

## **TECHNICAL ASPECTS OF ICE DIVING FOR A GROUP OF DIVERS WITH CHRONIC SPINAL CORD INJURY**

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### *Introduction*

Diving under the ice is a technically demanding and occurs in a limited access environment. It is practiced by public safety divers and by some recreational divers trained for ice diving. Divers with chronic spinal cord injury (SCI) and resulting dysfunctions are classified into a recreational diving group and advised not to dive in cold and overhead environment. This recommendation, however, does not seem to be evidence based. A group of divers with SCI that has been training for years and diving in various circumstances, decided to undertake the ice dive as a normal evolution of their multi-year training.

### *Methods*

Diving was planned, monitored and executed in accordance to valid diving standards. A total of eight divers participated, 4 with chronic SCI and 4 healthy able bodied scuba diving instructors. No exercise was performed except slow swimming. Water temperature was 4°C constantly, visibility up to 3m, the sky was clear and air temperature varied between 13 and 19°C. The lake was covered with 15 to 20cm thick ice. Logistic team included backup and safety divers, technical and medical stuff. Only one pair of divers dived at the time. Standard equipment configuration for ice diving was used. Multiple access/exit routes were made into the ice.

### *Results*

Dives did not exceed 30 minutes. All divers felt cold. There was no major difference reported by divers with SCI and able bodied controls in spite of exposure to low temperatures. Group of disabled divers was observed for next ten days and they did not report any complications in that period.

### *Conclusions*

Ice diving exposes able bodied divers and divers with chronic SCI to extreme cold. However, careful planning and proper logistic support allowed for divers with SCI accompanied by well trained able bodied divers to take part in this activity.