

Drowning, Near-Drowning, and Diving Emergencies

MAJOR CAUSES: Drowning and Near – Drawing

- Getting exhausted in the water
- Losing control and getting swept into water that is too deep
- Losing a support (sinking boat)
- Getting trapped ore entangled while in the water
- Using drugs or alcohol before getting into the water
- Suffering seizures while in the water
- Using poor judgment while in the water
- Suffering hypothermia
- Suffering trauma
- Having a diving accident

Safety Measures

- You are a good swimmer
- Trained in water rescue techniques
- Wearing a personal flotation device
- You are accompanied by other rescuers

RESPONSIVE PATIENT: close to shore:

- Use the REACT, THROW, ROW, GO STRATEGY

UNRESPONSIVE PATIENT

- Row to the patient in a boat
- Wade to the patient
- Swim to the patient
- Use a float board
- Suspect possible spine injury if diving accident is involved or unknown

RESUSCITATION

- Mammalian diving reflex
- Attempt resuscitation on any pulseless, nonbreathing patient who has been
- Submerged in cold water
- Seek medical direction and follow local protocol

ASSESSMENT AND CARE

Scene size - up

- Study the scene to make sure that it is safe to enter
- Wear PFD if within 10 feet of water
- BSI
- Determine number of patients
- Call for EXPERT assistance

Initial assessment

- Assess LOC
- Assess Airway, keeping in mind potential for spinal injury
- Suction water, vomitus, from airway, place oral or nasal airway if the
- Airway cannot be managed with manual maneuvers
- Check breathing presents and adequate
- Assess for any open wounds to chest that would impede breathing
- If breathing is inadequate BVM
- If breathing is adequate Non rebreather 15 liters
- Check pulse and life threatening external bleeding is controlled
- Assess signs of hypoperfusion (shock)

Focused history/Physical Exam

- Conduct rapid assessment
- If alert, conduct SAMPLE history and focused exam
- In-line immobilization and remove from water with backboard if spine
- Injury and patient is unresponsive.
- Ensure airway and breathing if not breathing Begin Rescue breathing ASAP
- Patient is breathing backboard in the water

Emergency Medical Care

- No spinal injury place on left side to allow water, vomitus to drain from airway
- Suction as needed
- Establish airway and begin BVM with O2
- If gastric distention interferes with ability to ventilate place patient on his
- Left side, and place your hand over the epigastric area and apply firm
- Pressure to relieve the distention.
- Manage any other medical or trauma condition
- Transport patient ASAP
- If time and patients condition permits perform detailed physical exam

DEEP WATER EMERGENCIES

- Air Embolism
- A blocking of blood vessels by an air bubble or cluster of air bubbles
- If a diver ascends rapidly while holding his breath, the air in the lungs
- Expand rapidly rupturing the alveoli and damage the adjacent blood vessels.

Decompression Sickness

- "The Bends" usually occurs with a diver ascends too quickly from a deep prolonged dive.
- As the diver comes up, the nitrogen is transformed into tiny bubbles which lodge in body tissues and enter the blood stream, causing pain and obstructing circulation

Barotraumas

- Occurs during ascent or descent when air pressure in the body's cavities becomes too great.
- Tissues in the air cavities are injured: for example the eardrum or sinus may rupture.

Emergency Medical Care

- If there is no sign of neck or spine injury, position patient on the board on his side with head down; slant entire body 15 degrees BVM with O₂ Initiate CPR and AED if needed
- Transport ASAP
- Try to obtain patient diving log
- Contact medical direction for transport to recompression chamber.