Letters to the Editor

Online literature database for diving and hyperbaric medicine

Many colleagues already know about the 'Rubicon Foundation' database project (<http://archive.rubicon-foundation.org>), a great project that provides easy access to a vast amount of relevant diving medicine literature from many sources, including articles from the *SPUMS Journal* up to 2003. This letter is to inform SPUMS members about a long-standing project that is a nice addition to this.

Because of legal restrictions, it is not easy to obtain complete articles for free without disregarding copyright. The EUBS has solved this problem for posters and presentations presented at the EUBS annual scientific meetings by allowing the German Society for Diving and Hyperbaric Medicine (GTÜM) to incorporate presentations into their literature database *GTUEMLIT* and to provide access through the members-only area of the EUBS homepage.

GTUEMLIT also provides information about the literature in diving medicine, hyperbaric oxygen therapy, and submarine medicine which can be found in large databases like MEDLINE, EMBASE and others. GTÜM employs a documentation specialist to keep the database up to date. In addition to these well-known sources, we have also included the so-called 'grey literature' – that not listed in the databases mentioned above. For German-speaking colleagues, we have included all articles published in the GTÜM periodical *Caisson*. In total, over 34,000 publications are now included. Also included is a search engine and all articles can be exported as text file (rtf) or xml file. In many cases these export formats allow import of publication data into one's own literature database due to 'medline compatibility'.

Until now, *GTUEMLIT* was only accessible for members of GTÜM and EUBS. Because of this restriction, it is legally possible to provide access to all articles in full length where copyright is with EUBS or GTÜM. Every article published in *Caisson* or EUBS ASM proceedings can be downloaded as a PDF file in the original format including all tables, graphs, and pictures.

We believe there is enough room in the WorldWideWeb for two diving medicine database projects with different focuses and advantages – the Rubicon Foundation Archive and *GTUEMLIT*. Our idea is to open *GTUEMLIT* to SPUMS members. SPUMS Executive Committee members recently were provided with access to our database to get a personal impression of how it works.

If SPUMS is interested, we would need to agree that:

- SPUMS will provide us with digital data of articles published in *SPUMS Journal* / *Diving and Hyperbaric Medicine* to integrate these data into *GTUEMLIT* and
- GTÜM in return provides *GTUEMLIT* access to all SPUMS members.

For copyright reasons, access to the *GTUEMLIT* database will be restricted to members of EUBS, GTÜM and SPUMS only. There will be no additional costs for SPUMS members, this will be covered by GTÜM. The GTÜM Executive Committee hopes you like our project and that SPUMS will join us in the near future!

Dr. med. Wilhelm Welslau, President GTÜM
Seeboeckgasse 17, A-1160 Wien
E-mail: *<welslau@gmx.at>*

Reply:

This matter was considered at the SPUMS Executive Committee meeting in May 2009, and received unanimous support. Since then, Professor Weslau has been provided with volumes 1–30 of the *SPUMS Journal* (to year 2000) and this will be built on further over coming months. This service for SPUMS members will become available hopefully early in 2010 via a secure link in the members-only section of the new Society website once this is launched. On behalf of SPUMS members, I would like to express our gratitude to the GTÜM for this generous offer.

Michael Davis
Editor, Diving and Hyperbaric Medicine

Key words
Data, underwater medicine, hyperbaric research, writing – medical, medical society, letters (to the Editor)

Deaths from breath-hold diving

Whilst admiring the scientific approach and methodology revealed in Schagatay's paper on competitive apnoea diving,[1] I am of sufficient age to remember the earlier days of recreational breath-hold and scuba diving when the diving magazines reported each fresh record depth achieved [*Editor's note: They still do!*]. Then sanity prevailed and there was an agreement that such efforts could be fatal and should not be publicised, as such only encouraged others to try to exceed the achieved depths.

In this paper, the first sentence of the abstract reads "*Ever since the first deep diving competitions were organised, there has been debate about when the ultimate limits of the human apnoeic performance will be reached*". As the endpoint, in the absence of extremely efficient back-up services, is death, there is argument in favour of the prohibition of such competitions and for research to be

limited to strictly controlled conditions. This is particularly important as swimming activity can continue for a time after consciousness has been lost, a fact noted in swimming pool fatalities.

Having read so many reports of the deaths of breath-hold swimmers in swimming pools, and of highly experienced spear fishermen in the sea and known one who survived with marked loss of cerebral function, I believe that physiologists have a social duty to ensure their efforts are not viewed as encouraging public competition in this activity. Although this information has value in increasing our present imperfect understanding of the complex physiology involved, there should also be a recognition of the unintended flow-on effects of such research. While this paper records the results of carefully supervised dives it may be viewed as justification by others for their efforts to become successful in such competitions but who practice, for financial reasons, without the necessary safety support.

Reference

1 Schagatay E. Predicting performance in competitive apnoea diving. *Diving and Hyperbaric Medicine*. 2009;39(2):88-99.

Douglas G Walker, principal researcher for Project Stickybeak since its inception in 1972, is now retired from medical practice but continues an active interest in the investigation and reporting of diving fatalities.
E-mail: *<diverhealth@hotmail.com*

Key words
Breath-hold diving, freediving, safety, deaths, writing – medical, letters (to the Editor)

Reply: Increased reporting improves safety

Freediving is a growing recreational and competitive sport. My answer to Dr Walker's concern that reporting on competitive freediving may encourage others to try this on their own is that only by increasing the general knowledge of the dangers of the sport will we be able to avoid them. Having taught freediving to children for nearly three decades, I am aware of the possible risks and how to avoid them.

Any responsible person can freedive without the risk of drowning by abiding to two simple rules of freediving.

- Never dive alone.
- Never hyperventilate before diving.

For those interested in learning how to do it properly, there are many diving clubs and schools teaching freediving at basic and advanced levels.

However, when freediving is taken to its extremes in competitions, it does, as do several other sports, include calculated risks and necessitates good backup safety systems to deal with them. For the past six years, I have worked with the world elite of freediving or "Apnea" in physiological studies at competitions. In safety discussions with the athletes, I have been impressed by the concern taken and the methods developed by these divers to avoid injury. There have been no accidents in organized competitions during that time, and much has been learned about safety from these elite divers, which can contribute to improved safety in recreational diving. My recent review of the physiological limits of static apnoea, however, did not focus on safety aspects, as several other recent papers have dealt with this.[1]

I respect and share Dr Walker's desire to avoid injury and fatalities, but do not understand how this could be achieved by not writing about the physiology of freediving. Instead, should we not increase the reporting and improve common knowledge? Dr Walker's comments basically imply that we should not write about this sport at all, as it may be dangerous to uninformed people. For me, this is a contradiction; by understanding and reporting the risks we may instead avoid them. I do not believe freediving will go away if we as physiologists and physicians decide not to report and study it.

Describing the achievements of elite apneists with depth records now beyond 100 msw and breath-hold times over 10 minutes' duration, I believe will not encourage individuals to try this for themselves, as the records achieved are so clearly beyond normal performance. We still report Everest climbs without including the warning "*don´t try this on your own*", even though high altitude climbing probably involves a far greater risk than diving, breath-hold or scuba. It is obvious that this cannot be done without proper knowledge and training, and only by certain individuals and with serious safety measures taken to support their activities.

Reference

1 Pollock NW. Breath-hold diving: performance and safety. *Diving and Hyperbaric Medicine*. 2008;38(2):79-86.

Erika Schagatay, Professor
Mid Sweden University, Östersund, Sweden
E-mail: <Erika.Schagatay@miun.se>

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