Danger of icing of the scuba regulator
– a neglected risk while diving in mountain lakes

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Introduction: Diving in mountain lakes is very attractive. However, some special risks are described in literature, especially the problem of decompression under changed pressure conditions (1). As an other problem the icing of the scuba regulator is described (caused by lower water temperature and the Joule-Thomson-effect, 1, 4). Diving in mountain lakes is only marginally included in the basic courses of the great diving associations PADI und SSI (3, 5), and only referring to the modified decompression; a similar situation is found in nearly all other special courses for diving in mountain lakes. So it seems that this danger is not sufficiently known among divers.

Methods: Inquiry with a special manual of 30 divers at the Walchensee (802 m), interview with 3 regional therapeutic recompression centres (2).

Results:
Inquiry of the divers: Most of them knew the necessity of special decompression procedures, but only half of them knew the danger of icing of the scuba regulator and used, in consequence, a complete redundant regulator system (2). Only a minority had passed a special course for diving in mountain lakes.
Interview with decompression centres: Nearly all serious accidents of divers in mountain lakes were caused by iced scuba regulators (2).

Conclusions: In every basic course for divers the risk of icing of the scuba regulator should be underlined, combined with the necessity to join special courses for diving in mountain lakes. In these special courses the necessity to use redundant regulator systems should be explained and it should be trained, how to use them in the case of icing of the primary system.

References:

   http://www.divessi.com/deu