

CMAS TC Newsletter

April 2011

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An update of some of the work completed by the CMAS TC during last year

Firstly I would like to inform you of how the CMAS Technical Commission {TC} is getting on this year. We meet approximately four times per year and the meetings are normally hosted by one of the TC member's federations. Last year we met in Brussels, Dublin, Marseille, Rome and Vienna. In between meetings we communicate by telephone and e-mails. In this way we deal with ongoing matters and issues that require urgent attention.

For the past number of years a large emphasis has been placed on creating diving standards that did not exist in the CMAS system and in correcting or modernising our existing standards.

In the past year we have started a new project. This is to re-write all our standards in a new format. The reason for this work is to:

- It is the Vision and an Objective of the TC President.
- Requested by the CMAS President and Secretary General.
- All our standards are written differently in many different formats, this is NOT correct.
- Introduce a degree of commonality and professionalism to our standards.
- When finished all of our standards will be written in the same format and all will read in a similar way.
- Standards should stand up to any scrutiny if ever they were to be audited in the future.
- The CMAS should have world class standards.
- And all the standards need to be in all 3 official languages.





Some of the work completed by the TC

The forward is written which is an introduction to the new project. In it one finds:

- Introduction written by the CMAS President and President of the T.C.
- Written to explain the process used in producing the standards.
- Disclaimer of responsibility.
- Contains the table of contents.

Chapter 1 is also completed:

- Explanation on how to use the new standard documentation.
- Outlines the foundation for our courses.
- General rules applicable to all CMAS Diver Training and certification system.
- Definitions and explanation of terms that are used.
- Diver training Philosophy and general requirements of training programs.
- CMAS Numbering System outlined.
- Hand signals, protocol for DSMB and the 10 Golden Rules.

Chapter 2 will contain all the standards. Each one of these standards will be no greater than three pages long. Chapter three will contain all the training requirements for each of the standards. We have the following completed and approved by the BOD:

- Introduction to Scuba.
- Diver One-Star.
- Oxygen Administration.



This is a long term project. Work is ongoing on Diver Two-Star, Nitrox and Instructor levels.

New standards that were created and approved during the last BOD meeting were:

- Oxygen Administration.
- Recreational Trimix.
- Altitude Diver.

Modifications were carried out on existing standards:

- Night Diver.
- Rescue Diver.
- Disabled Diver.

After all our standards are rewritten, what's next for the TC? Where do we go from here?

- Our desire is to make available all the required teaching material for all courses e.g:
 - Instructor notes on each lecture.
 - Power Point presentation for each lecture.
 - Student notes that can be issued for each course.
 - The goal is to eventually have this for all standards.

This is an overview of the work undertaken by the TC members during this past year and what you can expect in the near future.

Safe Diving

Kevin O'Shaughnessy

CMAS Technical Commission President



A Lesson Learned from a Diving Death

Recently, I acted as an expert witness for our local Coroner's Court on the death of a British diver. The accident happened overseas and it has taken sometime to get the official report from that country's officials.

I was asked to interrogate the dive record in the deceased personal decompression computer (PDC). Apart from some minor ascent errors that were quickly corrected by the diver there was no indication of anything that could have caused his death.

However, the local experts at the dive site said that the diver called for extra air, from the dive guide, when they were at about 6-metres and he had only about 30-bar of air in his cylinder. At his air consumption rate at that time in his 15-litre cylinder should have lasted about 10-minutes more.

There would seem to be three possible causes for his need to seek extra air.

1. When the demand valve (DV) was fitted to the dive cylinder and the valve opened, he may have turned the cylinder valve back one-half-turn. This is an obsolete practice, but one that a number of people still use.
2. The cylinder valve may have rubbed partially closed on the overhanging metal work of the wreck he was diving on. Or
3. A combination of the two.

Whatever the cause the diver suffered hypoxia and died as a result.

The Take-Home-Message

Always fully open the cylinder valve before you dive, and never turn it back until you are on the surface and out of the water at the end of the dive. Check before going in the water that your pressure gauge is not adversely affected by your breathing.

Safe Diving

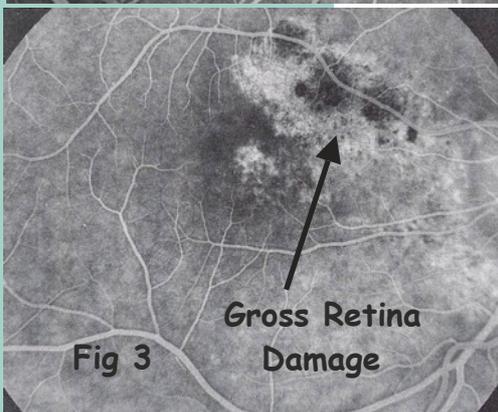
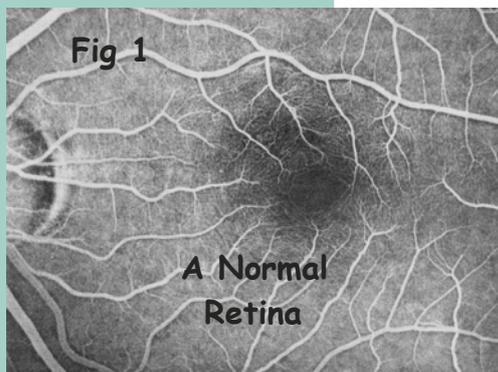
Bob Cole - CMAS Technical Director



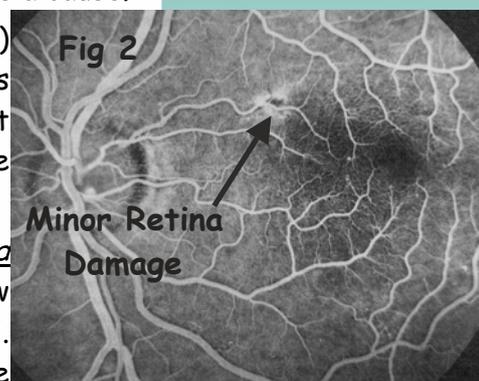


Micro-bubble (MB) Damage?

Further proof of potential damage, if further proof is needed, comes from a study by Polkighorne, Sehmi, Cross and Bird who looked at lesions in the eyes of divers. Fig 1 shows a normal retina, Fig 2 shows minor pigment and capillary changes in the eye of a diver and Fig 3 shows gross changes in a diver's eye. The findings of the study were statistically significant. It showed that during the first year of diving 22% of diver surveyed developed pigment changes in their eyes. In divers with no record of DCI, 36% had pigment changes. Whilst in those with a history of DCI 92% had changes. None of these divers had any idea that they had suffered any damage - silent bubbles cause silent damage! In fact, diving could be described as a "slow accident"! The report authors suggested that vascular obstruction (ie blocked blood vessels) as a cause.



Given that micro-bubbles (MBs) obstructs blood vessels and ascents cause MBs (or so-called free-gas), it would seem common sense to slow the rate of ascent and include DeeP-Stops! Keep in mind that the eyes are "endo-organs" of the brain and are a window into the brain that needs no scalpel. Capillary damage seen here is more than likely to be mirrored in the brain itself.



Ear Clearing?

Think on! You may have a PFO without knowing it - about 25% of us do!! Remember that clearing your ear using Valsalva's maneuver may shunt MBs into your arterial circulation - DCI may be next!. Find another way to clear your ears and add DeeP-Stops into your dive profile - please.

Safe Diving

Bob Cole, CMAS Technical Director

