

Letter to the Editor

Carbon dioxide absorbents for rebreather diving

Firstly I would like to thank SPUMS members for making me a Life Member of SPUMS; I was surprised and greatly honoured by the award.

I also want to confirm and expand on the findings on carbon dioxide absorbents reported by David Harvey et al.¹

For about 35 years, I was the main player in deciding which absorbent went into Australian Navy and Army diving sets. On several occasions, suppliers of absorbents to the anaesthesia market tried to supply the Australian military market. On no occasion did they provide absorbent that came close to the minimum absorbent capacity required, generally being 30–40% less efficient than diving-grade absorbents. Because I regard lives as being more important than any likely dollar saving, the best absorbent was always selected unless two suppliers provided samples with the same absorbent capacity. On almost every occasion, there was a clear winner and cost was never considered.

I suggest the same argument for the best absorbent should be used by members and their friends who dive using rebreather sets. I make this point because of my findings

on a set that was brought to me after the death of its owner. The absorbent was not the type or grain size recommended by the manufacturer of the set and did not resemble any of the diving grade absorbents I knew of. I suspected by its appearance that it was anaesthetic grade absorbent. When I tested the set, the absorbent system failed very quickly so it is likely that carbon dioxide toxicity contributed to his death. The death was not the subject of an inquest and I have no knowledge of how the man obtained the absorbent. Possibly there was someone from an operating theatre staff who unintentionally caused their friend's death by supplying him with 'borrowed absorbent'. I make this point as I would like to discourage members from making a similar error.

Reference

- 1 Harvey D, Pollock NW, Gant N, Hart J, Mesley P, Mitchell SJ. The duration of two carbon dioxide absorbents in a closedcircuit rebreather diving system. *Diving Hyperb Med.* 2016;46:92-7.

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Key words

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