



Rob has a fractured right rib (or ribs), a concussion, a stable right ankle injury, and a possible cervical spine injury. While the chances of an unstable cervical spine are small, you have bivy gear and a second snowmobile. Use a padded cervical collar, maintain Rob's spine stability, set up camp on the road over him, and send your friend on the one of the other snowmobiles for help.

*Question 1.*

*If your resuscitation efforts remain unsuccessful how long do you continue CPR?*

CPR alone can be effective in resuscitating a drowning victim. Severe hypothermia is not a concern even with the cold water because of the relatively short submersion time. Most wilderness CPR protocols call for stopping CPR after 20-30 minutes of pulselessness. If the victim's pulse has not returned within that time period, he is dead.

---

*Question 2.*

*If your resuscitation efforts are successful but he remains pain responsive and shivering with bruising and tenderness on his lower right ribs, slightly elevated pulse and respirations, and wet lung sounds, what are his problems, his anticipated problems, your field treatment and your evacuation level?*

If resuscitation is successful (pulse and respirations return) but the patient remains voice responsive, pain responsive (as in this case) or unresponsive you must assume he has increased ICP and an unstable spine. Wet lung sounds indicate developing pulmonary edema. Shivering indicates a drop in core temperature, likely a cold response or mild hypothermia; not enough time has passed for the patient's core temperature to drop below 90° F. Slightly increased pulse and respirations may be due to the fluid in his lungs and/or internal bleeding. Your field treatment includes complete spine immobilization, removal of all wet clothing, a hypothermia package, and a Level 1 Evacuation. Whenever possible position the patient in a slightly heads-up position and be prepared for vomiting.

---

*Question 3:*

*If your resuscitation efforts are successful and your patient becomes awake and alert with no memory of the event, bruising and tenderness on his lower right ribs (he can take a deep breath without pain and he appears to be breathing easily), and a normal focused spine assessment (reliable with no spine pain, no spine tenderness, normal sensory & motor exams), what are his problems, his anticipated problems, your field treatment and your evacuation level?*

If resuscitation is successful and your patient awakens but has no memory of the event you must assume he has a concussion. Since he is reliable and passes the focused spine assessment, you may rule out an unstable spine injury. The tenderness and bruising to his lower right ribs appear to be insignificant because he is able to take a deep breath without pain and is breathing easily. None-the-less, underlying traumatic injuries are possible and his pulse and respirations should be monitored for the next 3-6 hours. Because water may have entered his lungs while he was submerged and unresponsive (near drowning), he may develop pulmonary edema over the next 24 hours. Begin a Level 2 Evacuation and upgrade the evacuation to Level 1 if he develops wet lung sounds (rales).