

**AMERICAN BOARD OF PREVENTIVE MEDICINE, INC.  
UNDERSEA & HYPERBARIC MEDICINE**

**REFERENCES**

Bennett and Elliotts' Physiology and Medicine of Diving, 5th Ed., Eds. AO Brubakk, TS Neuman, W.B. Saunders Company, London, 2003.

Bove and Davis' Diving Medicine, 4th Ed., Eds. AA Bove, WB Saunders Co., Philadelphia, 2004.

Code of Federal Regulations, Title 29, Articles 1910.401-441, Commercial Diving Operations.

Code of Federal Regulations, Title 29, Articles 1926.801-804 and Appendix A to Subpart S-Caissons, Cofferdams, Compressed Air, Definitions and Decompression Tables.

Consensus Standards for Commercial Diving and Underwater Operations,  
[www.adc-int.org/documents/ADCICS\\_000.pdf](http://www.adc-int.org/documents/ADCICS_000.pdf)

Hyperbaric Oxygen 2008: Indications and Results: The Hyperbaric Oxygen Therapy Committee Report, LB Gesell, Chairman and Editor. Undersea and Hyperbaric Medical Society, Durham, NC, 2008.

Hyperbaric Oxygen I & II. RE Moon and EM Camporesi Eds. Respiratory Care Clinics of North America (March and June issues). WB Saunders, Philadelphia, 1999.

The Physician's Guide to Diving Medicine, Eds. CW Shilling, CB Carlston, RA Mathias, Plenum Press, NY, 1984.

Physiology and Medicine of Hyperbaric Oxygen Therapy, TS Neuman, SR Thom, Saunders Elsevier, Philadelphia, 2008.

US Navy Diving Manual, Revision 6, [http://www.supsalv.org/pdf/DiveMan\\_rev6.pdf](http://www.supsalv.org/pdf/DiveMan_rev6.pdf)

The examinee should also be generally familiar with the literature of Undersea and Hyperbaric Medicine as published in a variety of journals including but not limited to Undersea and Hyperbaric Medicine, Journal of Applied Physiology, Aviation Space and Environmental Medicine, in the Proceedings of the International Symposia on Underwater Medicine, and in the various Undersea and Hyperbaric Medical Society workshops.

This list is not claimed to be all-inclusive or definitive. In every specialty, time and circumstances bring changes in what is expected of its practitioners. Books grow out of date and are replaced by later editions or alternative works by different authors. Thus, although this list is revised from time to time, the Board makes no claim that cited texts are best or most current and cannot assure that persons who read any or all listed texts will achieve competence or perform at some predictable level on the examination.

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# Undersea and Hyperbaric Medicine Outline

- 1 Fundamentals
  - 1.1 Physics
    - 1.1.1 Units
    - 1.1.2 Gas law, buoyancy
    - 1.1.3 Vision and acoustics
    - 1.1.4 Physical properties of gases (density, solubility, thermal conductivity etc.)
  - 1.2 Recognition and treatment of physiological/pharmacological effects/toxicity of gases
    - 1.2.1 Oxygen
      - 1.2.1.1 CNS
      - 1.2.1.2 Pulmonary
      - 1.2.1.3 Ocular
      - 1.2.1.4 Blood
    - 1.2.2 Carbon dioxide
    - 1.2.3 Other gases (helium, argon, etc)
  - 1.3 Equipment
    - 1.3.1 Chamber systems design, construction & maintenance, operations
    - 1.3.2 ASME and NFPA regulations
  - 1.4 Decompression Theory
    - 1.4.1 Decompression tables
    - 1.4.2 Decompressing chamber attendants
    - 1.4.3 Altitude effects of decompression
    - 1.4.4 Saturation
    - 1.4.5 Repetitive
    - 1.4.6 Bubble detection
  - 1.5 Pathophysiology and clinical manifestations of dysbarism
    - 1.5.1 Barotrauma (otic, sinus, pulmonary, GI, other)
    - 1.5.2 DCS
    - 1.5.3 AGE
    - 1.5.4 Venous gas embolism
    - 1.5.5 Long-term diving effects (dysbaric osteonecrosis, etc.)
    - 1.5.6 Management of pressure related diving chamber accidents
    - 1.5.7 Effects of bubbles
    - 1.5.8 Mechanism of gas entry and distribution
    - 1.5.9 Diving casualties
- 2 Diving Medicine
  - 2.1 Physiological effects of diving
    - 2.1.1 High pressure nervous syndrome
    - 2.1.2 Breath-hold diving
    - 2.1.3 Physiology of immersion
    - 2.1.4 Surface decompression
    - 2.1.5 Mixed gas diving

- 2.2 Diving operations
  - 2.2.1 Bounce diving
  - 2.2.2 Saturation diving
  - 2.2.3 Caisson and tunnel work
  - 2.2.4 Surface decompression
  - 2.2.5 Flying after diving
  - 2.2.6 Mixed gas diving
  
- 2.3 Medical and technical support of diving
  - 2.3.1 Medical standards for diving and chamber personnel (return to work)
  - 2.3.2 Hazardous marine life
  - 2.3.3 Other medical disorders
  - 2.3.4 Psychology of closed spaces
  - 2.3.5 Chambers, bells, habitats, and saturation systems
  - 2.3.6 Underwater breathing apparatus
  - 2.3.7 Thermal
  
- 3 Clinical Hyperbaric Medicine
  - 3.1 Indications for hyperbaric oxygen therapy
    - 3.1.1 Carbon monoxide poisoning -- carbon monoxide complicated by cyanide poisoning
    - 3.1.2 Clostridial myositis and myonecrosis (gas gangrene)
    - 3.1.3 Crush injury, compartment syndrome, & other acute traumatic ischemias
    - 3.1.4 Enhancement of healing in selected problem wounds
    - 3.1.5 Exceptional anemia
    - 3.1.6 Intracranial abscess
    - 3.1.7 Necrotizing soft tissue infections
    - 3.1.8 Osteomyelitis (refractory)
    - 3.1.9 Delayed radiation injury (soft tissue and bony necrosis)
    - 3.1.10 Skin grafts and flaps (compromised)
    - 3.1.11 Thermal burns
    - 3.1.12 Other
  
  - 3.2 Patient Management
    - 3.2.1 Patient selection and care
    - 3.2.2 Treatment protocols
    - 3.2.3 The physiological effects of hyperbaric oxygen
    - 3.2.4 Pharmacological effects of HBO
    - 3.2.5 Management of O<sub>2</sub> toxicity
    - 3.2.6 Patient monitoring and equipment
    - 3.2.7 Complications of hyperbaric oxygen therapy