missing decompression stops. The following day the diver reported 'pins and needles' in his shoulder and was advised to contact a recompression facility. It is not believed that this diver was recompressed.

**January 1998 98/094**

Shore dive to a wreck at 46 metres with an elapsed time of 32 mins resulted in a diver having a vestibular embolism. This diver missed 55 minutes of stops but the computer read OK. (Coastguard & RNLI report)

**January 1998 98/096**

During a training dive to 34m using nitrox 30 a diver's regulator froze and started to free flow. His buddy took hold of him and they started to ascend. At 15m buoyancy control was lost and they descended again to 27m.

At this point the diver with the free flow indicated urgently that he had on 70 bar left in his cylinder. The buddy was unable to release his octopus regulator. The buddy vented all the air from his own BCD and suit and taking a good grip on the diver with the free flow he opened the emergency cylinder on the BCD of the free flowing diver. They reached the surface safely. 1 hour 40 mins later they again dived to 22m for 20 mins, using air. During the ascent one diver conducted 7 to 8 mins of decompression stops at 5m. The second did not complete stops. On surfacing the first diver carried out a towing exercise on the second. The following day the first diver awoke feeling tired with a mild pain in his left shoulder. Towards the end of the day the pain worsened, the diver sought medical advice and was recompressed.

#### **January 1998 98/103**

Two divers required treatment after one of them ran out of air at 29 metres and both made a rapid ascent missing stops. (Coastguard report)

Two divers were at 30m when one had a problem with her air supply and became unconscious. Her buddy brought her to the surface. Both divers were flown by helicopter to a recompression facility for treatment. The unconscious diver recovered. (Newspaper report)

#### **February 1998 98/123**

Two divers who had dived a Loch on the West Coast earlier in the day began to feel unwell once home on the East Coast. An ambulance took them to the local hospital then they were airlifted to Aberdeen for treatment. (Coastguard report)

#### **February 1998 98/333**

Following a no stop dive to 30m one of the group reported his computer was showing SOS but was showing no symptoms. He was given oxygen and the Coastguard was contacted for advice. This was passed on from the duty dive doctor in Oban and the diver was advised not to return home via the mountain pass road straight away but to delay and report to doctor as soon as possible. (Coastguard report)

#### **February 1998 98/120**

Five divers commenced a dive to a maximum depth of 35m. 20 mins into the dive they ascended to 22m, at this point one diver left the group, as planned, and ascended to the surface. At 45 mins the other divers started to decrease depth to 18m. After 50 mins they ascended a shotline to 15m and started decompression. They switched to nitrox 50. 1 min later they ascended to 6m, now 61 mins into the dive. At 74 mins one of the divers was observed to be suffering from the cold and failed to respond immediately to signals. She was shivering and indicated that she wanted to leave the water. At 80 mins this diver was showing signs of stress, and a slow ascent was started. They arrived at 3m at 84 mins and were back on the surface at 86 mins. Out of the water the diver complained of cold and shortly afterwards of 'pins and needles' in her hands, and an ache in her right shoulder. She also had a mottled rash on the right side of her chest. She could not grip with her right hand. This diver was recompressed. She is thought to have had an oxygen convulsion whilst in the chamber. A full recovery was made.

#### **March 1998 98/119**

Two divers completed a dive to 20m for 33 mins with no stops. 1 hour 18 mins later they dived again to 20m and conducted two controlled buoyant lift drills from 20m to the surface. The total time of this second set of dives was 16 mins. The following day three short dives were conducted to a maximum of 6m for periods of 9, 3, and 11 mins. The following day one of the divers noted a tingling and numbness of the left cheek. This spread to include the left arm and thigh. He sought medical advice. Early the following day he received recompression treatment, with further treatments over the next two days.

#### **March 1998 98/340**

An uncontrolled ascent on a training dive from 17m caused an arterial gas embolism and the casualty was evacuated by helicopter for treatment. (Coastguard report)

#### **April 1998 98/132**

A diver conducted a dive to 27m for 27 mins. 1 to 1 hour 30 mins later he conducted another dive to 20m for 30 mins. Overnight he experienced a numbness in his right hand, pins and needles, and then the same in his shoulder and neck. He sought medical advice and was recompressed. He was kept overnight in hospital. The following day he still had problems with his right hand, neck and face, and further recompression was conducted. During recompression the symptoms came and went. It was subsequently concluded that bruising not DCI may have been the cause.

#### **April 1998 98/342**

A surface interval of less than one hour between dives to 27m contributed to a diver suffering DCI with partial paralysis. The early administration of oxygen proved very beneficial and after treatment made a full recovery. (Coastguard report)

#### **April 1998 98/343**

Following an uneventful dive to 28m with all stops carried out, a diver felt unwell on surfacing. Helicopter evacuation was made and 7 hours of treatment. (Coastguard report)

#### **April 1998 98/345**

A missed decompression stop after a 31m dive resulted in an airlift for extended treatment. (Coastguard report)

#### **April 1998 98/136**

33 mins into a wreck dive to a maximum depth of 36m a diver became separated from his buddy. He checked around and then started an ascent. At 15m he deployed a delayed SMB. He started to sink back down and put air into his drysuit. Winding the SMB line in he arrived at 9m where he discovered that the inlet valve to his suit had jammed and was continuing to let air flow. He tried to disconnect the hose but could not. He tried his shoulder dump but that would not release air quickly enough. He made a rapid ascent to the surface. Recovered into the boat he was placed on oxygen. 5 mins later he experienced 'pins and needles' over his whole body. He was flown by helicopter to a recompression facility for treatment.

#### **May 1998 98/356**

Problems with DV at 56m caused a diver to ascend rapidly missing stops. The CG helicopter airlifted him for treatment at Haslar. (Coastguard report)

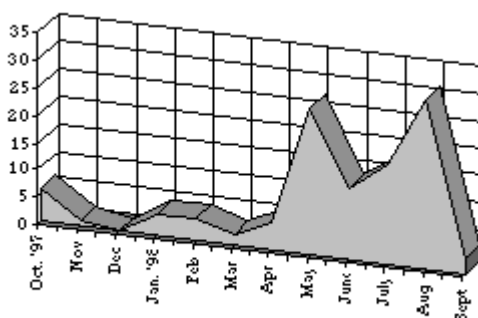
#### **May 1998 98/154**

A short while after a dive to 18m for 30 mins, with 1 min stop at 6m, a diver reported a loss of feeling to his left arm, side and leg. He was placed on oxygen. Diver and buddy were flown to a recompression facility and the casualty was recompressed.

#### **May 1998 98/141**

Two buddy pairs dived together to a depth of 35m. After 1 min at this depth, one of the divers signalled that she did not feel happy. She was seen to be in some distress. A normal ascent was made including a 2 mins stop at 6m. Once ashore the casualty was quiet and had some dizziness, was cold and felt unwell. 1 hour later she was worse and was taken to the local hospital. She was flown from here to a recompression facility. A suspected cerebral bend was diagnosed and she was recompressed. The site is a quarry at a height above 250m above sea level.

#### **Decompression Incidents by Month**



**Excludes BHA / INM data**

#### **May 1998 98/145**

Two pairs of divers entered the water to dive to a wreck, their maximum depth was to be 54m. They descended the shotline and the water became very dark. At 45m the shotline was horizontal. One of the divers swam ahead and then turned to check his buddy. He could see torch lights behind him and he returned to his buddy, the depth was 54m. The buddy indicated that he was not happy and ascend signals were exchanged. The buddy's hand was gripping the shotline tightly and had to be released. He was not responsive and the first diver went to inflate his buddy's suit. He could not do this since the inflator had come off the suit and they sank to the bottom at a depth of 60m. He managed to refit the inflator and, with the buddy still unresponsive, he closed the auto dump on the buddy's suit and started to bring them both to the surface. They ascended quite rapidly to about 35m and switched to their second cylinders since both were low on air. At 12m they deployed a delayed SMB and ascended to 6m. The distressed diver wanted to go directly to the surface but his buddy restrained him and they completed 6 mins of stops with the rescuing diver using 75% nitrox. Back on the boat the distressed diver was given oxygen and the other continued to breathe his 75% mix. The distressed diver complained of pain in the arm and 'pins and needles' in the hip area, the other diver had 'pins and needles' in his eye socket. Both were flown by helicopter to a recompression facility, both were

recompressed, with the distressed diver needing a second recompression treatment.

**May 1998 98/205**

Two divers were on a wreck at a depth of 30m. After 10 mins they started to make their way back to the shotline. At this point one of the divers had a problem clearing her mask and in trying to resolve the problem knocked her own regulator from her mouth. She panicked, inflated her BC and made a buoyant ascent to the surface. The other diver was reeling a distance line and did not see this happen. When she discovered her buddy missing she cut the distance line and made her ascent. At the surface both divers were recovered into boats. The diver who had made the rapid ascent was placed on oxygen and Coastguard assistance was called. The casualty was airlifted to a recompression facility.

**May 1998 98/357**

Inadequate surface intervals were contributory factors to this diver requiring extended treatment. He was airlifted 70 miles by the Coastguard helicopter for treatment at the Dunbeg facility. (Coastguard report)

**May 1998 98/359**

Another rapid ascent, this time due to dump valve failure on a second dive at 28m caused pain and tingling down a diver's upper right torso. First dive of the day was to 48m. Surface interval unknown. Airlifted for treatment at Poole. (Coastguard report)

**May 1998 98/150**

A diver conducted a series of four dives over a two day period. The fourth dive was to a depth of 33m for a dive time of 31 mins. They made a rapid ascent from 18 to 11m due to a jammed delayed SMB reel. They completed 6 mins of decompression stops. 1 hour after the dive one of the divers reported an itching rash. He was placed on oxygen and given fluids. He was taken to a recompression facility and received treatment. He was subsequently advised not to dive for two months.

**May 1998 98/360**

After missing a stop a diver carried out in water recompression on nitrox 80. Diver later taken by road to the Poole facility for treatment. (Coastguard report)

**May 1998 98/362**

Either accidental or equipment failure of stab jacket inflation caused a rapid ascent during which the diver held his breath resulting in an embolism. The diver was airlifted to Poole for treatment. (Coastguard report)

**May 1998 98/198**

A diver conducted a dive to 28m for 31 mins including 2 mins stops at 6m. Shortly after this dive, back in the boat, he began to feel seasick and was unable to stand steadily. He started to go deaf in his right ear and had tinnitus. He was placed on oxygen, the Coastguard was alerted and the boat returned to harbour. He was transported to a recompression facility and received a course of 6 treatments. He spent a week in hospital but made a good recovery. The diagnosis was a vestibular bend. He recalls having to work hard during the ascent, his computer print out shows a high breathing rate, and it is postulated that this increased his nitrogen uptake and thus promoted the bend.

**May 1998 98/166**

A diver with DCI was taken to a recompression facility. (Newspaper report only).

**May 1998 98/168**

A diver surfaced after a dive to 14m with chest pain. She managed to struggle to rocks but briefly lost consciousness. She was rescued by helicopter and taken for recompression treatment. (RNLI & Newspaper report)

**May 1998 98/169**

A diver who became separated from the group ascending the shot line from a depth of 30 metres made a fast ascent and surfaced semi-conscious with pain in the shoulder and knee. The diver was airlifted for extended treatment at Plymouth. (Coastguard report)

**May 1998 98/365**

Following a dive to 17m a novice diver under supervision displayed signs of DCI although dive was well within limits. Airlifted for precautionary treatment. (Coastguard report)

**May 1998 98/366**

Another precautionary recompression for a diver whose dive profile was normal and buddy was unaffected. (Coastguard & RNLI report)



**May 1998 98/267**

After a dive to 31m for a total of 27 mins, including 1 min stop at 3m, a diver noticed a loss of feeling in his legs for a short time. He was given oxygen, the symptoms lessened. An unusual sensation remained and two days later the diver sought medical advice from a recompression facility. He received three sessions of treatment, the third session made no change to the residual symptoms. These subsequently gradually became fully resolved.

**May 1998 98/174**

Diving to 36 metres and missing a stop resulted in evacuation of a diver initially by ambulance to hospital then by helicopter for treatment in Plymouth. (Coastguard report)

A diver on her first dive of the day, surfaced missing decompression stops. Once ashore she complained of 'pins and needles'. She was given oxygen and taken to hospital by ambulance. She was then flown to a recompression facility for treatment. (Newspaper report)

**May 1998 98/368**

Two divers missed all stops after a dive to 36m and were airlifted by CG helicopter for treatment. (Coastguard report)

**May 1998 98/369**

On returning to shore a diver developed a rash and aching to the shoulders. The ambulance was called and transported the diver to a waiting Coastguard helicopter for transfer to Poole recompression. (Coastguard report)

**May 1998 98/185**

Two divers completed a dive to 37m for 61 mins, including 24 mins stops. 5 hours 37 mins later they again dived to 37m for 24 mins. During the ascent from this second dive, one of the divers lost control of his buoyancy and ascended directly to the surface missing 4 mins of stops. He was recovered into a boat and given oxygen and water to drink. The diver had no symptoms and returned home. Later he decided to seek medical advice and he was given four sessions of recompression treatment. His buddy had correctly completed his stops, but the following day felt 'pins and needles' in his hands and feet. He too was given precautionary recompression treatment.

**May 1998 98/204**

Two divers planned a drift dive to 25m in a 1 kn. current with a 24 min dive time. They found the seabed at 32m and the current 2 kn. After 20 mins one of the divers had only 70 bar remaining, they began their ascent. After 23 mins they were at 22m, the 70 bar cylinder was down to 10 bar, and the other diver had 50 bar. They shared air using an alternative air source. Difficulty was experienced reeling in the SMB line. The pair then touched the seabed at 27m with the remaining air at 30 bar. They finned for the surface and ignored the SMB reel. They slowed their ascent at 10m but surfaced at 26 mins, having missed 2 mins stops at 6m. They were recovered into the boat, which had no oxygen. The engine took 45 mins to start. Neither showed signs of DCI in the boat. 2 hours later one developed a tingling in his fingers and another hour later the other had joint pains in his elbow. They were taken to a recompression facility but it was decided that no treatment was necessary. They were advised not to dive for 24 hours.

**May 1998 98/177**

A diver completed a series of two dives with a 3 hour 45 mins surface interval. The first was to 19m for 50 mins with a 1 min stop at 6m. The second was to 31m for 40 mins including 1 min at 9m, 5 min at 6m and 1 min at 3m. 2 hours after the last dive he had a pain in his right shoulder and a skin rash. The Coastguard was alerted and the casualty was given recompression treatment. He made a full recovery and was advised not to dive for 6 weeks.

**June 1998 98/180**

Three divers completed a dive to 47m. They started their ascent 26 mins into the dive using a delayed SMB deployed by one of the group. At 20m one of the divers felt too light and, despite dumping air from suit and BC, was not able to stop the ascent. He took hold of one of the other divers who also tried to control the ascent. At about 4m he was released by the other diver and ascended buoyantly to the surface. His computer indicated that he needed to recompress to 12m for 45 mins. He tried to re-descend to his buddies but was not able to do so. He was recovered into the boat and placed on oxygen. The Coastguard was alerted and a helicopter transported him to a recompression facility. He experienced brief 'pins and needles' in his left arm and leg during the journey. Medical examination revealed no symptoms of DCS. He was given 5 hours recompression treatment. No subsequent ill effects were experienced. This diver reports that he was diving with a new set up and was not correctly weighted for twin cylinders and that as they emptied he became too buoyant.

**June 1998 98/195**

A diver had completed a series of two dives per day with a break on one of the days. On the last day he dived to 50m for 30 mins with 5 mins stop at 6m. 2 mins after surfacing he developed a mild pain in his right arm. Oxygen was administered and the diver was taken by lifeboat to a recompression facility. The symptoms were almost totally resolved after recompression treatment.

#### **June 1998 98/171**

A diver was treated at a recompression facility having been brought ashore suffering from 'pins and needles'. (Newspaper report only)

#### **June 1998 98/197**

Three divers conducted a dive to 29m. Their swim to the wreck involved some distance against a current. After approximately 20 mins they launched a delayed SMB in preparation to surface. At about 18m one of the divers realised that he was surfacing too rapidly and took hold of another of the divers who was holding an SMB reel. The buddy noticed air escaping from the inflator / dump device of the buoyant diver's BC. Unsure of the problem he tried to dump air from this device and eventually brought the ascent to a halt at 4m. Believing all to be well he released the other diver and began to reel in the SMB line. Shortly afterwards the once buoyant diver was seen to be descending rapidly. The third diver took hold of the descending diver at 11m and put some air into his jacket. They all ascended quite quickly to the surface. Once at the surface the diver with buoyancy problems seemed to be alright at first and then became unresponsive and collapsed. He was recovered into the boat and found to have no pulse. People in the boat commenced resuscitation and the other divers were recovered. Assistance was sought by radio. The diver's pulse returned and he was placed on oxygen. He was taken by helicopter to a recompression facility, where he received treatment. The other divers were also placed on oxygen and flown in for examination, although no problems were found. The casualty regained consciousness although he suffered short-term memory loss. He was diagnosed as having a cerebral embolism. A full recovery was anticipated.

#### **June 1998 98/315**

Three divers completed a wreck dive to 22m for 42 mins with a 3 min stop at 6m. 2 hours 30 mins later they dived again to 23m for 51 mins. During the ascent from the second dive one of them became separated whilst the other two were sorting out a delayed SMB. He came up slowly with no stops indicated by his computer. The others conducted a safety stop. 1 hour after surfacing the lone diver experienced pain in his right arm, and he thought that he had pulled a muscle whilst climbing back into the boat. The following day the pain was worse and he went to hospital. He was referred to a recompression facility for treatment.

#### **June 1998 98/201**

Two divers suffering from DCI were flown by helicopter to hospital. They are reported to have surfaced too quickly. They were sent home after treatment. (Newspaper reports only)

#### **June 1998 98/229**

A diver completed a dive to 28m for 49 mins including stops at 9m, 6m and 3m for 1 min, 3 min and 8 mins respectively. 5 hours 27 mins later he dived again to 30m. During this dive he became separated from his buddy and, after 35 mins, started his ascent up the shotline. At 10m he deployed a delayed SMB. During the deployment he had become buoyant and 'floated' to the surface at a slow rate. Once on the surface he got into the boat and reported that he had missed stops. 15 mins after surfacing he reported pain in the small of his back and later 'pins and needles' in his legs. He was given nitrox 40. Assistance was sought by radio and after recovering the last dive pair the boat headed back to harbour. An ambulance and helicopter were waiting. He was taken to hospital but discharged as he had no signs of DCI. The next morning he had pain in his back and was sent to a recompression facility for treatment.

#### **June 1998 98/374**

Too many ascents and descents caused DCI to an Instructor carrying out training. The diver was taken by ambulance for recompression treatment. (Coastguard report)

#### **June 1998 98/375**

On his third dive to 30m over two days a diver showed classic signs of DCI and was airlifted for treatment. (Coastguard report)

#### **June 1998 98/378**

Following what seemed to be an incident free dive to 25m a diver had tingling in legs and felt nauseous. He was taken to the recompression facility by helicopter. (Coastguard report)

#### **June 1998 98/380**

Recompression treatment was given to a diver with quite a normal dive profile who had however suffered DCI eight months earlier. (Coastguard report)

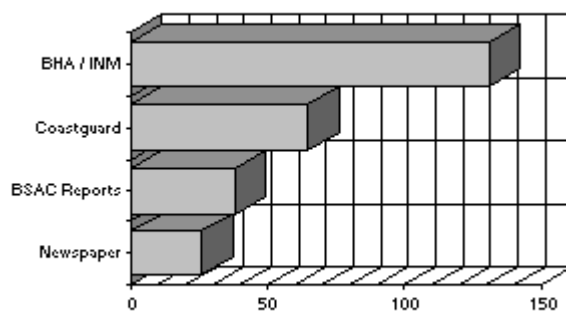
### June 1998 98/381

A diver who made a fast ascent and showed signs of DCI was airlifted for treatment. (Coastguard report)

### June 1998 98/182

A diver completed the last dive of a week's diving trip. This was the second dive of the day. The first to 36m for 25 mins with no stops, the second to 24m for 33 mins with 2 mins stops. 20 mins after the last dive he experienced a chest ache and tingling in his legs. He was given oxygen, and the boat headed for harbour. The skipper alerted the emergency services by radio. During the trip back, all the oxygen was used up and the casualty was given nitrox 40. Once ashore the casualty was with out symptoms. He was taken to a recompression facility and treated for 6 hours, with a further 90 mins the following day. He was told that he had had a spinal and cerebral bend.

### *Decompression Data Source Analysis*



### July 1998 98/383

An airlift was arranged for a diver who had DCI after a dive to 22m for 37 mins but had failed to carry out any stops. (Coastguard report)

### July 1998 98/249

A diver conducted a dive to 31m for 30 mins with 11 mins decompression at 6m. He noticed an ache in his right shoulder but did not report it. 2 hours 23 mins later he dived again to 20m for 38 mins, and completed 2 mins of stops at 6m. The shoulder ache was still present but he put it down to a muscular tear and refused oxygen. That night the pain made it difficult for him to sleep. The following day he attended a recompression facility. He received two courses of treatment and an uneventful recovery was made. He had had a type 1 bend in his left shoulder 5 years earlier.

### July 1998 98/239

Two divers reported the onset of DCI symptoms after a dive to 12.5m. I am unsure of this dive profile as a 5 hour treatment was required ! (Coastguard report)

### July 1998 98/221

Following a rapid ascent a diver was put ashore then the Coastguard were contacted. The diver was then transferred to the recompression facility by helicopter. (Coastguard report)

### July 1998 98/242

Buoyancy control problems resulted in a diver missing 14 mins of stops. The diver was airlifted for treatment. (Coastguard report)

### July 1998 98/313

Two divers completed a dive to 43m. During the ascent one of the pair deployed a delayed SMB to enable then to conduct decompression stops. The reel jammed and as it was connected to the diver it dragged him to the surface. His buddy did not see him ascend and completed his stops before ascending. The first diver had missed about 3 mins stops at 6m. He was placed on oxygen and the boat headed back to harbour. Once ashore the diver had no symptoms. However during his journey home he felt unwell and drove to hospital. He received two sessions of recompression treatment.

### July 1998 98/394

After a dive to 43m a diver made a rapid ascent from 7m missing stops. He was airlifted for treatment. (Coastguard report)

**July 1998 98/397**

Symptoms of DCI were shown by a diver once back onshore who had made a rapid ascent from 22m. The diver was airlifted for treatment. (Coastguard report)

**July 1998 98/398**

Missing stops after a 41m dive resulted in treatment for two divers. (Coastguard report)

**July 1998 98/399**

A diver was airlifted to hospital with suspected DCI (few details) (Coastguard report)

**July 1998 98/247**

Two divers were at a depth of 34m when one was hit in the face by a large jellyfish. It stung her severely. She signalled that she wished to ascend. They made their way back to the shotline. They made a quick ascent but carried out a stop at 6m. Total dive time was 23 mins. Back on board boat her condition worsened, she felt sick and had 'pins and needles'. The other divers were recalled and the boat returned to harbour. The casualty was taken by ambulance to hospital where she was given a saline drip and oxygen. Because of the 'pins and needles' and rashes on her wrists she was flown to a recompression facility for treatment. This treatment resolved the symptoms. The buddy showed no adverse symptoms. This incident took place in the North Sea.

**July 1998 98/246**

A diver conducted two dives, the first to 22m for 28 mins, the second, 4 hours 51 mins later to 15m for 31 mins, both with a 1 min stop at 6m. That evening he drank a large amount of alcohol and awoke the following day with 'pins and needles' in his left forearm and hand and his right hand. Later that day he reported to hospital because the symptoms had not resolved. He attended a recompression facility.

**July 1998 98/323**

Another airlift for a diver who had pain and in the elbow and 'pins and needles' in the right hand. Profile not known. (Coastguard report)

**July 1998 98/322**

A missed 3m stop brought on symptoms of DCI after a dive to 32m. The diver was airlifted for treatment. (Coastguard report)

**July 1998 98/403**

Due to poor visibility at 44m the dive was aborted but one diver dropped his weightbelt and made an uncontrolled ascent. Initial treatment was carried out locally but after little improvement he was airlifted to Aberdeen. Total recovery is doubtful. (Coastguard report)

**August 1998 98/260**

Two divers commenced a dive to a wreck in a depth of 27m. On the way down the shotline one of them thought that she had been stung by a jellyfish. They conducted a normal dive, arriving back at 6m after 26 mins. Here they completed a 1 mins safety stop before surfacing. Back on the boat the diver felt sick. Then both her feet went numb and began to tingle and ache. At first she thought that this was just through sitting in the boat. She reported this to others and was placed on oxygen. She was taken to hospital and then flown to a recompression facility for treatment. She was finally released from hospital.

**August 1998 98/312**

Two divers completed a dive to a maximum depth of 33m for a total time of 30 mins which included 1 min at 6m and a planned 4 mins at 3m. During the 3m stop, one of the pair had buoyancy control problems and ascended to the surface, the other completed the stops. The diver who had missed stops was placed on nitrox 80 and monitored for symptoms; none were found. This diver had been diving with nitrox 32 but using an air computer. The following day, although still without symptoms, the diver who had missed stops was persuaded to seek medical advice at a recompression facility. Here it was felt that the diver's pupil response and reflexes were slow and he was recompressed. This resulted in little change. He was advised not to dive for 24 hours.

**August 1998 98/255**

A diver spent 5 hours in a recompression chamber after suffering a severe pain in his shoulder following a dive. (Newspaper report only).

**August 1998 98/405**

Following a dive to 59m on trimix (with a previous dive of 62m two days prior) this diver showed symptoms of DCI and was airlifted for treatment. (Coastguard report)

**August 1998 98/406**

After his sixth dive in four days (dives getting progressively deeper) this diver developed severe neurological DCI. Although extended treatment was given he was advised not to dive again. (Coastguard report)

**August 1998 98/268**

Upon surfacing from a dive to 30m for 26 mins, including a 1 min stop at 3m, a diver reported 'pins and needles' in his feet. He was wearing thick socks and put it down to the tightness of his drysuit boots. On returning to shore he also noted 'pins and needles' in his hands. He was wearing a new drysuit with tight wrist seals and when he removed this the sensation in his hands went away. The sensation in his feet was still present but declining. It was decided that he should monitor the condition. Later that day the symptoms were still present and he sought medical advice. He was advised to keep monitoring the situation. The following evening the symptoms were still present and the diver was given a series of recompression treatments over a seven day period. After this he was left with a loss of power to his left leg and sensory nerve loss to both lower legs. He was referred to a consultant neurologist.

**August 1998 98/298**

A diver was treated in a recompression facility after he complained of a numbness in his leg and hip. (Newspaper report only).

**August 1998 98/277**

Two divers were diving on a wreck at a depth of 32m. The current was strong and when one of them released the shotweight from the wreck it was swept away. They pulled themselves along the wreck but the current grew stronger and they prepared to ascend. They held onto the wreck whilst one tried to deploy a delayed SMB. He dropped and lost a reel and then deployed the SMB with a second reel. They were swept off the wreck and landed on the seabed. The diver with the reel took hold of his buddy by wrapping his legs around him. This prevented the second diver from achieving neutral buoyancy since the air escaped from the neck of his drysuit. He released himself from this grip and was able to become buoyant. The first diver then took another grip on the second but released a shoulder strap in the process. He took a more secure grip. The first diver's mask flooded twice during the ascent. He struggled with the SMB reel and then abandoned it. He became concerned at the situation and made them both buoyant to ensure that they reached the surface. Their ascent became fast. The second diver tried to release the grip on him but failed. They arrived at the surface and were recovered into their boat. Their total dive time had been 14 mins. Early the following morning one of the divers awoke with a tingling sensation in his right hand. He rang for medical assistance and was advised to report to a recompression facility. He was recompressed and this fully resolved his symptoms.

**August 1998 98/409**

A diver who felt unwell at home some hours after a dive rang the Coastguard who arranged for an ambulance to take the diver for precautionary treatment. (Coastguard report)

**August 1998 98/414**

The lifeboat transferred a diver with suspected DCI to a waiting ambulance. (Coastguard report)

**August 1998 98/415**

Two divers with DCI airlifted for treatment. (Coastguard report)

**August 1998 98/416**

After a second dive to 31m a diver developed signs of DCI. No oxygen could be administered as the charter boat had used it all the same morning following another incident. (Lesson here). The diver was airlifted for treatment. (Coastguard report)

**August 1998 98/271**

A diver conducted a drift dive to 18m for 23 mins including a 2 mins stop at 6m. The following day, 20 hours later, he dived again to 30m on a wreck. During the dive he became separated from his buddy and ascended to 25m because of buoyancy problems. He re-descended and re-grouped with his buddy. They ascended to 20m and, some time later, the diver again lost control of his buoyancy, making a rapid ascent to 7m. He managed to make a 1 min stop before rising rapidly to the surface. His computer indicated no stops missed. Early the following morning the diver experienced pain in his chest and left shoulder. At mid-day he reported to his local hospital. He was placed on oxygen and transported to a recompression facility for treatment. The symptoms resolved. The diver reported problems with the use of his drysuit cuff dump.

**August 1998 98/417**

Upon losing his weightbelt his buddy held on to attempt to slow the ascent, this was unsuccessful and both made a rapid ascent missing stops. Both were flown to the recompression facility for treatment. (Coastguard report)

**August 1998 98/421**

A rapid ascent from 28m due to a diver not being able to dump air from BC with buddy also ascending at same speed caused DCI in both and they airlifted for treatment. (Coastguard report)

**August 1998 98/294**

A diver surfaced too quickly because he was afraid of being stung by jellyfish that were known to be in the area. Soon after surfacing he complained of numbness and pain in his back. He is reported to have had a serious spinal bend and was taken to a recompression facility for treatment. This incident took place off the West Coast of Scotland. (Newspaper report).

**August 1998 98/290**

Two divers completed a dive to 37m for a total time of 57 mins that included decompression stops indicated by their dive computers. One of the computers showed 9 mins more stops than the other. They both followed the most conservative computer. 30 mins after surfacing one of the pair thought that she had a dull ache in her left arm. She was placed on oxygen for 20 mins and the condition resolved. No subsequent ill effects were reported.

**August 1998 98/293**

Five divers surfaced without completing the required decompression stops. They were taken by inshore lifeboat to harbour to meet a waiting ambulance. At first they showed no symptoms. An hour later their condition deteriorated and they were taken back to sea and winched into a helicopter. They were then flown to a recompression facility. (Newspaper report).

**August 1998 98/321**

The Coastguard was contacted when a member of a diving party started to cough up blood and show serious symptoms of DCI. She was flown by helicopter to hospital for treatment. (Newspaper report).

**August 1998 98/292**

A diver suffering from DCI was given recompression treatment. (Newspaper report only).

**August 1998 98/426**

After a 25m dive probably with insufficient stops a diver developed severe chest pains and 'pins and needles' in both legs. She was airlifted for treatment. (Coastguard report)

**August 1998 98/429**

Two divers who had surfaced from a 45m dive and missing a stop were given precautionary treatment. (Coastguard report)

**August 1998 98/430**

Using nitrox a dive to 43m with normal profile still resulted in symptoms of DCI. The diver was airlifted for treatment. (Coastguard report)

**August 1998 98/435**

A diver was airlifted for treatment after complaining of dizziness and some facial numbness. (Coastguard report)

**September 1998 98/304**

Severe symptoms of DCI were shown by a diver after a 36m dive. The casualty was ashore but due to the terrain had to be winched into the helicopter then flown a short distance for treatment. This diver was later transferred to Oban as his condition deteriorated and as he could not be flown to Aberdeen due to fog. (Coastguard report)

**September 1998 98/440**

A diver with DCI was transferred from a dive charter boat to the lifeboat and taken for treatment. (Coastguard report)

**September 1998 98/308**

Three divers commenced a drift dive to an anticipated maximum depth of 20m. They reached the seabed at 30m. The current was strong. One of the three prepared a delayed SMB, the other two divers checked one of the pair's dive computer. When they looked back the third diver was not to be seen. The lone diver ascended. The other two deployed their own SMB and made their ascent. At the surface all were recovered into their boat. 15 mins later, the diver who had ascended alone complained of a pain in his ankle. He was placed on oxygen and assistance requested. This diver was airlifted to a recompression facility. He had previously dived to 30m for 33 mins and the surface interval was 3 hours 22 mins. The duration of the second dive was 7 mins.

# NDC Diving Incidents Report 1998

## *Injury / Illness*

### **October 1997 98/006**

Three divers dived to 33m, using masks with 'buddy phones'. The divers re-ascended to 20m and one became breathless. She was brought to the surface slowly by her buddies. On the surface she was given oxygen and taken by ambulance to hospital. She had a headache and was very pale. She was discharged from hospital in less than two hours.

### **October 1997 98/048**

On his first dive a trainee surfaced normally but was sick at the surface. He was towed to the shore, dekkitted and then was sick once again. The diver is reported to have been disorientated and felt dizzy when he moved his head underwater. He was also cold.

### **November 1997 98/059**

A trainee diver was on his first open water dive. He was unable to equalise pressure in his ears and felt extreme pain. He was brought to the surface by his instructor. Damage to the eardrums was considered possible and he was advised to seek medical advice. His diver suffers a condition that results in his having little strength in his facial muscles and was thus using a full-face mask.

### **December 1997 98/077**

Shortly after a 35 mins dive to 21m, including a 10 mins decompression stop, a diver suffered a suspected stroke. The diver was taken to hospital where the diagnosis of a slight stroke was confirmed. The diver was recompressed as a precaution.

### **December 1997 98/071**

Two divers descended to a depth of 30m. At this depth one planned to practice mask clearing. He removed his mask and then started to breathe heavily. He started to float up and his buddy took hold of his arm and guided him down onto some rocks. The maskless diver indicated that he wanted to ascend and his buddy lifted him to the surface with a controlled buoyant lift. The maskless diver held his nose during the ascent. One of the divers' dive computers indicated a fast ascent. No subsequent ill effects were experienced.

### **January 1998 98/097**

Two divers entered an underwater 'blockhouse'. As they made to exit another pair of divers also left. After his exit the dive leader realised that his companion had not come out. Back inside he found the buddy unconscious with mask off and regulator out of her mouth. The dive leader tried to give his octopus regulator but it was not accepted. With the help of other divers the unconscious diver was brought to the surface where she was found to be breathing. Taken ashore by boat she quickly recovered. It is suggested that the unconscious diver may have a heart condition.

### **March 1998 98/106**

An instructor with two trainees entered the water and signalled the first trainee to enter. The trainee conducted a stride entry and struck on of her legs on a rock. She fractured both tibia and fibula. She was taken by ambulance to hospital for treatment.

### **March 1998 98/118**

Two divers entered the water, for one it was his first open water dive. The first descent was aborted because the trainee needed more weight. During the second descent the trainee indicated trouble with ear clearing and they paused at 3m whilst this was resolved. The dive then continued for 20 mins to a depth of 6m. They then made a slow ascent. Whilst de-kitting after the dive a small amount of blood was noted to be coming from the trainee's ear. Two days later the ear was inflamed and infected and the diver felt unwell. He sought medical advice and was given antibiotics. Subsequent re-examination 12 days after the incident indicated that the ear had fully recovered.

### **April 1998 98/133**

Two divers conducted a dive to 21m for 26 mins. On exit from the water one of the pair started to 'pass out'. He had only been using thermal underwear under a membrane drysuit. He was very cold. The diver was taken into a warm environment and quickly recovered.

### **April 1998 98/147**

A diver completed a dive to 7m for 31 mins. 2 hours later she dived again, to 4m for 25 mins. After the second

dive she reported numbness and tingling in her arms. The following day she also had visual disturbances. Breathing oxygen she went to a recompression facility and was recompressed. The symptoms did not resolve and she was admitted to hospital. Tests the next day included an MRI scan; no abnormalities were found. She was referred to her own GP for further investigation, as it was concluded that no DCI was present.

#### **April 1998 98/137**

A trainee and dive leader completed a dive to 6m for 20 mins. 2 hours later they entered the water again. The trainee lost a fin at the surface, but it was replaced. They descended to 7m and, on reaching this depth, the trainee did not seem to be in control of herself. The dive leader took hold of the trainee and noticed that her eyes were 'going to the back of her head'. The dive leader brought the casualty to the surface using a controlled buoyant lift. At the surface she came to. During the debrief the casualty complained of deafness in one ear and spoke of ear troubles and an ear operation in the past and stated that she had experienced recent 'black outs'. Later blood was seen coming from one of the casualty's ears and she reported to hospital. This diver had a diving medical but has now been advised not to dive again.

#### **April 1998 98/138**

Two divers were 5 mins into a dive at a depth of 34m. One of the pair began to feel uncomfortable and out of breath. He let his buddy know and they made a controlled ascent. At the surface he had difficulty breathing. Once out of the water he recovered.

#### **April 1998 98/352**

Scrambling back onto rocks gave a diver minor cuts to his hands after he was caught in an undertow. (Coastguard report)

Two divers completed a dive to 21m for 30 mins. On arrival at the surface one of the pair felt very cold. His hands and feet were numb and he was dizzy and unsteady when he tried to walk. His dive profile did not suggest a DCI problem. He was kept warm and given oxygen. He soon recovered.

#### **May 1998 98/142**

After a dive to 16m for 24 mins a 12 year old diver was found to be very cold. He was of small build and had been diving in a thin ill-fitting wetsuit with a very large semi-drysuit over the top. The diver was treated for hypothermia.

#### **May 1998 98/358**

An emergency ascent after running out of air resulted in a diver losing consciousness. CPR administered until helicopter airlifted to Hospital. Dive profile 25m for 27 minutes. (Coastguard report)

#### **May 1998 98/367**

Although this diver was showing signs of DCI i.e.: cold, vomiting, generally unwell and lapsing in and out of consciousness the doctor at the recompression facility diagnosed the condition not to be dive related and the diver was transferred to hospital. (Coastguard report)

#### **May 1998 98/151**

A diver completed a dive to 36m for 27 mins and 3 hours later a second dive to 21m for 15 mins. At the end of the first dive, he spent 15 mins at 6m. Shortly after the second dive he reported feeling unwell, very tired and generally uncomfortable. He reported difficulty in breathing during the second dive. The diver was sick and very sleepy. Medical advice was sought. The diver was placed on oxygen. He reported that his ears felt as if they had not cleared. He was taken to hospital where an ear infection was diagnosed.

#### **May 1998 98/165**

A diver was on a weeklong training course. During the week he had experienced pain in his ear on descent. After ascending slightly it had cleared. After one dive he complained of a sharp pain in his left ear and feeling giddy and of being subject to 'rocking movements'. A medical examination diagnosed a perforated eardrum, subsequent examinations proved inconclusive. He was prescribed antibiotics and referred to his GP.

#### **May 1998 98/211**

A diver rolled into the water from a boat. His buddy then rolled in and landed on top of him. The first diver was struck on the head by the pillar valve of the second. The dive continued and afterwards it was discovered that the injured diver had a cut to his head. He went to hospital where the wound was stitched. He suffered bruising and stiffness to head and neck.

#### **May 1998 98/483**

Lifeboat launched to help diver with illness. (RNLI report)



**May 1998 98/318**

During an open water training dive to just 3 metres a diver practising clearing the mask panicked and was brought ashore by other divers. The diver was taken to the recompression facility as a precaution. (Coastguard report)

**June 1998 98/375**

Diving whilst feeling unwell led to a diver requiring evacuation by helicopter. This diver had felt unwell for three days prior to the first dive to 41m and felt seasick before his second dive to 41m. What happened to simply saying 'NO'. (Coastguard report)

**June 1998 98/189**

A diver completed a series of six dives in three days. The last two were 38m for 44 mins including 13 mins stops and, 2 hours 28 mins later, to 34m for 43 mins with 19 mins of stops. Prior to the three days this diver had been suffering a dull ache in his right elbow. After the last dive his elbow was aching more than usual. Later this had extended to his right shoulder and to his left shoulder. The strength in his right arm had diminished by 50%. After an uncomfortable night the diver sought medical advice. He was examined and given recompression treatment. This did not resolve his symptoms so it was concluded that a DCI was not the cause. It is believed that the problems were due to carrying heavy diving equipment.

**June 1998 98/219**

20 mins after a dive to 28m for 49 mins including 6 mins stop at 5m a diver complained of a pain in the top of his left arm. His dive profile was within his computer's recommendations. There were no other signs of DCI and it was concluded that he had strained a muscle lifting heavy equipment earlier that day. This diver had completed other dives earlier that day.

**July 1998 98/252**

Two divers were conducting a dive to 18m, when the mask of one flooded. She indicated that she wished to ascend. The ascent was controlled but exceeded the ascent rate of the dive timer of the other diver. The following day this diver felt a numbness in his arm and feet, and was generally unwell. He had a history of back problems and it was unclear if this was the problem. He sought medical advice and DCI was ruled out.

**July 1998 98/209**

An instructor took 2 trainees into the water to dive to a wreck in a depth of 15m. As they descended they let go of the shotline. One student descended quickly and the instructor went after him and regained control. He then looked back to see the other student with ear clearing problems. He left his SMB reel on the seabed and indicated to the first student to stay and went up to help the second. This student was still having problems and wanted to ascend. The instructor took him up to 7m and told him to stay whilst he went back for the other student. He collected the second student and ascended. On the way he collected the first student, but the second separated from them and made his way to the surface. All three were safely recovered into their boat. On return to shore one student stated that he had had discomfort with his ear and the other that he had had sinus discomfort. Both sought medical advice.

**July 1998 98/253**

A charter boat skipper alerted the Coastguard when two divers returned to the boat suffering from nausea and shock. They were given oxygen. The boat returned to harbour and the divers decided that they did not need further assistance. (Newspaper report only).

**July 1998 98/238**

After a shallow dive to 7m a diver felt unwell and was airlifted, along with his buddy, for precautionary assessment. (Coastguard report)

**July 1998 98/208**

At a branch pool night a party of members and guests were in the pool. One of the guests tried to stand on an airbed in a water depth of 1.5m. He started to fall and dived into the water banging his head on the bottom of the pool. He was taken to hospital where his skull was X-rayed. He had 8 stitches in a wound to his forehead and then released.

**July 1998 98/234**

A diver completed a 40 mins dive to 21m, then 30 mins later, a second dive to 20m for 20 mins. Both were multi-level dives. At 20m on the second dive he started to feel uncomfortable. He made his way up to 7m where he still had problems, particularly with a flooding mask. He was also anxious about his high air consumption. He made an uncontrolled ascent from 4m to the surface. 10 mins after surfacing he was sick and continued to feel nauseous for 30 mins. He was given oxygen and his condition improved. He was monitored for symptoms of DCI but none were found.

**July 1998 98/270**

A pair of divers was descending a shotline to a wreck at a depth of 47m. At 37m on the descent the current swept a Lion's Mane jellyfish into the face of one of the divers. He was badly stung around the face, he removed the jellyfish with his bare hands and these were stung too. He let go of the shotline and descended to the seabed. His buddy was unable to keep up with him and they became separated. The buddy met another pair and ascended with them. The injured diver's eyes were hurting and his vision had become impaired. He was able to find the shotline and made an ascent including 3 mins stops at 3m; total dive time 19 mins. He arrived back at the surface almost at the same time as his buddy, who came to his assistance. He was assisted back into the boat. He complained of being hot with a burning sensation on his face and hands. He went below to lie down but began shaking and convulsing. Oxygen was administered and advice sought by radio. The casualty complained of pain and tingling in his feet. He began to lose consciousness. A nearby oilrig rescue vessel offered assistance and the casualty was transferred to it. He was diagnosed as suffering from anaphylactic shock. Adrenaline was administered and the casualty was flown to hospital. From there he was transferred to a recompression facility for precautionary treatment. This incident took place in the North Sea. The casualty is reported to have made a full recovery.

**July 1998 98/497**

Lifeboat launched to help diver with illness. (RNLI report)

**July 1998 98/276**

A diver used a stride entry to enter the water from a hardboat. He was carrying an SMB and as he jumped in the buoyancy of the SMB pulled his right arm back and upwards causing him great pain. He dekkitted in the water and was assisted back into the boat. The Coastguard was contacted and medical advice given by radio. The diver was given painkillers. The other divers were recovered and the boat headed back to harbour. The diver was taken to hospital by ambulance where he was treated for a fully dislocated shoulder.

**July 1998 98/400**

A diver who became unconscious on the ascent was assisted to the surface then was airlifted to hospital. No recompression was required as cause was not dive related. (Coastguard report)

**July 1998 98/266**

Five divers were recovering their boat onto a trailer after their dive. One drove the vehicle and the others helped with the boat. As the vehicle made its way up the slip four of the divers jumped onto the boat to get a lift to the car park. The road made a turn and this tipped the people off of the boat. One landed in a wire mesh fence injuring his hand and knee, another sustained injuries to his head and pelvis. This later casualty was taken by ambulance to hospital where he received surgical treatment for a possible fractured pelvis.

**August 1998 98/226**

Two divers were at 20m and one appeared to have some difficulties then indicated that he was OK. They made a normal ascent to the surface. The dive duration was 10 mins. Shortly after the dive, back on shore, this diver collapsed. It is thought that he had a heart attack. He was given oxygen, and then taken by ambulance to hospital.

**August 1998 98/314**

Prior to a series of two dives a diver was putting on a twinset. He was bent over to secure the loosely fastened straps when the boat lurched. The set nearly slid over his head but he caught it; both hands were raised in an awkward manner. He completed the dives, the first a wreck dive to 47m and the second a drift dive to a maximum depth of 20m. Both dives were controlled by the most conservative of the two divers' computers. The boat returned to shore and heavy kit was unloaded. 2 hours later, whilst driving home, the diver noticed a pain in his right shoulder. He took aspirin that cured the pain. At five o'clock the following morning he awoke with a deep pain in this shoulder. He sought medical advice and was advised to report to a recompression facility. This he did and he was recompressed. This did not relieve the pain. It was concluded that the pain was caused by a strained shoulder joint. A month later the condition had almost completely healed.

**August 1998 98/310**

A diver carried out a dive to 6m. 2 hours 12 mins later he dived again as part of a threesome. He got ready quickly and was hot and breathing heavily by the time he reached the entry point. 10 mins into the dive at a depth of 6m this diver experienced a sharp pain in his lower left leg. He signalled to the dive leader and then suffered pain of such intensity that he blacked out. The dive leader brought him quickly to the surface and towed him to the shore. Once out of the water the pain eased off but he felt exhausted. He recovered but was left with sore muscles in his leg and the feeling that he needed to sleep. He reports that he has experienced this pain on three previous occasions once in a pool and the other two occasions whilst diving.

**August 1998 98/262**

A RHIB was on its way to a dive site in calm conditions. The cox crossed the wake of another boat. One of the divers grasped a grab handle to stop herself being thrown forward and injured her wrist. She went to hospital and a bone in her wrist was found to be broken. The casualty was in plaster for six weeks.

**August 1998 98/263**

On the way to the second dive of the day a diver fell down some stairs of a hardboat and injured his ankle. The Coastguard was alerted. The dive plans were aborted and the boat returned to harbour. The boat was met by the Coastguard and an ambulance and the casualty taken to hospital. His ankle was found to be broken and an operation was required to repair the damage. Sea state had been slight to moderate.

**August 1998 98/275**

A group of five divers were on a training course, participating in a night dive. The dive duration was 45 mins to a maximum depth of 6m. During the dive the instructor's torch failed and he 'disappeared' twice, leaving one of the students to check up on the other divers. Upon surfacing one of the divers collapsed and started shaking violently. The casualty was taken to hospital 1 hour 30 mins later. She was given recompression treatment and remained in hospital for 5 days.

**August 1998 98/285**

Three divers were making stride entries into the water. On entering, one of the three landed on a submerged rock spraining her ankle. The dive was aborted.

**August 1998 98/286**

After a series of two dives a diver felt sick and dizzy. He was found to have an injury to his ear. He was advised to seek medical advice.

**August 1998 98/306**

Two divers descended an anchor line to a reef. At the bottom, one of the divers felt that he was not buoyant enough and had difficulty breathing. He developed a 'splitting headache' and passed out on the seabed for several seconds. He then attracted his buddy's attention. He pointed to his head to indicate the problem. They started to swim back to the shotline but this diver passed out again. The buddy brought the casualty to the surface with a controlled buoyant lift and then towed him 35m to the boat. The casualty was recovered into the boat where he regained consciousness on the way back to the shore. Once ashore the diver was given oxygen and a medical check up. He did no further dives that weekend.

**September 1998 98/436**

A report of two shore divers in trouble was investigated. The lifeboat revealed that four divers were involved. Three had made the shore unaided although one had to be given medical treatment and the other who had drifted further was picked up by the lifeboat. (Coastguard report)

**September 1998 98/278**

After a dive to 24m for 25 mins a diver had very bloodshot eyes. This is believed to have been caused by mask squeeze. Two days later his eyes were worse and he subsequently went to hospital.

**September 1998 98/442**

A diver ran out of air at 15m and carried out a shared ascent with buddy, however they became tangled in the shot line at 3m and fell back to 30m where the two made a rapid direct ascent to the surface. Another of the party made a similar ascent (reason unknown). The diver out of air was unconscious and required resuscitation. All three divers were evacuated by helicopter for treatment. (Coastguard report)

**September 1998 98/305**

On the return trip from a dive a RHIB crossed the wake of a larger vessel. Although the cox had slowed the RHIB slammed into this wake and one passenger was thrown onto the metal screen surround and aerial bracket of the RHIB. He struck his head and received a bad cut to his left ear. He was taken by ambulance to hospital and stitches were required to this wound.

# NDC Diving Incidents Report 1998

## ***Boating & Surface Incidents***

### **October 1997 98/447**

Lifeboat launched to assist swamped dive boat. Craft and crew brought in. (RNLI report)

### **October 1997 98/448**

Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report)

### **October 1997 98/449**

Two lifeboats assisted in the search for missing diver(s). (RNLI report)

### **October 1997 98/450**

Lifeboat assisted in the search for missing diver(s). Others coped. (RNLI report)

### **October 1997 98/451**

Lifeboat launched to assist divers, others coped. (RNLI report)

### **October 1997 98/452**

Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report)

### **October 1997 98/092**

A dive charter vessel with 14 persons on board hit rocks and sank. A Navy vessel in the area responded to the CG relay call and the lifeboat proceeded. 2 persons were picked up from a liferaft, the rest from the water. (Coastguard & RNLI report)

### **October 1997 98/033**

Two pairs of divers entered the water to dive from a RHIB. When the divers were underwater the engine of the RHIB stopped and could not be restarted. The boat was anchored and attempts made to repair and restart the engine. The divers returned to the boat. The Coastguard was alerted and a police launch towed the boat into a harbour. After further cleaning and adjustment to the engine it was restarted.

### **October 1997 98/453**

Two lifeboats launched to assist dive boat with engine problems and missing diver(s). Three people landed and craft escorted in. (RNLI report)

### **October 1997 98/039**

Whilst returning from a dive, a dive boat's outboard engine broke down. The boat was anchored and the fuel and plugs checked. A passing fishing boat then towed the disabled boat back to the harbour.

### **November 1997 98/328**

Dive boat reported two divers missing. The CG helicopter was tasked and given an area to search, quickly locating them and guided their own boat to their position. (Coastguard report)

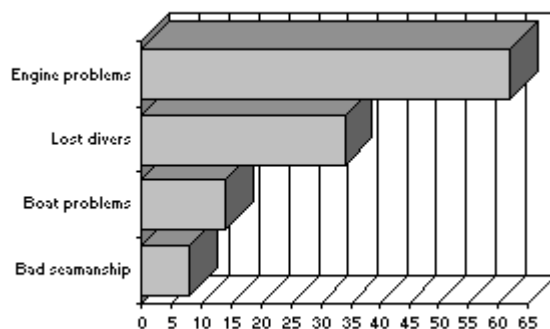
### **November 1997 98/010**

A diver was helping to recover a boat onto a trailer when a large wave lifted the boat, knocking him down and depositing the boat on top of him. He was released when the boat was again lifted by the water. At the time he felt OK, but was subsequently discovered to have two broken ribs.

### **November 1997 98/089**

A dive boat engine failed to start. The boat was towed ashore by a lifeboat. (Newspaper report only)

### ***Analysis of Boating & Surface Incidents***



**December 1997 98/457**

Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report)

**December 1997 98/331**

Two shore divers were caught in a tide race and were unable to re-make the shore. They were assisted by a local fishing vessel that took them to the harbour. These divers were not local to the area and obviously did not consult anyone about local tidal conditions. (Coastguard & RNLI report)

**December 1997 98/458**

Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report)

**December 1997 98/459**

Lifeboat launched to search for missing divers. Two people landed. (RNLI report)

**December 1997 98/460**

Lifeboat recovers an abandoned dive boat. (RNLI report)

**December 1997 98/461**

Lifeboat assisted in the search for missing diver(s). Others coped. (RNLI report)

**December 1997 98/462**

Lifeboat launched to assist dive boat in difficulties in adverse conditions, craft escorted in. (RNLI report)

**January 1998 98/463**

Lifeboat recovers an abandoned dive boat. (RNLI report)

**January 1998 98/332**

Two shore divers experienced difficulty with the tidal current and ended up on a nearby island. They shone torches and waved at a passing car ferry that spotted them and reported to the CG. The lifeboat gave them a lift back to shore. (Coastguard & RNLI report)

**January 1998 98/464**

Two lifeboats assisted in the search for missing diver(s). Others coped. (RNLI report)

**February 1998 98/334**

Two divers became separated from their charter vessel and eventually made their way ashore. In the meantime the vessel had reported this to the Coastguard and at the same time one of the divers had made his way to a nearby house and raised the alarm via the 999 system. Both divers were reunited with the vessel with the help of a local fish farm workboat. It is thought no detection aids were carried. (Coastguard report)

**March 1998 98/335**

A dive RHIB with four on board reported engine failure. A local vessel responded and the dive boat was towed back to the slip. (Coastguard report)

**March 1998 98/337**

A dive RHIB with 6 divers aboard reported being broken down and drifting. A lifeboat which was out on exercise was diverted and towed the boat into harbour. (Coastguard & RNLI report)

**March 1998 98/338**

Diver reported missing by buddy. Had become disorientated in fading light and climbed onto rocks. Lifeboat crew and Coastguard rescue team located the diver and assisted to cliff top complete with equipment and without injury. Who is the fourth emergency service ?? (Coastguard & RNLI report)

**March 1998 98/339**

A warship was the only vessel to hear a MAYDAY call from a dive RHIB who was reporting a missing diver. This was reported to the Coastguard who alerted the helo and lifeboat. The diver was located by own RHIB prior to units arriving on scene. (Coastguard report)

**March 1998 98/466**

Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report)

**March 1998 98/467**

Lifeboat launched to assist dive boat with engine problems. Others coped. (RNLI report)

**March 1998 98/341**

A dive boat with engine failure and 8 persons on board was towed into harbour by another vessel. (Coastguard report)

**April 1998 98/131**

Four divers were in a RHIB as part of a boat handling course. One of the group made an emergency stop and, as soon as the wheel was turned, the entire central console including steering and engine controls, electronics, battery, driver's seat and cylinder rack was thrown into the water. All four people were also thrown in. No one was injured and they got back into the boat and recovered the console. One of the tubes was punctured. They radioed the Coastguard. A passing vessel came to their assistance and they were towed ashore.

**April 1998 98/468**

Lifeboat launched to assist dive boat with man overboard. Craft towed in. (RNLI report)

**April 1998 98/344**

Coastguard rescue team and inshore lifeboat tasked to investigate RHIB reported in difficulty by member of public. On arrival it was confirmed they were carrying out rescue drills. Classed as false alarm with good intent. (Coastguard & RNLI report)

**April 1998 98/470**

Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report)

**April 1998 98/471**

Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report)

**April 1998 98/472**

Two lifeboats launched to assist dive boat with engine problems. Others coped and persons brought in. (RNLI report)

**April 1998 98/135**

Three divers were on route to a wreck dive 12 miles offshore. They made a fuel tank change and the engine failed to restart. They attempted to resolve the problem but could not. Sea conditions were calm. They anchored the boat and contacted the Coastguard. They were towed ashore by an inshore lifeboat. They used flares to help the lifeboat locate them. One flare failed to ignite. An electrical fault in the engine was eventually traced.

**April 1998 98/349**

One of four shore divers lost a fin, all four then got caught in a surface current. The lifeboat was stood down when the divers made shore unaided. Coastguard team attended. (Coastguard report)

**April 1998 98/347**

Seven divers in a swamped 6.5 metre RHIB were escorted into harbour by the lifeboat. They had no VHF but called for assistance on a mobile phone. The boat was powered by two 140 HP engines. (Coastguard & RNLI report)

**April 1998 98/351**

A chartered RHIB with five divers aboard was towed in by another dive boat after the outboard refused to start. (Coastguard report)

**April 1998 98/350**

The inshore lifeboat towed a RHIB with 7 divers into harbour. They had experienced engine failure. (Coastguard & RNLI report)

**April 1998 98/353**

Coastguard rescue team was called to investigate an empty drifting boat. This turned out to be a dive boat with all divers down collecting shellfish. (Coastguard report)

**April 1998 98/473**

Two lifeboats launched to assist dive boat with engine problems. Craft towed in. (RNLI report)

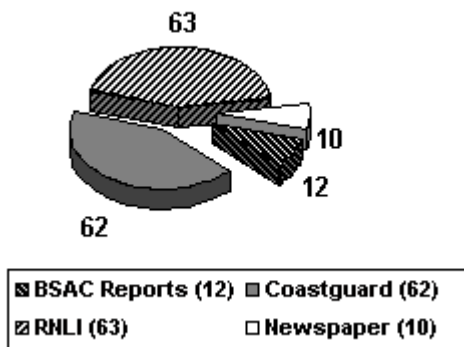
**April 1998 98/354**

Three divers who were washed off rocks by the heavy swell and were then swept out by the current were rescued by the inshore lifeboat. Why were they diving in such conditions ?? (Coastguard report)

**April 1998 98/355**

Two helicopters, two lifeboats, a Coastguard rescue team and a fishing vessel were all tasked to search for four divers reported missing by their surface cover boat. They were found and recovered by one of the lifeboats and the Coastguard helicopter 1 hour 30 mins after they had entered the water. They had drifted for 5.5 miles. One diver was taken to hospital suffering shock and mild hypothermia. Surface detection aids were inadequate considering the strong currents in that area. (Coastguard & RNLI report)

**Boating & Surface Incident Report Source Analysis**



**May 1998 98/474**

Two lifeboats launched to assist dive boat with engine problems. Craft towed in. (RNLI report)

**May 1998 98/476**

Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report)

**May 1998 98/477**

Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report)

**May 1998 98/361**

Dive boat with five on board and engine failure was towed in by a local fishing vessel. (Coastguard report)

**May 1998 98/478**

Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report)

**May 1998 98/479**

Lifeboat launched to assist dive boat that was out of fuel. Others coped. (RNLI report)

**May 1998 98/363**

Whilst investigating a report of a lost boat the searching Coastguard boat came across three divers three quarters of a mile from shore. They had been caught in the tide and were drifting. The Coastguard boat on returning them to shore responded immediately to a Mayday call and no further details could be obtained. (Coastguard report)

**May 1998 98/167**

A dive boat capsized. Its two crew members were recovered from the sea by another dive boat. A lifeboat

towed the capsized craft away from rocks. The other dive boat occupants towed the capsized craft ashore and helped to recover it. (RNLI & Newspaper report)

**May 1998 98/364**

A fishing vessel reported an unmanned boat at a harbour entrance, the harbour patrol boat discovered that it had been a dive boat with all divers down. Flying the 'A' flag whilst all divers are down is very poor practice. (Coastguard report)

Three lifeboats assisted in the search for missing diver(s). Others coped. (RNLI report)

**May 1998 98/481**

Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report)

**May 1998 98/158**

A group of divers in a boat were returning from a dive at a speed of about 20kn. The outboard engine started to rattle slightly and then slowed to a stop. The engine instantly restarted and they continued for another 5 mins, when again the engine rattled and stopped. Although it was an oil injected engine, they added oil to the fuel and continued at a slower speed. After another 5 mins the engine stopped again. The local harbour control was alerted by radio and they continued at very slow speed. At little later the engine seized. The harbour control was informed of their situation and position and three MOD police RHIBs can to tow them back. The engine is said to have been well maintained.

**May 1998 98/482**

Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report)

**May 1998 98/163**

Two divers were attempting to dive a wreck in 11m of water in a strong tidal race. They were swept away from their boat. The Coastguard was contacted and a lifeboat and helicopter launched. The divers were found at the surface, fit and well, by the lifeboat, almost 3 miles from their entry point. They were found quickly, at about 9pm, because they were using a strobe light. (Coastguard & RNLI report)

**May 1998 98/371**

The lifeboat was called to a dive RHIB that had broken down with seven divers on board. They were towed back the 8 miles to their point of departure. (Coastguard & RNLI report)

**May 1998 98/372**

Reports of divers in trouble were being received via 999. Three divers were pulled from the surf by lifeboat crew ashore. (Coastguard report)

**May 1998 98/484**

Lifeboat assisted in the search for missing diver(s). Others coped. (RNLI report)

**June 1998 98/485**

Lifeboat launched to assist dive boat that was out of fuel. Craft brought in. (RNLI report)

**June 1998 98/486**

Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report)

**June 1998 98/487**

Lifeboat launched to assist dive boat with engine problems. Craft escorted in. (RNLI report)

**June 1998 98/488**

Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report)

**June 1998 98/489**

Lifeboat launched to assist stranded diver(s). Persons brought in. (RNLI report)

**June 1998 98/213**

Whilst dropping two divers into the water a RHIB took on a lot of water. The boat was driven to allow the water to escape but, in the process, some of the water got into the fuel and the engine cut out. The boat was about 200m from the buoy marking the dive site. It was anchored and attempts made to restart the engine. The anchor started to drag and the engine could not be restarted. The Coastguard was notified and a lifeboat launched to assist. The divers surfaced and held onto the buoy. The engine was eventually restarted and the divers recovered. No ill effects were reported.



**June 1998 98/490**

Lifeboats launched to assist swamped dive boat. Others coped. (RNLI report)

**June 1998 98/379**

Two divers had dived from an unmanned and unmarked dinghy, which had then drifted onto rocks. Members of the public called the Coastguard who upon investigation discovered the divers finning to shore. Lesson taught I hope ! (Coastguard report)

**June 1998 98/492**

Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report)

**June 1998 98/382**

Two local vessels assisted a broken down dive boat with seven divers on board. (Coastguard report)

**July 1998 98/494**

Two lifeboats launched to assist dive boat with engine problems and missing diver(s). Two people and craft brought in. (RNLI report)

**July 1998 98/384**

The lifeboat was launched to assist two divers on the surface whose dive boat had drifted due to engine failure. The lifeboat picked up the divers (with cramp) and towed the dive boat back into harbour. (Coastguard report)

**July 1998 98/386**

A dive boat reported that other divers appeared to be in difficulty, they were on a rock in heavy swell and could not make it back to their own boat. The reporting boat managed to get a line to the divers and tow them to their boat (was it unmanned ?) (Coastguard report)

**July 1998 98/385**

Two very lucky shore divers who had drifted to seaward in strong currents were spotted by a lifeboat out on exercise. They were taken aboard and examined by a paramedic who diagnosed cold and shock. What happened to surface location aids and a shore party ? (Coastguard & RNLI report)

**July 1998 98/387**

Dive boat with engine failure and three on board was towed in by the lifeboat. (Coastguard report)

PAN PAN call from dive boat reporting engine failure and drifting. Lifeboat on scene reported boat was swamped and took all eight divers aboard and safely back ashore. (Coastguard report)  
July 1998 98/194

A dive boat had two pairs of divers in the water. One pair surfaced away from the boat and was spotted by people on near by cliffs drifting away from their boat. The alarm was raised. Two lifeboats and other nearby craft came to assist. The lost divers were recovered after 40 mins, 1.5 miles from their entry point. They were reunited with their boat.

**July 1998 98/391**

Two rescue teams and a helicopter were called to search for three divers reported missing. They were located safe and well some way from their shore entry point. (Coastguard report)

**July 1998 98/496**

Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report)

**July 1998 98/236**

A diver was separated from his party. An air and sea search took place. The diver swam ashore safely. (RNLI & Newspaper report)

**July 1998 98/495**

Two lifeboats launched to assist swamped dive boat. (RNLI report)

**July 1998 98/241**

A dive boat broke down with divers in the water. The cox radioed for assistance. A lifeboat was launched and recovered three divers, who were unaware of the problem. (Newspaper report only).

**July 1998 98/396**

With four divers down and one drifting away on the surface the dive boat contacted the Coastguard who began an immediate search with two lifeboats, a helicopter and other vessels. One of the resources located the diver 5 miles from point of entry. The diver was then airlifted to hospital for a check up. (Coastguard & RNLI report)

**July 1998 98/498**

Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report)

**July 1998 98/228**

The engine of a dive boat stopped whilst the boat was 2 miles off shore. The engine could not be restarted. The Coastguard was alerted and a lifeboat arrived to tow the boat back to the launch site.

**July 1998 98/401**

Two lifeboats, a helicopter, six other dive boats and two Coastguard rescue were alerted to a diver who had been observed waving a flag and shouting. The dive cover boat had suffered engine problems. (Coastguard report)

**July 1998 98/220**

Three divers surfaced after a dive. Their RHIB approached to recover them. The cox put the boat into neutral as she approached the divers. She moved to help the divers into the boat and in doing so knocked the engine into gear. The boat struck one of the divers and the propeller hit him several times. He lost consciousness. He was recovered into the boat, taken ashore and then by ambulance to hospital. He suffered concussion, cuts to his right ankle, and cuts and bruising to both legs and the left-hand side of his face. His drysuit was also damaged beyond repair.

**July 1998 98/240**

A diver became separated from the others during a drift dive. His party searched for him for 25 mins and then alerted the Coastguard. Three lifeboats and a helicopter were sent to search for the diver. He was eventually found 2 miles from the entry point. The diver is believed to have surfaced too quickly. He was taken to a recompression facility for treatment. (Newspaper report only).

**July 1998 98/402**

A dive boat made a PAN (urgency) broadcast following engine failure and was subsequently towed back to harbour by lifeboat. (Coastguard & RNLI report)

**August 1998 98/261**

Two divers descended a shotline to a wreck at an expected depth of 17m. On reaching the shot they found it 1m off the bottom. They searched around for the wreck which they did not find. 20 mins into the dive, with the water current slowly increasing they moved out of the shelter of a bay into a strong tidal stream, of near to 3 kn. They attempted to deploy a delayed SMB but the reel jammed and had to be abandoned. The current carried the divers around a large rock, one either side. This caused them to become separated. Both divers surfaced safely. They were spotted by people on nearby cliffs who called the emergency services. An inshore lifeboat was launched. The divers were spotted and recovered by another boat. They were safely reunited with their own group who had by this time started their own search.

**August 1998 98/408**

Investigations were carried out following a 999 call reporting two dive boats overdue. Enquiries found that one had broken down and was under tow by the other. (Coastguard report)

**August 1998 98/256**

Workmen on shore raised the alarm when they sighted three shore divers being swept out by a current. A lifeboat was launched and picked up all three, one of whom had ingested seawater. (Coastguard report)

**August 1998 98/412**

Unmanned boat in a Loch entrance was investigated and found to be a dive boat with diver down. No 'A' flag. Very unsafe practise. (Coastguard report)

**August 1998 98/411**

An evening dive was carried out by two divers who became separated on the bottom. Both divers surfaced within minutes of each other but the boat sighted only one. The alarm was raised and two lifeboats and a helicopter began to search. The missing diver was located by Coastguard and Coastwatch units guiding the boat toward the diver using radio. The divers strobe and torch both refused to work. (Coastguard report)

**August 1998 98/413**

Whilst on patrol a Coastguard patrol boat came across a dive boat with engine failure. The occupants of the boat reported that one diver had become separated from them. The patrol boat located and recovered the diver. When questioned about safety equipment the divers admitted to having left SMB, 'A' flag and VHF radio in the car ! (Coastguard report)

**August 1998 98/245**

A number of boats were over a wreck site. A RHIB had put two divers into the water when they were struck by a large hardboat. The engine of the RHIB scraped against the hull of the large boat and the two divers had to swim out of the way. The crew of the hardboat recovered their shotline and left the scene. No subsequent ill effects were noted.

**August 1998 98/248**

Two dive boats were at anchor with divers down. A yacht was on a collision course with them. Attempts were made to alert the skipper of the yacht but he did not take avoiding action until the last moment and he collided with the starboard side of both boats. Minor damage but no injuries resulted.

**August 1998 98/499**

Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report)

**August 1998 98/418**

Two shore divers became separated, one made the shore unaided and raised the alarm whilst the other clung to an off lying rock until the lifeboat arrived. (Coastguard report)

**August 1998 98/419**

Dive boat's engine refused to start after the dive and the boat with ten onboard was towed in by lifeboat. (Coastguard report)

**August 1998 98/420**

Divers who became separated from the shotline were located by helicopter and the lifeboat re-united them with their vessel. (Coastguard report)

**August 1998 98/422**

A dive charter vessel that took out a party of divers from different clubs had dropped two off in one location and on the return forgot to pick them up. The lifeboat was alerted and collected two very annoyed divers. (Coastguard report)

**August 1998 98/297**

Dive boat with engine failure and eight divers on board fired red flares and were towed in by lifeboat. (Coastguard report)

**August 1998 98/423**

RHIB with engine failure and four on board fired red flares and were towed in by lifeboat. (Coastguard report)

**August 1998 98/424**

A PAN PAN call was received reporting two divers overdue. A lifeboat, fixed wing aircraft, helicopter and other vessels were tasked to search. The divers were located safe and well by the lifeboat. (Coastguard report)

**August 1998 98/427**

An inshore lifeboat whilst out on exercise came across three shore divers who, due to sea and weather conditions, were exhausted. The ILB picked up the divers and returned them to shore. (Coastguard report)

**August 1998 98/303**

A search involving a lifeboat was initiated after a diver was reported missing. The diver reached shore unaided. (Newspaper report only).

**August 1998 98/431**

The inshore lifeboat rescued a diver who was experiencing strong tides. His buddy had made shore unaided and raised the alarm. (Coastguard report)

**August 1998 98/500**

Lifeboat launched to assist dive boat. Problem not recorded. (RNLI report)

**August 1998 98/433**

Dive boat with six onboard reported that their propeller had fallen off. A Lifeboat exercising in the area towed

them in. (Coastguard report)

**August 1998 98/434**

Dive RHIB with engine failure and three onboard was towed in by a dive charter vessel. (Coastguard report)

**September 1998 98/437**

A club diver who was collecting shellfish was reported 30 mins overdue. The helicopter was scrambled, located the diver and the lifeboat picked him up. The dive boat had no communications. The situation was relayed from a nearby dredger. (Coastguard report)

**September 1998 98/438**

Dive RHIB with engine failure towed in by lifeboat. (Coastguard report)

**September 1998 98/439**

One of the crew of a passenger boat reported to the Coastguard that he had seen a dive boat that appeared to be searching for missing divers. Two lifeboats and a helicopter were sent to the scene. One hour later a pleasure fishing boat reported having picked up three divers 2 miles from their entry point. Divers should be aware of tides and local currents prior to the dive. (Coastguard report)

**September 1998 98/324**

Cries for help in thick fog were reported by a member of the public. A call to vessels in the area revealed a dive boat had two divers missing for over an hour. Two lifeboats, three Coastguard rescue teams and five other vessels began the search. A fishing vessel located them and the lifeboat transported them to the ambulance ashore for a check up. (Coastguard report)

**September 1998 98/441**

Dive boat with engine failure and three onboard was towed in by local fishing vessel. (Coastguard report)

**September 1998 98/444**

A warship responded to a relay call from the Coastguard about a broken down dive boat. The warship took the five occupants on board and the lifeboat towed back the RHIB. (Coastguard report)

**September 1998 98/445**

An all vessels call by the Coastguard reference a RHIB with engine failure resulted in a dive charter vessel responding and assisting the boat with five divers aboard. (Coastguard report)

**September 1998 98/446**

Dive boat with five on board suffered engine failure and was towed in by lifeboat. (Coastguard report)

# NDC Diving Incidents Report 1998

## *Ascents*

### **October 1997 98/042**

Two divers became disorientated underwater at a depth of 22m. They developed buoyancy problems with drysuit boots inflated and made a rapid ascent. No subsequent ill effects are reported.

### **October 1997 98/032**

Two divers were at a depth of 30m when one of them lost a fin. He lost buoyancy control and made a rapid ascent to the surface. No ill effects were reported.

### **October 1997 98/327**

A diver who vomited into his mouthpiece made a rapid ascent from 36m. The diver was then airlifted for treatment. (Coastguard report)

### **October 1997 98/045**

At the end of a dive to 32m for 44 mins two divers ascended the anchor line. The anchor line was fastened to a weight by a snap shackle with a trip line. During their ascent, the snap shackle became disconnected, possibly because it was fouled by a lifting bag, and the boat was blown down wind. As the boat moved down wind the divers were dragged through the water and towards the surface. The divers let go of the anchor line and returned to 20m where they attempted to launch a delayed SMB. During this time they became separated. Both divers then surfaced and were picked up and returned to the hardboat. They undertook re-entry decompression for 20 mins using nitrox 50. After surfacing they were placed on oxygen and taken to a recompression chamber where they were treated for 2 hours 30 mins as a precaution. No subsequent ill effects were reported.

### **November 1997 98/052**

After a dive to 36m for 25 mins a pair of divers were swimming up a slope. At 20m one of the divers lost control of his drysuit buoyancy and made a faster than normal ascent to the surface. His dive computer was found to be signalling an ascent warning. No subsequent ill effects were experienced.

### **November 1997 98/053**

Early into a dive at a depth of 20m a trainee diver started to panic. She was brought to the surface by her instructor. A faster than normal ascent was reported but no subsequent ill effects were observed.

### **January 1998 98/098**

After a dive to 36m two divers ascended to 22m. One of the divers let air into her drysuit and this caused a rapid buoyant ascent. She experienced some shoulder pain but this was a normal condition for this diver. No other problems were found.

### **January 1998 98/101**

19 mins into a dive at a depth of 21m a diver got air in his drysuit boots and lost both fins. In a panic he took in water and made a rapid ascent. No subsequent ill effects were experienced.

### **January 1998 98/099**

After a dive to 36m three divers made their way up to 34m. One diver felt that she was unable to fin upwards and started to panic. She took in a little water. Her buddies brought her to the surface. They made a very fast ascent. No subsequent ill effects.

### **February 1998 98/111**

Two divers had completed a dive to 36m and were ascending an underwater slope to a depth of 6m where they planned 5 mins stops. 38 mins into the dive at 14m one of the divers began to feel buoyant and fully opened the dump on his drysuit. Still too light he reached down from a rock but could not lift it and became inverted. His buddy tried to right him but in the struggle both had their regulators dislodged and the inverted diver's mask was filled with water. Losing contact with each other the buoyant diver made a rapid ascent, breathing out all the way. He arrived at the surface, the right way up and shouted for help. A boat came to his assistance. The other diver completed the planned stops. No subsequent ill effects were experienced.

### **February 1998 98/102**

After a dive to 36m two divers followed a slope up to 14m. 39 mins into the dive, one of the divers had difficulty venting air from the auto dump on his drysuit and became inverted. His buddy tried to right him but was unable to do so. The inverted diver made a rapid ascent to the surface. In the struggle he had his mask

# NDC Diving Incidents Report 1998

## *Technique*

### **October 1997 98/047**

After conducting air sharing and controlled buoyant lift practice from a depth of 10m a diver joined three others for a dive to 20m. At this depth one of the other divers was preparing to conduct a controlled buoyant lift when the first diver ran out of air. He panicked and made a fast ascent to the surface. Subsequently it was discovered that this diver's BC emergency cylinder was seized shut, and that in addition to his 7½ kg weight belt he had 3½ kg of rocks in his BC pocket.

### **November 1997 98/051**

Three divers were diving in a quarry to a depth of 24m. After 20 mins they moved into an area of low visibility. The dive leader became separated. All divers ascended and regrouped. They decided to continue the dive with a maximum depth of 10m.

### **November 1997 98/060**

A dive leader was with a trainee who was conducting her first dive of the day in a quarry. At a depth of 6m the trainee lost control of her buoyancy and made a fast ascent to the surface. The dive leader was not immediately aware of the separation. When she was she retraced her steps to locate the trainee. After a 'minute or so' she also surfaced and was unable to see the trainee, who was already making an exit from the water, because of the presence of many other divers. Both divers alerted others to their lost buddy and some confusion arose until it was discovered that both were safe.

### **December 1997 98/079**

A diver was at 20m trying out a new drysuit. He lost control of his buoyancy and made a fast ascent to the surface. No subsequent ill effects were noted. 1 hour 10 mins earlier this diver had conducted a 30 mins dive to a maximum depth of 7m.

### **January 1998 98/109**

Three divers prepared for a dive to 18m in a quarry. The dive leader noticed that one of the other divers had a poorly adjusted mask and took steps to resolve the problem. During the descent this diver continued to have problems with the mask, but returned OK signals. 22 mins into the dive this diver gave an unsure response to an OK signal from the dive leader. The dive leader indicated an ascent, but the third diver had swum on a little. The troubled diver waited whilst the dive leader caught and brought back the third diver. They started their ascent. The troubled diver was over weighed and, at 10m, she started to sink back. The dive leader took hold of her hand and they started to re-ascend. Once again at 10m the troubled diver seemed to have regained control and was released. At this point she made a rapid ascent to the surface with the others following. At the surface this diver was sick. She was towed to the side of the quarry by her buddies and helped onto a rock. Unable to exit at this point they shouted for help. At first no notice was taken of this (it was assumed to be a practice), but then a boat was brought to assist. The casualty was passing in an out of consciousness. Taken ashore she was placed on oxygen and moved by ambulance to hospital. The casualty was reported to be recovering.

### **March 1998 98/108**

Two divers using rebreathers entered the water to start their dive. One had a buoyancy problem and was preparing to leave the water to resolve the problem. The other diver was conducting buoyancy checks at 2m, he looked up and felt 'strange'. He surfaced and signalled to his buddy that he was making for the exit point. Without warning this diver became unconscious and started to sink down an underwater cliff face. He was spotted by two other divers who were just preparing to submerge. They chased after him and caught him at 15m on a rock ledge. They tried to give him his normal alternative air supply but he was not breathing. Using his suit buoyancy they brought him to the surface and summonsed help. The casualty started breathing and regained consciousness. He was given oxygen and taken to hospital. He was found to have a burst lung but is reported to be making a recovery. An equipment check after the incident found the diluent air supply turned off and the oxygen supply only just turned on.

### **April 1998 98/152**

After a dive to 41m for 15 mins a diver prepared to ascend from a wreck. He deployed a delayed SMB, inflating it with his pony regulator. After the SMB reached the surface the diver noticed his main regulator 'became light' and he was unable to get air from his main cylinder. He reached for his pony regulator but could not find it because he had not replaced it in its clip. Whilst this was happening he had sunk to the seabed at a depth of 50m. He could not inflate his suit and made a free ascent to the surface, missing 10 mins of stops. Back in the boat he was given oxygen. His buddy surfaced 9 mins later having completed decompression

stops. Neither diver experienced subsequent ill effects.

#### **May 1998 98/188**

Three divers entered the water to conduct a dive to 32m. On entry one of the group lost his mask and was forced to abandon the dive. The others continued. At the end of the dive they could not find the shotline and could not launch a delayed SMB because the third diver had been carrying it. They therefore made an ascent with no datum. They decompressed for 2 mins at 6m and then surfaced. They neither saw nor heard their boat (the only one on the wreck) but came up underneath it. One was hit by the side of the boat, the other by the propeller. The propeller cut through the BC and the regulator hose of this diver. Loosing buoyancy this diver dropped her weightbelt, surfaced and was recovered into the boat. She was taken to hospital suffering from shock but without other injury.

#### **May 1998 98/289**

Two divers completed a dive to 39m. At the end of the dive they were decompressing under a drifting SMB when one of the pair ran out of air. He ascended to the surface missing 3 mins of stops. He suffered no ill effects. He had not communicated the problem with his buddy and did not attempt to use his buddy's alternative air source.

#### **May 1998 98/156**

15 mins into a dive at a depth of 20m a diver's foot came out of her drysuit boot. Whilst trying to resolve the situation the other foot also came out of its boot. She lost control of her buoyancy and rose to the surface. Her buddy had cut hands through trying to hold on to rocks underwater to steady them both. No other ill effects were reported.

#### **May 1998 98/370**

When a shot line disappeared one of three divers carried out a brief search and could not see the other two and then surfaced to raise the alarm. Two lifeboats and the Coastguard helicopter were tasked but re-called when the other two divers surfaced without incident. Classed as false alarm with good intent. (Coastguard report)

#### **May 1998 98/206**

Two divers were on a wreck at a depth of 36m. 21 mins into the dive both divers sent lifting bags to the surface. One of the divers used his octopus regulator to inflate the bag and the regulator started to free flow. With a 6 mins ascent indicated they started to ascend. The free flow got worse and the cylinder quickly emptied. This diver switched to his pony regulator, but it was found to be empty. He attempted to use his buddy's octopus regulator and this proved difficult to release. They were close to the surface and decided to surface missing stops. They were recovered into their boat and placed on oxygen. The Coastguard was alerted and a helicopter flew both to a recompression facility for treatment. A lifeboat was also summonsed as they had other divers in the water conducting long decompression stops, this however was called off after other dive boats came to assist. Neither diver experienced any symptoms.

#### **June 1998 98/316**

Two divers descended to 17m, the descent was fast, the visibility was poor and one of the pair felt exhausted and had difficulty in breathing. She indicated that she wanted to ascend. Her breathing became more difficult and she started to panic. Her buddy commenced a controlled buoyant lift. During the lift the panicked diver spat out her regulator and pulled her mask off. Once at the surface she was towed ashore by her buddy and given oxygen. She was taken by ambulance to hospital. She was given a chest X-ray but no problems were found and she was later released. This diver had been using a borrowed weightbelt with extra weight.

#### **July 1998 98/216**

An instructor and a group of trainees were descending for a dive. One of the trainees had buoyancy problems and the instructor had to retrieve him and regroup. The trainee again began to descend quickly and his weight belt slipped to around his ankles. The instructor managed to bring the group to the surface in a controlled manner. Afterwards the instructor was concerned about her 'saw tooth' dive profile. No ill effects were reported.

#### **July 1998 98/235**

Two divers ran out of air. (Verbal report from RNLI only)

#### **July 1998 98/212**

Two divers descended a shotline to a wreck at a depth of 33m. The shot was not on the wreck and they deployed a delayed SMB and started to search for the wreck. The SMB line began to drag, and they later discovered that another boat had attached a 'floating decompression cylinder' to their line. They swam back reeling in the line. After 21 mins both divers were at 80 bar. They ascended to 6m and arrived there after 25 mins. They carried out a 1 min stop. The computer of one of the pair indicated the need for 4 mins stops at

3m. They completed 2 mins at 3m but surfaced because they were low on air. Their total time was 33 mins. The computer displayed missed stops and the divers were placed on oxygen for 20 mins. No ill effects were experienced by either diver.

#### **August 1998 98/407**

Two divers who dropped into the water from a RHIB discovered they had insufficient weight to submerge. In the meantime the boat had gone to another site to drop off more divers. The two on the surface were picked up by a passing fishing vessel !! (Coastguard report)

#### **August 1998 98/283**

Four divers conducted a dive to 35m. Underwater one of them became separated from the others. This diver made his own way back and went off to a car park. His buddies surfaced after 22 mins and raised the alarm, believing him to be missing underwater. As a search was being organised the missing diver returned.

#### **August 1998 98/272**

Two divers started their ascent from a wreck at a depth of 30m when one of them was down to 80 bar. By 20m all of this air had been used and she started to use her buddy's alternative air source. The buddy's air supply was now at 50 bar. They were spotted by two other divers above them and one of these divers came back to assist. He offered his octopus regulator to the out of air diver and started to lift this diver with a controlled buoyant lift using his own BC. Just as they started the ascent the shotline was hauled up fast. They released the shotline and ascended, with a brief stop at 6m. All four regrouped at the surface and were safely recovered into their boat. No ill effects were experienced.

#### **September 1998 98/287**

Two divers had been to 22m and, when at 18m, one of the two ran out of air. Her buddy gave her his alternative air source and they made a rapid ascent to the surface. Once out of the water the diver who had run out of air was found to be suffering from shock and was given oxygen.

#### **September 1998 98/307**

Two divers conducted a wreck dive at a depth of 25m. Towards the end of the dive one of the pair captured a lobster which he held in his hand. With 100 bar each left in their cylinders they started their ascent. At 6m they both stop for a planned 3 mins stop, only 1 min being required by the 88 tables. After 1 min 30 secs the diver with the lobster ran out of air. He grabbed his buddy's octopus regulator and despite inhaling some water to start with manages to get air. During this they sank back down to 13m. The buddy then used the buoyancy of his own jacket to bring them both to the surface. At the surface help was summonsed and the diver taken in tow and brought to the boat. Once back in the boat both divers are found to be without symptoms. The lobster made good its escape!



displaced and lost his mouthpiece but was able to use another of his regulators. The buddy made a normal ascent, completing decompression stops. The buoyant diver had a slight headache but no other ill effects were reported.

#### **February 1998 98/110**

Two divers started their descent. At 13m the regulator of one started to free flow and, not realising what was happening, he continued to descend. At 20m it was fully free flowing. This diver then made a fast ascent to the surface. After an initial check up this diver left the site without further contact (contrary to advice given at the time).

#### **February 1998 98/115**

A trainee and an instructor were 5 mins into a dive at a depth of 20m. The trainee was using a borrowed drysuit and BC. The drysuit was too large for the trainee. The trainee lost control of her buoyancy, was unable to dump air from suit or BCD and made a rapid, feet first, ascent. The drysuit boots were forced off of her feet. No subsequent ill effects were noted.

#### **March 1998 98/116**

Two divers were descending a shotline to a wreck at 28m. At 21m they exchanged OK signals. One diver then let air into her drysuit. The valve 'froze' open and the suit filled with air. The diver was holding on to the shotline in an inverted position. It was impossible for her to right herself so she released the line and made a rapid ascent, breathing out all the way. At the surface she was recovered into a boat and given oxygen for 1 hour. No subsequent ill effects were experienced.

#### **March 1998 98/336**

Precautionary recompression treatment was given to a diver who had made a rapid ascent from 7m but had made a stop at 3 metres. Symptoms were dizziness and nausea. This was an airlift evacuation. (Coastguard report)

#### **March 1998 98/128**

Two divers were 20 mins into a dive at a depth of 20m. One of the pair was unable to control his buoyancy and made a rapid ascent to the surface. Subsequently it was found that the BCD inflator hose was incorrect for the jacket and the inflation unit was loose. No subsequent ill effects were experienced.

#### **March 1998 98/121**

Two divers had dived to a maximum of 20m. They were 27 mins into a dive at a depth of 15m. One of the divers was using a weight harness system and one of the two weights was accidentally released. The diver was unable to prevent an uncontrolled buoyant ascent to the surface. She breathed out during the ascent and suffered no subsequent ill effects. The buddy followed at a normal rate. It is thought that the weight release became snagged thus releasing the weight.

#### **March 1998 98/122**

A trainee diver and an instructor commenced a dive to 10m. The trainee experienced some difficulty descending. 10 mins into the dive, the dive leader demonstrated the use of an SMB. The trainee felt something was wrong with his fin and bent down to correct it. This caused him to make a rapid feet first ascent to the surface. The instructor was not able to prevent this. At the surface the diver was recovered into a boat and placed on oxygen. Once ashore recompression advice was sought. The diver remained on oxygen for 1 hour 33 mins and no symptoms were noted. No subsequent ill effects were experienced.

#### **March 1998 98/129**

Two divers completed a dive to 6m for 20 mins. Later that day they made a second dive to 21m. 19 mins into that dive at a depth of 7m one of the divers lost control of his buoyancy and made a rapid ascent to the surface. The diver's right hand was slightly swollen, this was believed to be because of a tight cuff seal and cold water. This diver was using a new drysuit. No subsequent ill effects were noted.

#### **March 1998 98/148**

Two divers completed a dive to 34m with a duration of 24 mins. One of the pair launched a delayed SMB and the other went rapidly up the line, possibly missing stops. The first diver completed 4 mins stops at 6m. The diver who had missed stops was placed on oxygen once back in the boat. No symptoms materialised. The following day she was advised to seek medical advice, but no follow up action was recommended. Two weeks later she experienced pain in her spine and shoulder and visited a recompression facility. She was advised that this was unlikely to be a DCI. A drysuit dump valve fault may have been the cause of the fast ascent.

#### **March 1998 98/126**

18 mins into a dive, at a depth of 21m, a diver's weightbelt slipped off. He made a rapid ascent to the surface. No subsequent ill effects are reported.

**March 1998 98/130**

Two divers were 15 mins into a dive at 10m. One of the divers lost control of his buoyancy and made a rapid feet first ascent to the surface. He normally used ankle weights but had forgotten to bring them and dived without. No subsequent ill effects were experienced.

**March 1998 98/127**

A diver completed a dive to 20m for 40 mins with 1 min decompression stop at 6m. Later that day a dive to 18m was undertaken. After 40 mins this diver ascended and was unable to release air from the cuff dump of his drysuit. He made a rapid ascent to the surface. His computer indicated an alarm. No subsequent ill effects were experienced.

**April 1998 98/346**

A diver belonging to the party from which the diver of incident 121307 was involved in carried out a dive later in the day and made a rapid ascent. Standard treatment was given. (Coastguard report)

**May 1998 98/149**

24 mins into a dive and at a depth of 20m a diver let air into his drysuit. He lost control of his buoyancy and made a fast ascent to the surface. He tried to release air from the auto dump but it did not let air out fast enough. He was recovered into the boat and placed on oxygen. No symptoms appeared. His buddy made a normal ascent.

**May 1998 98/179**

A pair of divers dived on a wreck to a maximum depth of 28m. As the last pair down they placed a lifting bag on the anchor and sent it to the surface. At the end of the dive they prepared a delayed SMB. At first the SMB line snagged but then became free. They started their ascent 26 mins into the dive. As they left the wreck they were affected by a water current. The diver with the SMB was slowed by the drag of the line and they became separated. The other diver's computer indicated that stops were needed. He had difficulty releasing air from his drysuit cuff dump and made a rapid buoyant ascent to the surface. He was recovered into the boat and placed on oxygen. After several minutes he had no symptoms and transferred to nitrox 40 from his pony cylinder. The buddy was safely recovered into the boat. During the return journey the diver who had made the rapid ascent felt muscular pain in his left arm and transferred back to oxygen. On arrival back at the harbour he felt symptom free. No further action is reported.

**May 1998 98/193**

Three divers were conducting a drift dive. The maximum depth reached was 18m. At 12m one of the divers became inverted, a possible dump valve malfunction was reported. Her fins came loose and the other divers were unable to right her. She made a rapid buoyant ascent to the surface. The others followed, making a safety stop on the way. The inverted diver was recovered into the boat. Attempts were made to administer oxygen but the cylinder was found to be empty; the gas had leaked out in transit. The Coastguard was informed and the diver and one buddy were taken to a recompression facility. No symptoms were found and no treatment given.

**May 1998 98/214**

Three divers descended a shotline to a wreck at a depth of 47m. At the bottom they had to swim against a current about 8m to the wreck. During the swim one diver became separated from the other two. At the wreck one of the pair saw the torch light of the third and moved towards him. The other diver of the pair was having problems with his regulator and did not follow. He also had a problem with his drysuit inflation. After 2 mins he was still on his own and decided to deploy his delayed SMB. During deployment the line became stuck on two occasions and he was pulled upwards. At 30m he was still having problems with his regulator and pony regulator and he made a fast buoyant ascent to the surface without stops. Once back in the boat he was given oxygen for 1 hour. He showed no symptoms. The other two surfaced normally conducting stops on the way. The buoyant diver later stated that his regulator had not been serviced for a couple of years.

**June 1998 98/258**

Two divers conducted a dive to 45m, one was using a video camera. The shot was not on the wreck and they decided to abandon the dive after 18 mins. They deployed a delayed SMB. They attempted to make a stop at 9m but the diver with the camera struggled to maintain depth. After 1 min they moved up to the next stop, but despite dumping air, the buoyant diver ascended to the surface. The other diver completed a 3 mins stop at 6m. The buoyant diver was recovered from the water and placed on oxygen. No symptoms of DCI became evident.

**June 1998 98/172**

A group of one instructor and six divers entered the water to perform some training drills. During a mask clearing drill one of the divers became separated from the rest of the group and sank from a depth of 6m to

12m. She panicked and used her BCD to make a buoyant ascent. Other divers towed her to the shore and administered oxygen. Her own party was back on shore 8 mins later. The casualty is reported to have recovered.

#### **June 1998 98/190**

Two divers entered the water for the second dive of the day. The first had been to 33m for 24 mins without stops. The second was 3 hours later to a depth of 24m. This was a drift dive, a new experience for one of the pair. This diver was using another diver's drysuit, which was a little too big, and with an unfamiliar cuff dump. This diver had difficulty descending and sorting out her buoyancy. During the dive she had problems using the cuff dump and air migrated into the legs of the suit. She lost control of her buoyancy and made a rapid ascent from 20m to the surface. Her buddy followed. At the surface she was recovered into the boat. She experienced a sore ear for about 5 hours following this event. No other ill effects were noted.

#### **June 1998 98/217**

Four divers had been to 22m and followed the bottom up to 20m. One of the group began to lose control of his buoyancy. The dive leader held on to this diver's gauges but was pushed away. The diver began to ascend, another of the group tried to arrest the ascent but could not. The buoyant diver rose rapidly to the surface. The others surfaced at a normal rate. They regrouped at the surface and all made their way out of the water. No ill effects were experienced.

#### **June 1998 98/377**

Losing his weightbelt at 34m and the following rapid ascent caused a diver to become unconscious at the surface where he was successfully resuscitated and flown for treatment. (Coastguard report)

#### **July 1998 98/230**

A diver was using a new drysuit for the first time in the sea. She dived to 35m and during the ascent, at 12m, she lost control of her buoyancy. She had been using both suit and BC for buoyancy control. She made a buoyant ascent to the surface missing a stop. The dive duration was 20 mins. The buddy followed up at the correct rate but also missed the stop. Both were monitored for DCI but no signs were seen.

#### **July 1998 98/390**

Medical advice was sought after three divers reported problems with SMB at 14m after a dive to 27m, surfacing quickly from 14m. Divers self-monitored situation and told to call Coastguard if symptoms showed. (Coastguard report)

#### **July 1998 98/392**

A diver who made a rapid ascent was taken to the recompression facility as a precaution but was not in need of treatment. (Coastguard report)

#### **July 1998 98/393**

Another rapid ascent - The lifeboat transferred the unconscious diver to shore and the recompression facility. The Coastguard later received a call requesting a helicopter to transfer the patient to Aberdeen due to the seriousness of the situation. Dive profile - rapid ascent from 44m after dropping weightbelt. (Coastguard & RNLI report)

#### **July 1998 98/225**

Two divers had been to 36m and were making their way back up following the ground contour. At 20m air migrated into the legs of the drysuit of one of the pair and her feet came out of her boots. She made an uncontrolled ascent to the surface. No ill effects were noted.

#### **July 1998 98/227**

15 mins into a dive, at a depth of 6m, one of a pair of divers lost a fin. In trying to stop it floating away he lost control of his buoyancy and rose to the surface. He called for assistance. No subsequent ill effects were reported.

#### **August 1998 98/404**

Three divers were all transported to hospital via lifeboat and ambulance after missing decompression stops. No treatment was required. (Coastguard report)

#### **August 1998 98/410**

Although no symptoms of DCI were present a diver was taken to hospital after a rapid ascent from 27m. After a check up the diver was released without further treatment. (Coastguard report)

#### **August 1998 98/282**

Three divers had been to 35m. They were making their way back up and had got to 20m when one of them

started to sink back down, he felt that he could not get air into his BC. One of his buddies realised that there was a problem and used his own BC to bring them both to the surface. They made a rapid ascent but experienced no resultant problems. Dive duration was 16 mins. The BC was subsequently found to be working correctly.

**August 1998 98/281**

Two divers had been to 36m. As they were making their way back up, one of them started to sink back. He thought that he had a problem with his BC inflator. He became separated from his buddy and made a fast ascent. His buddy surfaced 5 mins later. It is thought that the diver had become disorientated by silt that they had disturbed. Dive duration was 14 mins. No ill effects are reported.

**August 1998 98/284**

Two divers started an ascent from 20m, one of them had only 50 bar remaining. At 10m this diver started to sink back down again and appeared to be out of air. His buddy offered his alternative air source and they made a fairly rapid ascent to the surface. Dive duration was 20 mins. No subsequent ill effects are reported.

**August 1998 98/425**

Upon medical advice a diver who had missed a stop was treated locally. (Coastguard report)

**August 1998 98/280**

A diver was using a drysuit for the first time. The suit was borrowed and too big. She started the dive holding hands with her buddy. Gaining in confidence, at 20m, she let go of her buddy. She then lost control of her buoyancy and made a fast ascent to the surface. No subsequent ill effects are reported.

**August 1998 98/432**

A report was received of three divers having made a rapid ascent from 25m and although no symptoms were apparent, medical advice was obtained and no treatment was required. (Coastguard report)

**September 1998 98/279**

A trainee and instructor conducted a dive to 30m for 15 mins. The student was wearing a drysuit belonging to the dive school. The suit was not allowing her much movement. As they approached 8m on the ascent the student lost control of her buoyancy and she made a rapid ascent to the surface. On the surface the student was shaken and panicked. She was given oxygen. No subsequent ill effects are reported.

**September 1998 98/443**

Medical advice was passed via a doctor to a dive boat with a diver aboard who had missed 14 mins of stops. (Coastguard report)

# NDC Diving Incidents Report 1989

## *Equipment*

### **October 1988 98/013**

At the end of a training dive, at a depth of 6m, a trainee's regulator started to free flow. The instructor passed the trainee his octopus regulator and brought the trainee to the surface using a controlled buoyant lift. The regulator continued to free flow.

### **November 1988 98/039**

6 mins into a dive, at a depth of 15m, a diver found herself starting to rise to the surface. She was unable to control her buoyancy and rose rapidly to the surface. The inflation valve of her drysuit was subsequently found to have stuck in, allowing air to flow continuously into the suit. No subsequent ill effects were reported.

### **November 1988 98/050**

Two divers descended a shotline to the seabed at a depth of 31m. Underwater visibility was very low. At the bottom, the regulator of one of the divers let in seawater, which caused him to panic. He was connected to his buddy by a line and the buddy also had an SMB. The panicked diver made for the surface dragging the other with him. The buddy caught up and managed to control the panicking diver at 23m. They made a controlled ascent to 6m and conducted a 3 mins stop. No subsequent ill effects were reported.

### **November 1988 98/052**

Four pairs of divers descended a shotline to a depth of 40m in a quarry. One pair became temporarily separated during the descent due to one stopping to adjust his weightbelt. The buddy of this diver suffered a regulator free flow as soon as he arrived at the bottom. One of the other divers gave him his alternative air source and a controlled ascent was made. The divers conducted 4 mins of stops. No subsequent ill effects were experienced.

### **December 1988 98/060**

Two divers involved in pool training noticed a smell similar to cellulose paint thinners in their diving air. Other cylinders were found to be similarly contaminated. The air was released and the cylinders refilled. During this process the refilling air bank also became contaminated. Refilling all associated cylinders reduced the problem, but a taint was still present.

### **December 1988 98/061**

16 mins into a night dive, at a depth of 23m a diver entered an underwater structure in a quarry. The BCD direct feed hose of this diver became snagged on a hook inside this structure and she was unable to exit. Her buddy entered and was able to free her. The divers made a safe return to the surface.

### **March 1989 98/101**

A diver was testing a new equipment configuration in shallow water. Prior to the dive, during a kit check, the feed supply to his BCD was inadvertently turned off. Underwater he had a problem with a full face mask, and was just able to get his alternative air source into his mouth before losing consciousness. He had been unable to make himself buoyant. He was recovered to the surface by his buddy and another diver and made a full recovery.

### **March 1989 98/092**

Two divers were filling a lifting bag to raise a shot weight. One diver used the octopus regulator of the other. On completion the diver was replacing her octopus regulator into its clip when she accidentally pressed the purge and started a free flow. This could not be stopped and, breathing from the octopus regulator of her buddy, they made a safe controlled ascent. No subsequent ill effects were reported.

### **March 1989 98/103**

10 mins into a dive to 36m a diver's cylinder became loose. Her buddy tried to fix the problem but couldn't, so they decided to ascend. At this point the buddy's regulator started to free flow. They used the first diver's alternative air source and made a faster than normal ascent to the surface. No subsequent ill effects were reported.

### **March 1989 98/108**

A diver was on a training course at a depth of 20m. 10 mins into the dive his regulator started to free flow. Another diver provided an alternative air source. The first diver was still in difficulties and the instructor took control of the ascent. At the surface the diver was found to be in shock and distressed. He was given a medical check and found to have low blood pressure and an irregular heart beat (a known prior condition). He

was taken to hospital but discharged the same day after a period of observation.

#### **April 1989 98/114**

Three divers were conducting a dive to 35m. 14 mins into the dive they commenced a slow ascent. At this point the regulator of one began a slow free flow. This diver switched to his octopus regulator. One of his buddies took hold of this diver and they started to ascend. The regulator was now fully free flowing. During the ascent the first diver's main cylinder became fully depleted and he switched to his pony cylinder. At 12m they got a fast ascent warning from one of their computers and they both dumped air. They lost too much buoyancy and returned to 20m before they realised. The buddy inflated his BCD but the other diver was unable to do so because he had no air remaining in his main cylinder. The buddy fully inflated his BCD and struggled to hold on to the heavy diver. Slowly they ascended again and reached the surface. The third diver stayed with the other two throughout. No subsequent ill effects were experienced.

#### **May 1989 98/189**

At a depth of 36m a diver switched to his pony cylinder regulator and used his main regulator to blow some air into a pipe found on the bottom. When he released the purge button the regulator continued to free flow. He and his buddy made a safe ascent to the surface.

#### **May 1989 98/156**

Two divers were at a depth of 25m when the regulator of one of the pair began to free flow. The octopus regulator of the other diver was then used but this also started to free flow. The divers ascended to the surface. The final part of the ascent was quick. No subsequent ill effects were experienced.

#### **May 1989 98/158**

Three divers were at a depth of 34m when, after 10 mins, one of their regulators began to free flow. This diver used the alternative air source of one of the others and they made their ascent. The ascent became fast from 20m and they missed a planned safety stop. No subsequent ill effects were reported.

#### **May 1989 98/163**

Two divers were 10 mins into a dive at a depth of 22m. One of the pair noticed a restriction to inhalation through his regulator. The next breath was even more restricted and on the third he was not able to get any air. He approached his buddy and they made an air shared ascent. Inspection at the surface showed that his air cylinder still contained 160 bar. When tested the regulator fluctuated between no air and free flow.

#### **June 1989 98/231**

Two pairs of divers were conducting a dive, each covered by a boat. Both pairs were using SMBs. One SMB moved away from the intended dive area and one of the boats followed it. The first boat stayed in the dive area and was recovering the first pair when they heard shouts nearby. They discovered that it was the second pair of divers. All divers were safely recovered, and it was found that the SMB of the second pair had become detached from the line because of an eyelet failure. The second boat had been following the drifting SMB, not realising that it had become detached.

#### **July 1989 98/209**

At the beginning of a dive, at a depth of 6m, a diver's regulator hose burst at the junction with the first stage. He made a rapid, controlled ascent to the surface, breathing from this regulator. No ill effects were reported.

#### **July 1989 98/179**

Two divers conducted a dive to 11m. A few minutes into the dive, one of the pair looked at his contents gauge which was mounted in a console and noticed that the high pressure hose was kinked at a right angle. As he moved the hose it suddenly burst allowing air to escape violently. The two started an ascent and half way to the surface he took the alternative air source from his buddy as his own regulator was becoming hard to breathe from. They arrived safely at the surface, with a total dive time of 5 mins. The 10.4l cylinder had started at 215 bar and finished with 50 bar.

#### **July 1989 98/180**

An instructor and two trainees were descending a shotline to a wreck. At 4m they stopped while one of the trainees cleared his ears. At this point the weightbelt fell away from this diver. The instructor grabbed hold of the trainee and held him to the shotline. They then made a controlled ascent to the surface. The weightbelt was subsequently recovered and it was found that the belt had come undone from the buckle, the buckle was still correctly fastened to the clip at the other end of the belt.

#### **August 1989 98/357**

A solo shore diver panicked and made a rapid ascent when his suit became very uncomfortable. He was assisted to the shore by another group of divers. An ambulance was called, but the symptoms disappeared when the ill fitting drysuit was removed. It beggars belief! (Coastguard report).

# NDC Diving Incidents Report 1998

## *Miscellaneous*

### **November 1997 98/329**

Cellular 999 call reporting shore divers in trouble was investigated but the divers were back on shore after another vessel had assisted them. (Coastguard report)

### **February 1998 98/465**

Lifeboat launched to locate missing diver(s). False alarm. (RNLI report)

### **April 1998 98/469**

Lifeboat launched to locate missing diver(s). False alarm. (RNLI report)

### **April 1998 98/348**

Once again the Coastguard and lifeboat were called to investigate reports of divers in distress. They were actually carrying out rescue drills. The Coastguard service relies heavily on reports of distress or urgency by members of the public and whilst I realise the importance of diver rescue training please be aware that the waving of flags or arms will be seen as a distress signal. Always inform the Coastguard of your intentions. (Coastguard report)

### **April 1998 98/139**

Two divers completed a dive to 6m for 22 mins. 1 hour 5 mins later they dived again to 6m for 15 mins. After the first dive one of them was very cold, he was tense and had difficulty breathing. After the second dive he felt dizzy, nearly fainted and had 'pins and needles' in his hands. Medical advice was sought. He was given oxygen, kept warm and placed under observation for 1 hour. It was discovered that he had had little sleep the previous night and that his drysuit wrist seals were very tight.

### **April 1998 98/140**

At a depth of 18m a diver started to panic having lost control of his breathing. He started coughing underwater. The dive leader brought him to the surface. No subsequent ill effects were noted.

### **May 1998 98/475**

Lifeboat launched to locate missing diver(s). False alarm. (RNLI report)

### **May 1998 98/373**

The skipper of a dive charter boat alerted the coastguard when he saw that a diver's SMB had disappeared and he was 5 minutes overdue. The Coastguard helicopter was scrambled and the lifeboat launched but both were returned before arriving on scene as the diver surfaced shortly afterwards. The action of the skipper was a wise precautionary measure and reflects concern for his party. (Coastguard report)

### **June 1998 98/491**

Two lifeboats launched to locate missing diver(s). False alarm. (RNLI report)

### **June 1998 98/493**

Lifeboat launched to locate missing diver(s). False alarm. (RNLI report)

### **July 1998 98/251**

A diver carried out several dives over a weekend, on the third dive she made a rapid ascent to stay with a buddy who had a buoyancy problem. Four days later she carried out two further dives, safety stops were performed. Two days after that she developed a numbness in her face. She visited a recompression facility and was treated. This did not resolve the symptoms and it was decided that the problem was not diving related.

### **July 1998 98/389**

Report of divers overdue was received and rescue teams, lifeboat and helicopter were scrambled, however the divers surfaced safe and well and all units were stood down. This was NOT an over reaction, it was wise to inform the Coastguard. (Coastguard & RNLI report)

### **July 1998 98/215**

An instructor and a trainee were at a depth of 12m when the trainee signalled that he was not comfortable. They made their way back to a depth of 7m. The trainee appeared to be out of breath. They made a normal ascent. At the surface the trainee had problems breathing, his chest was tight, he was very pale. Out of the

water he was given oxygen and after 10 mins recovered. His suit appeared to be quite tight.

**July 1998 98/395**

A diver reported overdue surfaced prior to many units arriving on scene. (Coastguard report)

**July 1998 98/231**

On a training course at a depth of 20m a trainee panicked. Her instructor brought her to the surface. The ascent was slightly faster than normal. No subsequent ill effects were noted.

**August 1998 98/296**

Two divers were at 8m during a night dive. One of the divers became trapped in a fishing net. Her buddy had to help her remove her diving cylinder and to cut away the netting to enable her to get free. No subsequent ill effects are reported. (Newspaper report only).



# NDC Diving Incidents Report 1998

## Overseas Incidents

### Fatalities

#### **November 1997 98/030**

During the final stages of an ascent from a dive, a diver experienced respiratory problems. He was assisted to the surface. Soon afterwards he suffered a heart attack from which he did not recover.

#### **May 1998 98/161**

Five pairs of divers were diving on a wreck with a seabed depth of 40m. The last pair in made their way down the shotline and was planning to cut the light line that had been secured by the first pair and make sure that the shot was free to be lifted. At the wreck one diver heard an exclamation or shout from his buddy and when he turned to find out what was wrong the buddy was not to be seen. He made a small search, cut the line, made a longer search and then began his ascent. The lost diver was seen to surface by those on the boat. He had no mask and seemed to be relaxing on the surface. He failed to acknowledge the boat and the boat was moved towards him. A rope was thrown but the diver did not move towards it. A crewmember entered the water, the diver's kit was removed and he was lifted into the boat. He was not breathing. Resuscitation procedures were started and assistance summonsed by radio. 20 to 30 mins later a launch arrived with paramedics aboard. Adrenaline was injected and resuscitation continued for a further 30 mins, at which point the diver was pronounced dead. His diving equipment was examined and found to be in order. It is considered that a heart attack or stroke may have been the cause. All the other divers were recovered safely.

### Decompression

#### **October 1997 98/044**

Towards the end of a diving holiday which involved three dives per day and after a four day break in diving a diver conducted two dives. The first was to 39m for 26 mins with 7 mins of stops at 6m, and the second, after a 1 hour 14 min surface interval, was to 22m for 41 mins with a 6 mins stop at 6m and a 2 mins stop at 3m. These stops were longer than indicated by the diver's computer to match those of a buddy who was diving with a more conservative computer. That evening the diver experienced stomach pains and later 'flue-like' pains in both shoulders, arms and hands. The buddy had no symptoms. The following day the diver was medically examined and possible food poisoning was diagnosed. The diver then undertook a long flight home during which he experienced 'niggly pains' in his shoulders and finger joints and discomfort in his back muscles. The following day, still feeling unwell, the diver sought further medical advice. A neurological examination found some deficit and the diver was recompressed. The recompression treatment seemed to resolve most of the numbness that had been found in upper arm and leg. The diver was left with some residual pain in collarbone to shoulder joints and some numbness returned during the following week with accompanying 'dullness in mental ability'. The diver remains under medical investigation.

#### **March 1998 98/117**

A diver had conducted a series of three dives over a 24 hour period, the last to 21m for 42 mins. None of these dives involved decompression stops. 2 to 3 hours after the last dive the diver noticed a tingling sensation in his hands. He had been driving the boat and it was thought that the cause may have been vibration. He did not dive again that day. Later that day the sensation spread to his calves and feet and he had an ache in his knees. He had been sleeping and his posture, whilst asleep, is thought to have been a possible cause. The diver was taken to hospital for examination. No adverse signs were found. He was placed on oxygen but the symptoms did not resolve. The diver was advised not to dive for 28 days and not to fly for 7 days. Similar symptoms were experienced on waking 5 days after the last dive.

#### **June 1998 98/203**

A diver completed a dive to 24m for 38 mins including 2 mins stop at 5m. 2 hours 12 mins later he dived again to 28m for 37 mins including a 3 mins stop at 5m. Shortly after surfacing he complained of lower back pain and then of 'pins and needles' in his lower limbs and of a numbness across the chest. The other divers were recalled and the boat headed back. Assistance was sought by radio but the group was informed that none would be summonsed until they were ashore. The casualty was given oxygen. A local doctor diagnosed hypothermia and recommended that diving the following day should be limited to 10m. He would not seek specialist advice. The casualty continued to show symptoms and the group phoned for medical advice. The casualty was then flown by helicopter to a recompression facility and treated.

#### **August 1998 98/302**

A diver completed a wreck dive to a maximum depth of 30m for a total of 19 mins. His ascent from 6m took 40

secs. Once back into the boat he noticed a tingling in his left foot. 5 mins later he developed a tingling in his left arm. He was placed on oxygen and medical advice was sought. He was taken to a recompression facility for treatment. The symptoms were resolved.

#### **August 1998 98/311**

A diver completed a series of six dives over a three day period. On day three he dived to 33m for 38 mins which included 10 mins stop at 9m, 2 hours 38 mins later he dived again, this time to 36m for 28 mins with 4 mins stop at 6m. These dives were both multi-level and the divers did not violate any decompression indicated by their computers. 5 mins after surfacing one of the pair noted a pain in his left upper arm. He was given oxygen. He briefly experienced a numbness across his face and down his side. He was airlifted by helicopter to a recompression facility for treatment. He was kept in hospital overnight for observation.

#### ***Injury/Illness***

#### **November 1997 98/029**

Two divers were seen to surface and one began to tow the other. A second pair of divers surfaced close by and one signalled an emergency and went to help. The diving casualty was brought to a hardboat in a RHIB. The casualty was cyanosed and struggling to breathe. He was coughing up mucus and complaining of cold. He was placed on oxygen and taken to harbour where he was transferred to an ambulance. He later made a full recovery. The problem was diagnosed as salt water inhalation, although no problem could be found with his mouthpiece. The diver was taking beta-blocking prescription drugs.

#### **November 1997 98/057**

A diver was on a hardboat in fairly rough conditions. He became seasick and moved to the rail of the boat. He took hold of the rail to steady himself. The painter of a RHIB was tied to this rail further forward and this painter came down upon his little finger trapping it against the rail. The finger was 'split from end to end'. 5 stitches were required and the diver was unable to conduct any further diving on that trip.

#### **November 1997 98/078**

Three divers entered the water to conduct a dive to 20m. They descended a shotline. At 8m one of the divers lost a fin and started to descend rapidly. The others followed him to the bottom where he was found to be in an uncomfortable and anxious state. He signalled that he wanted to ascend. One of the divers had collected the lost fin on the descent offered it for refitting. The diver did not refit his fin and experienced difficulty with the ascent. He was breathing rapidly. The dive leader then conducted a controlled buoyant lift on the distressed diver, with the other following. They made it safely back to the surface. At the surface a small amount of blood was seen to be coming from the distressed diver's ear. Subsequent examination revealed a small elliptical tear towards the outer edge of his eardrum. This diver was using borrowed fins and weightbelt, it was suggested that he had failed to check for correct weight and fitting of this equipment.

#### **January 1998 98/125**

7 mins into a dive to 18m, a diver attempted to equalise the pressure in his ears. His right ear went suddenly cold and he felt and heard a 'whooshing'. He was disorientated for a few seconds. He signalled the problem to his buddy and they made a normal ascent. Medical examination revealed a pin hole rupture of his eardrum. He had had a previous injury to this ear.

#### **April 1998 98/199**

A diver had experienced problems with ear clearing during recent dives. After a dive to 20m for 30 mins he complained of pain in his left ear. He sought medical advice and was given antibiotics and told to return in three days, because of an infection the doctor could not diagnose the problem. Subsequent examination, three days later, revealed that he had perforated his eardrum. The diver was not aware when this injury had happened.

#### **May 1998 98/178**

A trainee on her first open water diver entered the water with an instructor. They dived to a depth of 6m. The trainee indicated that she wished to surface, and seemed to have ear trouble at around 3m. At the surface the trainee had ear pain and felt dizzy. The trainee was helped ashore and was found to have blood coming from her left ear. She was taken to hospital and a ruptured blood vessel was found. She spent the night in hospital and was given painkillers and antibiotics.

#### **May 1998 98/155**

A diver conducted a dive to 28m for 23 mins including a 1 min stop at 6m. During the dive a large ship passed close and the sound created an 'uncomfortable feeling and throbbing' in the head of one of the divers. As the dive progressed this developed into a bad headache. During the ascent the diver felt nauseous. Back on board the boat the condition continued and the casualty was placed on oxygen. He then vomited. He was taken ashore and given fluids. When standing ashore he noticed a tingling in his feet. He was taken to a

recompression facility. Still on oxygen, the headache had now resolved. A high level of carbon dioxide was thought to have been a potential cause. The casualty was recompressed as a precaution. He was advised not to dive for 28 days. No subsequent ill effects were noted.

#### **June 1998 98/184**

A diver entered the water from a boat. A swell caught this diver and his buddy entered on top of him. The pillar valve of the second diver caused a 1.5 inch gash on the forehead of the other. Divers in the water were recalled and the emergency services alerted by radio. The casualty was taken ashore and from there by helicopter to a hospital for treatment.

#### **August 1998 98/273**

Two divers completed a wreck dive to a maximum depth of 40m for a total of 31 mins including a precautionary stop of 1 min. Their computers showed a minimum of 5 mins no stop time remaining throughout the dive. About 20 mins after the dive one of the divers began to feel unwell. The remaining divers were recalled and the boat returned to harbour. The diver was taken to hospital and, by the time she arrived, she felt well again. This diver was subsequently given recompression treatment because it was decided by a doctor that 38 mins of decompression stops had been missed. Lack of sleep, no food, little or no drink and high ambient temperatures are believed to have contributed to the diver's illness.

#### **August 1998 98/301**

A diver completed a dive to 25m for 22 mins. Over 4 hours later he dived again to 21m for 21 mins. During the ascent he arrived at 6m but had to return to 13m because his buddy experienced buoyancy control difficulties. They re-ascended and spent 1 to 2 mins at 6m before surfacing. 2 hours after the dive he experienced an ache in the finger joints of his left hand. He also noticed a pulled muscle in his left shoulder. He sought medical advice and was recompressed. This did not resolve the problem and it was concluded that it was due to earlier rescue practice in which he had engaged.

### **Boating / Surface Incidents**

#### **October 1997 98/023**

Three pairs of divers entered the water at 10 min intervals to dive a reef at a depth of 27m. After 30 mins the first pair deployed a delayed SMB to start their ascent. The SMB split and did not rise to the surface. They attempted to deploy a second SMB but this also failed. The pair made their ascent to the surface. There was a current flowing and a surface swell. At the surface they were not seen by their boat cover, and they were carried away by the current. The other two pairs were recovered normally and when it was realised that the first pair was overdue a search was instigated involving several other boats. The lost pair was eventually found. No ill effects are reported.

#### **December 1997 98/067**

Two divers planned to conduct a 40 min dive to a maximum depth of 31m. When they were 10 mins overdue their boat cover reported them missing. A search was instigated and the divers were recovered 1 hour later 2 nautical miles from the start point. The divers were not using any SMB and the underwater current was in a different direction from the surface current. The searchers were looking in the wrong area and the divers were only found after their shouts were heard. They were operating in a remote area in the Middle East and no official rescue services were available to the party.

### **Ascents**

#### **June 1998 98/288**

Towards the end of a dive to 20m one of a pair of divers began to deploy a delayed SMB. During the deployment the reel jammed and, as it was attached to the diver, she was dragged directly to the surface. Her buddy made a normal ascent completing 4 mins of safety stops. The diver who had made the direct ascent was placed on oxygen for 45 mins and monitored. Her computer indicated a decompression violation. She experienced no subsequent ill effects. Dive duration 23 mins.

### **Technique**

#### **October 1997 98/043**

Two divers were conducting a wreck dive to a maximum depth of 28m. One diver was using air faster than the other and indicated when he had only 50 bar remaining. The second diver deployed a delayed SMB and they started their ascent. As soon as they did, the first diver ran out of air and reached for the buddy's octopus regulator. The octopus regulator was out of position and the diver who was out of air reached for the buddy's main regulator. The buddy indicated that he should take this and recovered his octopus regulator. He took a few breaths from it and passed it to the diver out of air and recovered his main regulator. The divers found that they were making a fast ascent and one of them had to dump air from his neck seal to slow them down

as his cuff dump was too slow. They completed a stop of 2 mins at 6m, and then completed their ascent. No subsequent ill effects are reported.

#### **December 1997 98/066**

Two divers began a descent and the dive leader decided to launch a delayed SMB at 9m because there was a strong current. To prevent being swept along with the current the diver held on to the line from a fishing pot. Struggling to deploy the SMB with one hand one of the lines of the SMB became tangled around the diver's regulator. As the bag lifted it pulled the regulator from his mouth. Further entanglement prevented him from reaching his octopus regulator and he decided to make a free ascent. He signalled this to his buddy and both made it safely to the surface. The dive was aborted at this point.

#### **Equipment**

#### **April 1998 98/146**

15 mins into a dive and at a depth of 25m a diver checked his contents gauge. As he did so it 'exploded into a mass of bubbles'. He moved to his buddy, showed him the problem, and was passed the buddy's octopus regulator. They made a controlled ascent. Subsequent examination of the contents gauge showed that an 'O' ring in the swivel had blown out. Neither diver suffered ill effects from the event.

#### **April 1998 98/183**

Two divers were diving to 15m for a training drill. At 10m the high pressure hose of one of the divers burst near the first stage. His contents gauge showed a drop in pressure from 200 bar to 50 bar 'in seconds'. His buddy gave him his octopus regulator and they ascended safely to the surface.

#### **September 1998 98/300**

Two divers conducting a wreck dive descended to the seabed at a depth of 30m. On arrival one of the divers turned himself into an upright position to land feet first and put some air into his BC to regain neutral buoyancy. As he reached the bottom his weightbelt slipped off of his hips and onto the seabed. He dumped the air from his BC and tried to swim down to his weightbelt. He could not do so and swam to the wreck, taking hold of it to prevent an ascent. His buddy recovered the weightbelt and returned it to him. The belt was refitted and the dive continued normally. This diver was using a neoprene suit for the first time at this depth and it is believed that suit compression contributed.

#### **Miscellaneous**

#### **October 1997 98/041**

At the end of a reef dive a dive guide lead a group of six divers into a cave system at a depth of 2 to 4m. The cave became a narrow, poorly lit tunnel and the divers had no torches. One of the divers became stuck in a narrow passage and had to force his way through. The divers stirred up silt and the visibility became poor. After about 30m into the cave system the divers entered a small chamber and the last two became separated from the others and were unable to find the way forward. A small fissure lead from the cave to the surface and one of the two divers removed his BC and cylinder and squeezed through to the surface. The second diver decided that he could not follow and sought a way out through the tunnels. When this second diver found his way to clear water he had less than one minute of air left and was badly cut and scratched from contact with the narrow passages.

#### **May 1998 98/192**

A trainee and an instructor entered the water to dive to a wreck at a depth of 10m. 8 mins into the dive the trainee gave the 'all is not well' signal. The instructor indicated to ascend. The trainee returned the signal but did not move. The signal was repeated but this time the trainee ignored it. The instructor then brought the trainee to the surface with a controlled buoyant lift. She was recovered into the boat and helped to de-kit. She showed signs of hyperventilation.

# NDC Diving Incidents Report 1998

## Overseas Incidents

### Fatalities

#### **November 1997 98/030**

During the final stages of an ascent from a dive, a diver experienced respiratory problems. He was assisted to the surface. Soon afterwards he suffered a heart attack from which he did not recover.

#### **May 1998 98/161**

Five pairs of divers were diving on a wreck with a seabed depth of 40m. The last pair in made their way down the shotline and was planning to cut the light line that had been secured by the first pair and make sure that the shot was free to be lifted. At the wreck one diver heard an exclamation or shout from his buddy and when he turned to find out what was wrong the buddy was not to be seen. He made a small search, cut the line, made a longer search and then began his ascent. The lost diver was seen to surface by those on the boat. He had no mask and seemed to be relaxing on the surface. He failed to acknowledge the boat and the boat was moved towards him. A rope was thrown but the diver did not move towards it. A crewmember entered the water, the diver's kit was removed and he was lifted into the boat. He was not breathing. Resuscitation procedures were started and assistance summonsed by radio. 20 to 30 mins later a launch arrived with paramedics aboard. Adrenaline was injected and resuscitation continued for a further 30 mins, at which point the diver was pronounced dead. His diving equipment was examined and found to be in order. It is considered that a heart attack or stroke may have been the cause. All the other divers were recovered safely.

### Decompression

#### **October 1997 98/044**

Towards the end of a diving holiday which involved three dives per day and after a four day break in diving a diver conducted two dives. The first was to 39m for 26 mins with 7 mins of stops at 6m, and the second, after a 1 hour 14 min surface interval, was to 22m for 41 mins with a 6 mins stop at 6m and a 2 mins stop at 3m. These stops were longer than indicated by the diver's computer to match those of a buddy who was diving with a more conservative computer. That evening the diver experienced stomach pains and later 'flue-like' pains in both shoulders, arms and hands. The buddy had no symptoms. The following day the diver was medically examined and possible food poisoning was diagnosed. The diver then undertook a long flight home during which he experienced 'niggly pains' in his shoulders and finger joints and discomfort in his back muscles. The following day, still feeling unwell, the diver sought further medical advice. A neurological examination found some deficit and the diver was recompressed. The recompression treatment seemed to resolve most of the numbness that had been found in upper arm and leg. The diver was left with some residual pain in collarbone to shoulder joints and some numbness returned during the following week with accompanying 'dullness in mental ability'. The diver remains under medical investigation.

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A diver had conducted a series of three dives over a 24 hour period, the last to 21m for 42 mins. None of these dives involved decompression stops. 2 to 3 hours after the last dive the diver noticed a tingling sensation in his hands. He had been driving the boat and it was thought that the cause may have been vibration. He did not dive again that day. Later that day the sensation spread to his calves and feet and he had an ache in his knees. He had been sleeping and his posture, whilst asleep, is thought to have been a possible cause. The diver was taken to hospital for examination. No adverse signs were found. He was placed on oxygen but the symptoms did not resolve. The diver was advised not to dive for 28 days and not to fly for 7 days. Similar symptoms were experienced on waking 5 days after the last dive.

#### **June 1998 98/203**

A diver completed a dive to 24m for 38 mins including 2 mins stop at 5m. 2 hours 12 mins later he dived again to 28m for 37 mins including a 3 mins stop at 5m. Shortly after surfacing he complained of lower back pain and then of 'pins and needles' in his lower limbs and of a numbness across the chest. The other divers were recalled and the boat headed back. Assistance was sought by radio but the group was informed that none would be summonsed until they were ashore. The casualty was given oxygen. A local doctor diagnosed hypothermia and recommended that diving the following day should be limited to 10m. He would not seek specialist advice. The casualty continued to show symptoms and the group phoned for medical advice. The casualty was then flown by helicopter to a recompression facility and treated.

#### **August 1998 98/302**

A diver completed a wreck dive to a maximum depth of 30m for a total of 19 mins. His ascent from 6m took 40

secs. Once back into the boat he noticed a tingling in his left foot. 5 mins later he developed a tingling in his left arm. He was placed on oxygen and medical advice was sought. He was taken to a recompression facility for treatment. The symptoms were resolved.

#### **August 1998 98/311**

A diver completed a series of six dives over a three day period. On day three he dived to 33m for 38 mins which included 10 mins stop at 9m, 2 hours 38 mins later he dived again, this time to 36m for 28 mins with 4 mins stop at 6m. These dives were both multi-level and the divers did not violate any decompression indicated by their computers. 5 mins after surfacing one of the pair noted a pain in his left upper arm. He was given oxygen. He briefly experienced a numbness across his face and down his side. He was airlifted by helicopter to a recompression facility for treatment. He was kept in hospital overnight for observation.

#### ***Injury/Illness***

#### **November 1997 98/029**

Two divers were seen to surface and one began to tow the other. A second pair of divers surfaced close by and one signalled an emergency and went to help. The diving casualty was brought to a hardboat in a RHIB. The casualty was cyanosed and struggling to breathe. He was coughing up mucus and complaining of cold. He was placed on oxygen and taken to harbour where he was transferred to an ambulance. He later made a full recovery. The problem was diagnosed as salt water inhalation, although no problem could be found with his mouthpiece. The diver was taking beta-blocking prescription drugs.

#### **November 1997 98/057**

A diver was on a hardboat in fairly rough conditions. He became seasick and moved to the rail of the boat. He took hold of the rail to steady himself. The painter of a RHIB was tied to this rail further forward and this painter came down upon his little finger trapping it against the rail. The finger was 'split from end to end'. 5 stitches were required and the diver was unable to conduct any further diving on that trip.

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Three divers entered the water to conduct a dive to 20m. They descended a shotline. At 8m one of the divers lost a fin and started to descend rapidly. The others followed him to the bottom where he was found to be in an uncomfortable and anxious state. He signalled that he wanted to ascend. One of the divers had collected the lost fin on the descent offered it for refitting. The diver did not refit his fin and experienced difficulty with the ascent. He was breathing rapidly. The dive leader then conducted a controlled buoyant lift on the distressed diver, with the other following. They made it safely back to the surface. At the surface a small amount of blood was seen to be coming from the distressed diver's ear. Subsequent examination revealed a small elliptical tear towards the outer edge of his eardrum. This diver was using borrowed fins and weightbelt, it was suggested that he had failed to check for correct weight and fitting of this equipment.

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7 mins into a dive to 18m, a diver attempted to equalise the pressure in his ears. His right ear went suddenly cold and he felt and heard a 'whooshing'. He was disorientated for a few seconds. He signalled the problem to his buddy and they made a normal ascent. Medical examination revealed a pin hole rupture of his eardrum. He had had a previous injury to this ear.

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A diver had experienced problems with ear clearing during recent dives. After a dive to 20m for 30 mins he complained of pain in his left ear. He sought medical advice and was given antibiotics and told to return in three days, because of an infection the doctor could not diagnose the problem. Subsequent examination, three days later, revealed that he had perforated his eardrum. The diver was not aware when this injury had happened.

#### **May 1998 98/178**

A trainee on her first open water diver entered the water with an instructor. They dived to a depth of 6m. The trainee indicated that she wished to surface, and seemed to have ear trouble at around 3m. At the surface the trainee had ear pain and felt dizzy. The trainee was helped ashore and was found to have blood coming from her left ear. She was taken to hospital and a ruptured blood vessel was found. She spent the night in hospital and was given painkillers and antibiotics.

#### **May 1998 98/155**

A diver conducted a dive to 28m for 23 mins including a 1 min stop at 6m. During the dive a large ship passed close and the sound created an 'uncomfortable feeling and throbbing' in the head of one of the divers. As the dive progressed this developed into a bad headache. During the ascent the diver felt nauseous. Back on board the boat the condition continued and the casualty was placed on oxygen. He then vomited. He was taken ashore and given fluids. When standing ashore he noticed a tingling in his feet. He was taken to a

recompression facility. Still on oxygen, the headache had now resolved. A high level of carbon dioxide was thought to have been a potential cause. The casualty was recompressed as a precaution. He was advised not to dive for 28 days. No subsequent ill effects were noted.

#### **June 1998 98/184**

A diver entered the water from a boat. A swell caught this diver and his buddy entered on top of him. The pillar valve of the second diver caused a 1.5 inch gash on the forehead of the other. Divers in the water were recalled and the emergency services alerted by radio. The casualty was taken ashore and from there by helicopter to a hospital for treatment.

#### **August 1998 98/273**

Two divers completed a wreck dive to a maximum depth of 40m for a total of 31 mins including a precautionary stop of 1 min. Their computers showed a minimum of 5 mins no stop time remaining throughout the dive. About 20 mins after the dive one of the divers began to feel unwell. The remaining divers were recalled and the boat returned to harbour. The diver was taken to hospital and, by the time she arrived, she felt well again. This diver was subsequently given recompression treatment because it was decided by a doctor that 38 mins of decompression stops had been missed. Lack of sleep, no food, little or no drink and high ambient temperatures are believed to have contributed to the diver's illness.

#### **August 1998 98/301**

A diver completed a dive to 25m for 22 mins. Over 4 hours later he dived again to 21m for 21 mins. During the ascent he arrived at 6m but had to return to 13m because his buddy experienced buoyancy control difficulties. They re-ascended and spent 1 to 2 mins at 6m before surfacing. 2 hours after the dive he experienced an ache in the finger joints of his left hand. He also noticed a pulled muscle in his left shoulder. He sought medical advice and was recompressed. This did not resolve the problem and it was concluded that it was due to earlier rescue practice in which he had engaged.

### **Boating / Surface Incidents**

#### **October 1997 98/023**

Three pairs of divers entered the water at 10 min intervals to dive a reef at a depth of 27m. After 30 mins the first pair deployed a delayed SMB to start their ascent. The SMB split and did not rise to the surface. They attempted to deploy a second SMB but this also failed. The pair made their ascent to the surface. There was a current flowing and a surface swell. At the surface they were not seen by their boat cover, and they were carried away by the current. The other two pairs were recovered normally and when it was realised that the first pair was overdue a search was instigated involving several other boats. The lost pair was eventually found. No ill effects are reported.

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Two divers planned to conduct a 40 min dive to a maximum depth of 31m. When they were 10 mins overdue their boat cover reported them missing. A search was instigated and the divers were recovered 1 hour later 2 nautical miles from the start point. The divers were not using any SMB and the underwater current was in a different direction from the surface current. The searchers were looking in the wrong area and the divers were only found after their shouts were heard. They were operating in a remote area in the Middle East and no official rescue services were available to the party.

### **Ascents**

#### **June 1998 98/288**

Towards the end of a dive to 20m one of a pair of divers began to deploy a delayed SMB. During the deployment the reel jammed and, as it was attached to the diver, she was dragged directly to the surface. Her buddy made a normal ascent completing 4 mins of safety stops. The diver who had made the direct ascent was placed on oxygen for 45 mins and monitored. Her computer indicated a decompression violation. She experienced no subsequent ill effects. Dive duration 23 mins.

### **Technique**

#### **October 1997 98/043**

Two divers were conducting a wreck dive to a maximum depth of 28m. One diver was using air faster than the other and indicated when he had only 50 bar remaining. The second diver deployed a delayed SMB and they started their ascent. As soon as they did, the first diver ran out of air and reached for the buddy's octopus regulator. The octopus regulator was out of position and the diver who was out of air reached for the buddy's main regulator. The buddy indicated that he should take this and recovered his octopus regulator. He took a few breaths from it and passed it to the diver out of air and recovered his main regulator. The divers found that they were making a fast ascent and one of them had to dump air from his neck seal to slow them down

as his cuff dump was too slow. They completed a stop of 2 mins at 6m, and then completed their ascent. No subsequent ill effects are reported.

#### **December 1997 98/066**

Two divers began a descent and the dive leader decided to launch a delayed SMB at 9m because there was a strong current. To prevent being swept along with the current the diver held on to the line from a fishing pot. Struggling to deploy the SMB with one hand one of the lines of the SMB became tangled around the diver's regulator. As the bag lifted it pulled the regulator from his mouth. Further entanglement prevented him from reaching his octopus regulator and he decided to make a free ascent. He signalled this to his buddy and both made it safely to the surface. The dive was aborted at this point.

#### **Equipment**

#### **April 1998 98/146**

15 mins into a dive and at a depth of 25m a diver checked his contents gauge. As he did so it 'exploded into a mass of bubbles'. He moved to his buddy, showed him the problem, and was passed the buddy's octopus regulator. They made a controlled ascent. Subsequent examination of the contents gauge showed that an 'O' ring in the swivel had blown out. Neither diver suffered ill effects from the event.

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Two divers were diving to 15m for a training drill. At 10m the high pressure hose of one of the divers burst near the first stage. His contents gauge showed a drop in pressure from 200 bar to 50 bar 'in seconds'. His buddy gave him his octopus regulator and they ascended safely to the surface.

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Two divers conducting a wreck dive descended to the seabed at a depth of 30m. On arrival one of the divers turned himself into an upright position to land feet first and put some air into his BC to regain neutral buoyancy. As he reached the bottom his weightbelt slipped off of his hips and onto the seabed. He dumped the air from his BC and tried to swim down to his weightbelt. He could not do so and swam to the wreck, taking hold of it to prevent an ascent. His buddy recovered the weightbelt and returned it to him. The belt was refitted and the dive continued normally. This diver was using a neoprene suit for the first time at this depth and it is believed that suit compression contributed.

#### **Miscellaneous**

#### **October 1997 98/041**

At the end of a reef dive a dive guide lead a group of six divers into a cave system at a depth of 2 to 4m. The cave became a narrow, poorly lit tunnel and the divers had no torches. One of the divers became stuck in a narrow passage and had to force his way through. The divers stirred up silt and the visibility became poor. After about 30m into the cave system the divers entered a small chamber and the last two became separated from the others and were unable to find the way forward. A small fissure lead from the cave to the surface and one of the two divers removed his BC and cylinder and squeezed through to the surface. The second diver decided that he could not follow and sought a way out through the tunnels. When this second diver found his way to clear water he had less than one minute of air left and was badly cut and scratched from contact with the narrow passages.

#### **May 1998 98/192**

A trainee and an instructor entered the water to dive to a wreck at a depth of 10m. 8 mins into the dive the trainee gave the 'all is not well' signal. The instructor indicated to ascend. The trainee returned the signal but did not move. The signal was repeated but this time the trainee ignored it. The instructor then brought the trainee to the surface with a controlled buoyant lift. She was recovered into the boat and helped to de-kit. She showed signs of hyperventilation.

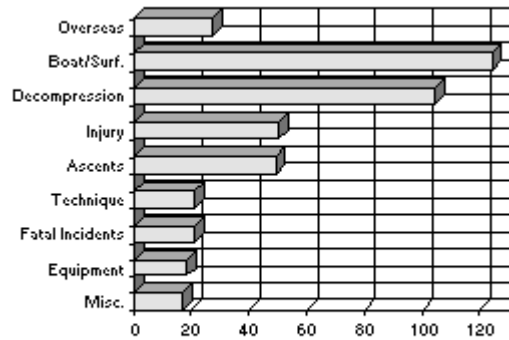


# NDC Diving Incidents Report 1998

## *Statistical Summary of Incidents*

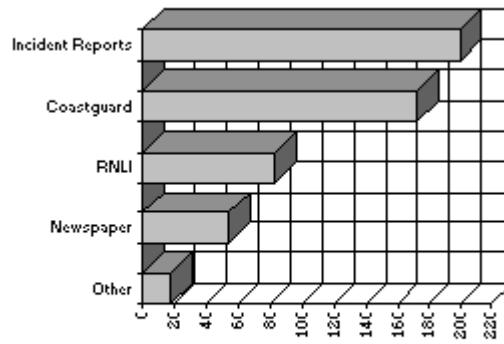
	1991	1992	1993	1994	1995	1996	1997	1998
Incidents Reported	199	123	263	385	351	315	397	452
Incidents Analysed	199	123	263	385	351	315	370	431
British Incidents	170	98	236	322	318	295	349	404
Overseas Incidents	24	14	21	9	33	20	21	27
Unknown Locations	5	11	6	54	0	0	0	0
BSAC Members	111	110	146	164	157	136	101	135
Non-BSAC Members	18	13	19	8	20	4	29	52
Membership Unknown	70	0	98	213	178	175	219	217

### *Incidents by Category*



Total Incidents: 431

### *Incident Report Source Analysis*



Total Reports: 528  
Total Incidents: 431

### ***History of Diving Fatalities***

Year	Membership	No. Of Fatalities	
		BSAC	Non-BSAC
1965	6,813	3	-
<b>1966</b>	<b>7,979</b>	<b>1</b>	<b>4</b>
1967	8,350	1	6
<b>1968</b>	<b>9,241</b>	<b>2</b>	<b>1</b>
1969	11,299	2	8
<b>1970</b>	<b>13,721</b>	<b>4</b>	<b>4</b>
1971	14,898	0	4
<b>1972</b>	<b>17,041</b>	<b>10</b>	<b>31</b>
1973	19,332	9	20
<b>1974</b>	<b>22,150</b>	<b>3</b>	<b>11</b>
1975	23,204	2	-
<b>1976</b>	<b>25,310</b>	<b>4</b>	<b>-</b>
1977	25,342	3	-
<b>1978</b>	<b>27,510</b>	<b>8</b>	<b>4</b>
1979	30,579	5	8

<b>1980</b>	<b>24,900</b>	<b>6</b>	<b>7</b>
1981	27,834	5	7
<b>1982</b>	<b>29,590</b>	<b>6</b>	<b>3</b>
1983	32,177	7	2
<b>1984</b>	<b>32,950</b>	<b>8</b>	<b>5</b>
1985	34,861	8	6
<b>1986</b>	<b>34,210</b>	<b>6</b>	<b>9</b>
1987	34,500	6	2
<b>1988</b>	<b>32,960</b>	<b>10</b>	<b>6</b>
1989	34,422	4	8
<b>1990</b>	<b>36,434</b>	<b>3</b>	<b>6</b>
1991	43,475	8	9
<b>1992</b>	<b>45,626</b>	<b>9</b>	<b>8</b>
1993	50,722	3	6
<b>1994</b>	<b>50,505</b>	<b>6</b>	<b>6</b>
1995	52,364	9	9
<b>1996</b>	<b>48,920</b>	<b>7</b>	<b>9</b>
<b>1997</b>	<b>48,412</b>	<b>4</b>	<b>12</b>
<b>1998</b>	<b>46,712</b>	<b>6</b>	<b>16</b>