



Dive (SCUBA) Injury/Accidents

Aliases

Barotrauma

Bends

Squeeze

Patient Care Goals

1. Rapid assessment and management of life-threatening injuries
2. Rescue from the water-based environment
3. Transport patients suffering from self-contained underwater breathing apparatus (SCUBA) diving injury/illness for hospital evaluation and consideration of repressurization/hyperbaric oxygen therapy (HBOT)

Patient Presentation

Inclusion Criteria

Patients with history of recent (within 48 hours) SCUBA diving activity who are exhibiting potential signs and/or symptoms of dive related illness/injury, regardless of dive table compliance. NOTE: SCUBA-related complications may occur anywhere, particularly when divers travel by air within 24-hours of diving

Exclusion Criteria

Patients without history of recent (within 48 hours) SCUBA diving exposure

Patient Management

Assessment

1. History should include circumstances leading to the complaint, details of mechanism of injury, time under water, depth of dive, compliance with dive tables/decompression stops, gas mixture used, and water temperature (if available)
2. Be alert for signs of barotrauma (pulmonary barotrauma, arterial gas embolism, pneumothorax, pneumomediastinum, ear/sinus/dental barotrauma, dysrhythmias, skin mottling or erythema, neurologic signs and symptoms etc.) and/or decompression sickness (joint pain, mental status change, other neurologic symptoms including paralysis) or nitrogen narcosis (confusion, intoxication).
3. Assess for other associated injury such as injury to the head or spine (if mechanism and symptoms suggest), marine envenomation, hypothermia, or other injury

Treatment and Interventions

1. If a SCUBA accident includes associated drowning/near-drowning [See [Drowning Guideline](#)]
2. Manage airway as indicated and provide 100% oxygen
3. If air embolism suspected, place in left lateral recumbent position (patient lying with the left side down, knees drawn upward, and flat)
 - a. Trendelenburg position is sometimes recommended to help trap the air in the dependent right ventricle, and may be useful if a central venous catheter is being used to withdraw the air, but this position may increase cerebral edema
4. Monitor vital signs including oxygen saturations and cardiac rhythm (if possible)
5. Administer oxygen as appropriate with a target of achieving 94–98% saturation