Title: Release of surfactant and a myelin proteolipid apoprotein in spinal tissue by decompression

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Abstract: Two experiments have been performed on sections of bovine spinal cord, the first demonstrating that surface-active phospholipid (SAPL) and myelin proteolipid protein (PLP) are released by bubbles produced by decompression. Both phospholipid and proteolipid were found to be released in amounts increasing with the extent of decompression. The immediate recruitment of surfactant to the monolayer coating the pool surface indicated that the SAPL had been "carried" at the liquid-air interface of the bubbles. In the second study, electrophoresis was used to identify a major portion of the released proteolipid as the PLP much studied in recent times for its encephalitogenic properties. These findings are offered as a possible explanation for the demyelination often found in pathologic studies of divers and for the possible role of SAPL and PLP in stabilizing microbubbles/macronuclei during recompression, especially in relation to the practice of surface decompression.

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