



## Wilderness First Aid Scenario

**DIABETIC ILLNESS, RESPIRATORY DISTRESS, POISON IVY, AND SEIZURE****Victim 1 (Tom) – Youth with Low Blood Sugar and History of Diabetes****Victim 2 (Andrew) – Youth with Respiratory Distress****Victim 3 (Joe) – Adult with Skin Rash (Poison Ivy Rash)****Victim 4 (Phil) – Youth with Seizure****SUMMARY**

A group of 12 Scouts from Michigan have planned a strenuous trek that includes hiking up to Baldy Mountain, at 12,441 feet the highest peak in the Cimarron Range. It is day nine of a 12-day trek in mid-June. Three adult leaders and nine Scouts, ages 14–17, have successfully completed several practice hikes over the past year, but for six of the youth and one adult, this is their first long trek at altitude.

Last night, the group camped in a densely forested area. One adult leader (Joe) moved his tent away from the others due to his snoring after a few of the Scouts said the noise had deprived them of sleep for several days.

The group members determine that they should begin the hike up to Baldy Mountain very early to avoid being at the top if a storm develops. They begin at 4:30 a.m., planning to eat breakfast after the sun rises while on their way up to the top. After hiking for 1½ hours, they take a break as the sun is just beginning to rise. Joe, one of the adult leaders, begins complaining of severe itching on his legs. During the break, the senior patrol leader takes a head count of the group and states that one person, Tom, age 15, is missing. Several go back down the trail and find Tom lying down about 300 feet from the rest of the group. He is mumbling, and it is sometimes difficult to understand him. The rest of the group hikes back down the mountain to help the Scout after hearing he was found. The Scoutmaster pulls out the copies of everyone's Annual Health and Medical Record, begins reviewing Tom's information, and learns that Tom has diabetes.

A second Scout, Andrew, age 17, who went to help find Tom, begins to have difficulty breathing and says he needs to sit down. Andrew has a history of asthma, which has been well-controlled up until now. When asked about his albuterol rescue inhaler, he says, "I had it when we stopped for our break, but now I can't find it. I must have left it up there."

**SCENARIO DETAIL**

The group had reached the tree line when they noticed that Tom was missing. Although they prepped well for the trek, none are used to hiking at altitude, and all are very tired. It is cool, 48 degrees Fahrenheit, and windy. The sky is clear for now with possible thunderstorms forecast for early afternoon. Two of the adults are trained in wilderness first aid. They have both a GPS-enabled satellite messenger and a satellite phone for communication, copies of everyone's medical records (AHMR), a first aid kit, and adequate food, clothing, and gear for the trek.

**WFA Instructor Note:** This scenario is most useful towards the end of the course. Add in Victim 4 (Phil) during the assessment of Victim 3 (Joe) and the ongoing treatment and monitoring of Victims 1 and 2. This works best when a second instructor or experienced student mixes in with the group of rescuers and then portrays signs of illness. Victim 4 (Phil) information is given below.



## Wilderness First Aid Scenario

# Diabetic Illness, Respiratory Distress, Poison Ivy, and Seizure

### STUDENT RESPONSE

**Victim 1 (Tom) – Low Blood Sugar (glucose) – This is a life-threatening situation.**

1. Scene safety:

Ensure that the scene safety assessment is completed. Check for the use of personal protective equipment before giving care.

2. Primary assessment:

Tom is mumbling. He responds to his name (A&Ox1) and is able to follow simple commands but with a delayed, slow response.

**WFA Instructor Note:** Students should treat the patient with approximately 15 grams of sugar-based fluid as long as the patient is alert and able to swallow. Monitor breathing and alertness. Secondary assessment (brief) may be conducted at the same time as the fluid is given. If a glucometer is available, glucose level should be checked. Checking the glucose level with the glucometer should not delay initial care of administering sugary beverage, gel, etc.

Students recheck vital signs and glucose every 15 minutes until stable.

No additional illnesses or injuries are found.

3. Secondary assessment:

(Full secondary assessment deferred due to altered mental status and history of diabetes, but students must follow treatment protocol.)

a. Vital signs (first check):

Alert (awake) and oriented to person and place (A&Ox2). Confused about time/date.

Heart rate: 72 bpm

Respirations: 16 bpm

Skin: pale, warm, and clammy

b. **SAMPLE** assessment (signs and symptoms, allergies, medications, past medical history, last oral intake, and events leading up to present injury):

**S** – As above

**A** – No known allergies

**M** – Insulin, 1x per day

**P** – Diabetes, Type 1

**L** – Water = ½ Nalgene – 24 oz. – since beginning hike; dinner at 6 p.m. last night = spaghetti/tortilla/water

**E** – Hiking, taking insulin this morning, no breakfast

c. Vital signs (second check and 15 minutes after drinking a sugar sweetened beverage):

A&Ox4: speech clear and concise

Heart rate: 68 bpm

Respirations: 16 bpm

Skin: Pink, warm, and dry

d. Vital signs (third check approximately 15 minutes after the second check): No changes noted



## Wilderness First Aid Scenario

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### Victim 2 (Andrew) – Respiratory Distress – This is a life-threatening situation.

1. Scene safety:

Ensure that the scene safety assessment is completed. This should be almost immediate due to the previous safety check. Check for the use of personal protective equipment before giving care.

2. Primary assessment:

Respiratory issue assessed. Inspiratory and expiratory wheezing audible. Nasal flaring noted with inspirations. Andrew is sitting on a rock, leaning forward in a tri-pod position.

3. Secondary assessment:

Mostly deferred. Vital signs and SAMPLE history determined from students' assessment, his AHMR, and Andrew's buddy. Several Scouts quickly return to the break site 300 feet up the trail. They locate Andrew's rescue inhaler in the rocks on the side of the trail. After returning, Andrew takes his rescue inhaler as prescribed. No additional illnesses or injuries are noted.

a. Vital signs (first check):

A&Ox4

Heart rate: 94 bpm

Respirations: 38 bpm, audible wheezing

Skin: Pale pink, warm, and dry

b. **SAMPLE** assessment:

**S** – As above

**A** – Bactrim

**M** – Albuterol (rescue inhaler), Advair inhaler, 1x per day; Flonase, 1x per day; Claritin, 1x per day

**P** – Asthma, seasonal allergies

**L** – Water during early morning hike

**E** – Backpacking at high altitude, not taking morning medication, leaving his rescue inhaler at the break site, running down the mountain to help find the lost Scout

c. Vital signs (second check approximately 15 minutes after rescue inhaler given):

A&Ox4

Heart rate: 98 bpm

Respirations: 24 bpm, occasional audible wheezing

d. Vital signs (third check approximately 15 minutes later and approximately 30 minutes after rescue inhaler):

A&Ox4

Heart rate: 82 bpm

Respirations: 16 bpm, no audible wheezing



## Wilderness First Aid Scenario

# Diabetic Illness, Respiratory Distress, Poison Ivy, and Seizure

### Victim 3 (Joe) – Rash to Lower Legs

1. Scene safety:

Ensure that the scene safety assessment is completed. This should be almost immediate due to the previous safety check. Check for the use of personal protective equipment before giving care.

2. Primary assessment:

Joe is complaining of his legs itching profusely. A red rash with small blisters is apparent on his lower legs.

3. Secondary assessment:

a. Skin assessed. Red rash to lower legs bilaterally with multiple small blisters approximately 1/8 to 1/4 inch in diameter on the front of the lower legs. Rash/blisters appear from knees to the top of socks. Students should treat for suspected poison ivy. Gloves should be on.

b. Vital signs deferred.

c. **SAMPLE** assessment:

**S** – As above

**A** – No known allergies

**M** – None

**P** – Tent set up last night in dense vegetation

**L** – Dinner last night (spaghetti, tortillas, water); this morning - water (3/4 Nalgene – 32 oz.); voided this morning before the hike

**E** – Setting up tent in dense vegetation with poor lighting

### Victim 4 (Phil)– While Victims 1 and 2 are being treated and Victim 3 is being assessed, Phil falls to the ground and begins shaking uncontrollably. The Scout is breathing but not responding to any verbal stimuli.

1. Scene safety:

Ensure that the scene safety assessment is completed. This should be almost immediate due to the previous safety check. Check for the use of personal protective equipment before giving care.

**WFA Instructor Note:** Students should protect the person from harm during the seizure but should not restrain the victim. Do not stimulate the person. Recognize that the victim's airway may become compromised and the recovery position may be necessary during the active seizure and possibly afterwards if the person remains unresponsive. Do not attempt to place anything in the mouth.

2. Primary assessment:

Phil is not responsive. He is breathing and his skin is warm, pink, and moist. His body is shaking uncontrollably. The shaking stops after 90 seconds, and he remains unresponsive, breathing, and with skin remaining pink.

3. Secondary assessment:

a. Phil is placed in recovery position and his breathing monitored. He remains unresponsive for 25 minutes after the seizure. Head, extremities, etc., are all protected from injury during episode. No injuries noted.

b. Vital signs: (while in recovery position; unable to check prior.)

Responsive to noxious stimuli such as loud noises; facial grimaces noted

Heart rate: 88 bpm



## Wilderness First Aid Scenario

### Diabetic Illness, Respiratory Distress, Poison Ivy, and Seizure

Respirations: 28 bpm

Skin: warm, moist, and pink

c. **SAMPLE** assessment (information obtained from AHMR and buddy):

**S** – As above

**A** – None

**M** – Tegretol, 1x per day

**P** – Seizures, most recently five years ago

**L** – Dinner last night (spaghetti, tortillas, water); this morning - water (¼ Nalgene – 12 oz.); voided this morning before the hike

**E** – Not enough sleep (awakened frequently by sounds of assistant Scoutmaster’s snoring), not drinking enough fluid this morning (mildly dehydrated), low blood sugar (no breakfast), possible elevated altitude issue

#### POST-SCENARIO DEBRIEF

- Scene safety: How was safety addressed?

**The buddy system needs to be reviewed for this group.**

**Also, hiking in darkness can be dangerous. A plan that addresses environmental concerns, etc., should be developed and put in place prior to the trek.**

- What personal protective equipment should have been used?

**Gloves for all victims.**

- Is evacuation necessary for any of these victims?

**Discuss diabetes, potential emergency situations, and how to prevent them. Discuss protocols for hypoglycemia (low blood glucose) and hyperglycemia (high blood glucose) treatments.**

- If Victim 1 (Tom) did not respond to glucose administration, was the evacuation process begun?
- Did Victim 4 (Phil), who suffered a seizure, need evacuation?

**Discuss seizure activity and treatment. Anyone with a history of seizure activity has the potential for additional seizures, no matter how long it has been since the last seizure. All high-adventure bases (HABs) have guidance for those with a history of seizure activity. Developing a plan begins with the Scout and a parent/guardian along with the Scout’s healthcare provider’s recommendations. The leaders should be a part of the discussion and pre-trek plan development. This should be reviewed for every event.**

**Discuss possible triggers for seizure activity and how these triggers could be mitigated.**

- This is day nine of a 12-day trek. The crew should already be aware of medical issues within the group. Did anyone review the AHMRs before the trek? Why should they have copies?

**Review of each participant’s AHMR should be completed before the trek in a confidential manner. A general knowledge of medical issues and medication is important to the success of the trek. Develop a plan beforehand with necessary individuals: parents/guardian, the Scout, selected adult leaders, selected youth, etc. Always obtain permission from the parent/guardian and Scout beforehand. See the AHMR FAQs for additional information.**

**Copies of each AHMR (both youth and adults) are necessary in the event of an emergency.**



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- Were plans developed for the potential treatment of the youth with diabetes during the planning phase? Did the group plan for adequate medications and other medical supplies before the trek began? Did the plan include using a glucometer?

**These preparations should be included in the plan as discussed above. Signs and symptoms of low blood sugar and high blood sugar, treatment, the use of a glucometer, and prevention of emergencies should be discussed before the trek.**

**Instant Glucose: 15 grams of sugar = 1 tube of glucose gel / 1 small tube of frosting (grocery store) / 4 tsp. sugar / 3-5 glucose tablets (check label) / energy cube or gel (commercially available) or equivalent.**

**Discuss alternatives. Discuss why gel or liquid is sometimes better for confused victims.**

- Did Victim 2 (Andrew) have a backup rescue inhaler? Did anyone know he had asthma?

**BSA recommends that people with asthma have backup medication available at every event. This should be included in the pre-trek planning.**

- What would have happened if the rescue inhaler was not found and there was no backup rescue inhaler?

**The asthma symptoms may have increased to the point of respiratory failure.**

- How could Victim 3 (Joe) have avoided his exposure to poison ivy?

**Plants go through seasonal changes and their appearance can be very different regionally, so trekkers should be knowledgeable about plants that may live in the area and be able to identify them before arriving. Set up tents in areas that are not in the middle of poisonous plants. Avoid setting up camp in the darkness.**

- Should responders wear disposable latex-free gloves when caring for this victim of poison ivy?

**Yes. The oil from the poison ivy plant may still be on the surface of the victim's skin, clothing, or gear, and the oil is the cause of the symptoms. It would be difficult to remove all traces of the oil in a backcountry location. Although the blisters do not transmit poison ivy, it is best to leave them intact so that you do not have an open wound that could become infected.**

- How did the group handle the addition of Victim 4 (Joe), who suffered a seizure?

**Advanced medical care may be available at all four BSA high-adventure bases and should be sought for seizure victims. Depending upon the stage of the trek for non-BSA locations, all factors should be considered when determining whether to conduct an emergent evacuation. Post-seizure victims with a medical history of seizures, if they are stable, may be able to be evacuated as a non-hurry case. All seizure victims should be evacuated. The determination of how fast the evacuation should occur will depend upon each individual situation. All unstable victims and those without any past medical history of seizure activity should be evacuated urgently.**

- How did they care for Victim 4 (Phil)?

**Review care for an active seizure patient. You should protect the airway and in general protect the patient from harm without restraint, especially to the head and extremities. Minimize overstimulation until they are recovered fully. A plan should also have been developed and put in place before the trek.**

- When did responders decide that advanced medical care was required for Victim 4 (Phil)? How did they access advanced care? Did they evacuate or stay in place for rescuers to locate them? Either way, how did they decide?
- How could these events have been prevented?