


Section: Pediatric Trauma  
Subject: PEDI DECOMPRESSION SICKNESS AND RELATED EMERGENCIES  
Section #: 344.06  
Issue Date: March 21, 2011  
Revision Date: December 1, 2017  
Approved By: 

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1. Basic ALS treatment
2. Position and transport the patient in the supine position to maximize arterial-venous flow
3. 100% Oxygen via NRBM
4. Document a thorough neurological exam
5. Transport to the closest facility
6. QA Points
  - a. The most efficacious intervention for the patient experiencing decompression sickness is 100% oxygen; it reduces intravascular bubble size by increasing the differential pressure for nitrogen diffusion out of the bubbles and speeds the washout of nitrogen from the tissues.<sup>1</sup>
  - b. Ground transport is preferred over air transportation because an increase in altitude lowers the ambient pressure and allows microbubbles to expand.
  - c. Trendelenburg position, once thought to reduce the degree of cerebral embolization, increases intracranial pressure, facilitates coronary gas embolization, and should be avoided.<sup>2</sup>

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<sup>1</sup> Strauss MB, Borer Jr RC: Diving medicine: Contemporary topics and their controversies. *Am J Emerg Med* 2001; 19:232.

<sup>2</sup> Butler BD, et al: Effect of the Trendelenburg position on the distribution of arterial air emboli in dogs. *Ann Thorac Surg* 1988; 45:198.