



Wilderness First Aid Scenario

SUBMERSION DISTRESS

Victim 1 – Submersion Distress

SUMMARY

Your group of six Scouts and two adult leaders are working on their open-water skills as part of their preparation for a trip to Sea Base in Florida. You are all in a boat on a large lake, along with your trained, qualified leaders. Your boat is equipped with a marine first-aid kit.

You notice a swimmer, not part of your group, who appears to be struggling in the water 40 feet away. He is not wearing a personal flotation device (PFD) and appears panicked: splashing about, bobbing up and down in the water, and waving his right hand above his head. He isn't using any identifiable swim stroke. There is a capsized rowboat nearby. No other victims are visible. He is trying to swim toward your boat but is not making progress. As he bobs up and down, you notice his mouth and nose spend more and more time below the water line. Both of the adult leaders have taken BSA's Safety Afloat; Safe Swim Defense; *Aquatics Supervision: Swimming and Water Rescue*; first aid; and CPR courses. The victim is too far to reach out to and too far away for an accurate throw of a flotation device. Using the *reach, throw, row, go* progression, the Scoutmaster takes the helm and steers closer to the victim, allowing the other adult leader to extend an oar as a reaching device. The Scoutmaster turns off the motor as they move closer to prevent further injury to the victim. Several Scouts help to pull the victim into the boat. The swimmer's breathing is labored, he is disoriented and confused about what happened, and his nose is bleeding.

SCENARIO DETAIL

The water is calm; it is sunny with no wind; the outdoor temperature is 75°F; and the surface water temperature is 70°F. You are about a half-mile from shore. The average lake depth is 65 feet with a maximum depth of 180 feet. The distressed swimmer appears to be in his mid-40s and is out of shape. He is wearing swim trunks.

STUDENT RESPONSE

1. Scene safety:

Ensure the scene safety assessment is completed. All Scouts and Scouters are appropriately wearing PFDs, Scouts have selected buddies, and qualified supervision is present. A float plan has been filed, and onshore unit leaders are aware of routine check-in times and anticipate time of return. The forecast does not call for inclement weather. The capsized boat does not appear to represent a threat. Upon closer inspection, there is large debris — possibly tree branches — floating a few feet below the surface of the water.

2. Primary assessment:

The swimmer is awake but disoriented, confused, and shivering. He thinks he hit his nose on something in the water. He is panting, with rapid, shallow breaths, making it difficult for him to speak.

3. Secondary assessment:

a. Physical exam: Respirations are fast and shallow. He has a shallow ½-by-¼-inch wound on his nose. There is a very small amount of blood visible. His nose appears to be swollen slightly.

b. Vital signs:

LOC: AVPU x 4 but is slow to answer questions, as if he has to think hard to remember details

Heart rate: 130 bpm

Respirations: 35/minute

Skin: wet and cool to touch; mucous membranes are pink and moist; nail beds bluish



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c. SAMPLE:

S – The victim complains of confusion, being cold, and difficulty breathing. He has a small wound on his nose.

A – none

M – none

P – slightly obese

L – light snack and voided before boating

E – He jumped off a capsizing boat into dark water and said his face hit something hard just underneath the water. He thinks he was in the water for about 15 minutes.

d. Monitor breathing; assess for head injury related to blunt force trauma to nose; assess for hypothermia related to symptoms noted in secondary assessment.

i. No skull depression or visible fracture, no bruising around eyes or behind ears, no clear fluid coming from ears (dry area first to properly visualize).

e. Vital signs after 10 minutes:

i. LOC: AVPU x 4; no mental status changes but responds more quickly to questions with seemingly more confidence in the response

ii. Heart rate: 125

iii. Respirations: 25

iv. Skin: cold to touch; mucous membranes pink and moist; nail beds remain bluish.

f. SAMPLE after 10 minutes:

S – complains of being cold, continues to shiver, has persistent (new onset) cough, headache, denies visual disturbances, no nausea/vomiting, no seizures.

A – none

M – none

P – slightly obese

L – light snack and voided before boating

E – rescued after 15-plus minute exposure to cold water, physical exhaustion, and minor trauma to face (nose).

POST-SCENARIO DEBRIEF

- Were conditions safe for swimming?

Safe Swim Defense guidelines identify water temperature at 80°F as most comfortable for recreational swimming. This 15-minute (or longer) exposure to cold water at 70°F is sufficient to produce hypothermia. His swimsuit offers no protection from the cold water. His cold skin temperature, shivering, rapid pulse and respiratory rate, and bluish nail beds are consistent with this condition.

- In rescuing this victim, what was done correctly? What was done incorrectly?

The Scoutmaster followed the “reach, throw, row, and go” method. “Reach” with a pole or other object, “throw” a life ring or flotation device, “row” a boat to the swimmer, and then “go” in to rescue the swimmer as the last resort. The Scoutmaster would have put himself in danger by first entering the water; he could have been drowned by the frantic victim.



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The Scoutmaster should always protect the swimmer's CAB (circulation, airway, breathing), especially the airway of a swimmer who hit something with his face hard enough to cause an injury.

Avoid being pulled into the water when assisting the victim into the boat. After the reaching device (in this case, an oar) has been grasped by the victim, it may serve best to allow the sense of panic to subside before making this assist. Assistance to a calm victim may allow that victim to do much of the work of getting into the boat. For unconscious, incapacitated, or exhausted victims where more assistance is needed, adults and older, more physically strong, Scouts may be required. Rescuers should act as a team to safely execute this part of the rescue.

The swimmer is hypothermic; he should be wrapped in dry towels immediately. Consider wrapping them in a reflective mylar blanket to conserve body heat.

They were in the middle of a lake, but 911, coast guard, etc., should have been called immediately so that an ambulance could be at the marina when the boat returned.

Nobody asked the swimmer if he had a partner; is there another distressed swimmer that you don't see? Do you leave the scene before verifying that there isn't another swimmer that you should be prepared to rescue?

- How would your response have differed if the swimmer lost consciousness while in the water?
In this situation, someone would have no choice but to enter the water and rescue the swimmer. In order to minimize the risk of creating a second victim, this swimmer should be a trained rescuer, such as being a certified lifeguard. The rescuer needs to be protected, too. Ideally, the rescuer would wear a flotation device with a line tied around his waist. Other Scouts could pull the rescuer and the victim back to the boat. In the absence of a trained lifeguard, Scouts and Scouters can rely upon their BSA training. Unconscious victims typically sink, so use of a flotation device may be necessary until the victim can be safely lifted in the boat or towed to shore if there is a risk in getting the victim into the boat.
- Describe emergency treatment for this unconscious swimmer:
Once you are on the boat, if the swimmer isn't breathing and has no pulse, begin CPR. A CPR mask or other barrier device and personal protective equipment are part of every first aid kit. If there is an AED available, use it – but be careful to dry off the victim and his immediate surroundings.
- How could this situation have been prevented?
Remember the tenets of the Guide to Safe Scouting's Aquatic Safety, Safe Swim Defense, and Safety Afloat (<https://www.scouting.org/health-and-safety/gss/gss02/>) to ensure that your group remains safe. In this scenario, your group did not know this swimmer. But before entering the water, the swimmer should have had a buddy with him, assessed the area for underwater hazards, and made sure that he had the appropriate skill proficiency and swimming ability to swim in this area. It is dangerous to jump into unknown waters.
- Did this situation require evacuation of the victim? If so, would it have required a rapid evacuation?
Evacuation is indicated for any submersion/drowning survivor if they lost consciousness, received CPR, or have difficulty breathing – which may manifest as a cough, wheezing sounds, difficulty catching breath, or difficulty speaking. In this scenario, evacuation is appropriate because of the near-drowning event and his difficulty breathing. In addition, the victim may have a head injury based on the information obtained during the primary and secondary assessments. If his difficulty breathing persists or if you determine that the victim was unconscious at any time, then rapid evacuation is indicated.

Add how this could have been prevented. Stress the need for adult leader training and being qualified.



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- Prevention efforts can be maximized by:
 - o *Completing appropriate BSA training courses and familiarizing oneself with them before going out.*
Trainings include:
 - *Safe Swim Defense*
 - *Safety Afloat*
 - *Aquatics Supervision: Swimming*
 - *Aquatics Supervision: Paddlecraft*
 - *BSA Lifeguard*
 - *Hazardous Weather*
 - *First Aid/Wilderness First Aid*
 - *CPR*
 - o *Qualified, appropriate, trained supervision*
 - o *Health screenings*
 - o *No water activities for those under the influence of alcohol or drugs*
 - o *Physical conditioning*
 - o *Appropriate activities for skill level*
 - o *Use of the buddy system*
 - o *Availability and appropriate use of PFDs*
 - o *Qualified investigation of the swim area in advance for hazard identification*
 - o *Availability of appropriate rescue equipment and first aid kit onsite*

OUTCOMES

The questions above are based on the relevant learning outcomes for Submersion Incidents in the WFA Curriculum:

Upon completion of this lesson, the student will be able to:

1. Describe briefly the general sequence of events at a submersion (drowning) incident.
2. Describe the safest and most efficient means of removing a submersion victim from the water.
3. Describe emergency treatment for a drowned patient.
4. Describe how to prevent some drowning incidents.
5. Describe situations that would require an evacuation versus a rapid evacuation.