

Letters to the Editor

HBO Evidence website

Dear Editor,

As many of your readers may be aware, I have been having trouble maintaining the HBO Evidence site <www.hboevidence.com> over the last 18 months. This is partly because of the inevitable evolution of page-writing software and partly to the equally inevitable problems generated by hospital firewalls that seem designed to prevent employees from posting useful information on the internet. Our pages were also rather too often under cyber attack, making the discussion forums unworkable.

While we have moved the site behind the University of New South Wales (UNSW) defences in order to prevent its corruption, it is unfortunately no longer possible to update the contents – rendering it rather purposeless.

To this end, I have been working over the last 15 months to re-write the site as a wiki under the auspices of the UNSW ‘wikispaces’ group of sites. This has several advantages, including affording a high level of protection, an enhanced ability to quickly and easily update the contents, the ability to allow others to easily update contents if required and a more secure discussion facility.

I am pleased to advise, therefore, that the new site is now open for business. The new address is:
<<http://hboevidence.unsw.wikispaces.net/>>.

Interested readers should reset their favourites list to this address instead of the old <www.hboevidence.com>. The site remains dedicated to presenting useful summaries of all the randomised trials in both diving and hyperbaric medicine.

When you first visit the site, you will be asked if you wish to become a member. Membership is not required to view the pages, but anyone interested in assisting us with adding to the content of the site and keeping it up to date, can apply to join us by submitting the membership request.

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Safety of deep apneic diving

Dear Editor,

We agree with Dr Walker’s concerns about risks associated with breath-hold diving, voiced after Professor Schagatay’s first review in 2009 in this journal.^{1,2} We thank Professor Schagatay for her very thorough reviews, but only agree in part with her view that reporting increases safety, as breath-hold deep diving per se is unsafe.^{2,3,4} To weave a scientific lifebelt for this high-risk activity is inappropriate. We also doubt that uncritical reporting increases safety. We also believe that it is scientifically unsound to recommend so-called ‘proper techniques for preparation and performance’ to achieve ‘maximal performance’. We list below some of the serious pitfalls that could evolve from reading parts of the most recent review.⁴

Competitors in static/dynamic apnea experience extended hypoxia. While acutely elevated levels of a marker of brain damage may not be of major relevance, long-term, possibly cumulative effects must be suspected.⁵

If extended breath-holding alone poses serious risks for unconsciousness, brain injury and death,⁶ then breath-hold deep diving adds risks associated with the effect of increased ambient pressure on gas volumes and increased partial pressures.

If a coach advises the use of new hydrodynamic goggles, almost frictionless dolphin-skinned swim suits and more efficient power fins, then he does not harm the athlete. If the ambitious breath-hold deep diving athlete reads about ‘tricks’ on how to fool physics, then he is seriously endangered. After reading *Training, preparation and equalization to avoid barotrauma* (p. 220ff.) he feels encouraged to perfect his glossopharyngeal insufflation (GI) and exsufflation (GE) to prevent descent barotrauma,⁴ but he would thus go from bad to worse, as such techniques can do harm. Describing techniques without describing possible deleterious consequences seems too short-sighted.

GI might considerably increase intrathoracic pressures (up to 80 cmH₂O) with an increased risk of pulmonary barotraumas and arterial gas embolism.⁷ In turn, increased intrathoracic pressures will likely impede venous return, inducing hypotension with consequences varying from dizziness to fainting just prior to diving.

Submersion shifts blood towards the chest, and more blood is shifted as ambient pressure increases. Thus, all thoracic structures with a high compliance are considerably enlarged. In consequence, chest sonography frequently documents pulmonary oedema after immersion,⁸ and great depths are associated with the risk of pulmonary barotrauma (lung squeeze). GE can seemingly increase the risk of lung squeeze by taking some mouth-fills of air from the lungs