



Patient Safety Considerations

- Never assume that a patient presenting with syncope is simply intoxicated
- Altered LOC may obscure the presence of a spinal injury and appropriate spinal motion restriction may be indicated

Differential Diagnosis

Search for and treat possible contributing factors

- A – Alcohol, ingested toxins
- E – Epilepsy, Endocrine, Electrolytes
- I – Insulin (Hypoglycemia)
- O – Overdose, Oxygen deprived
- U – Underdose, Uremia
- T – Trauma
- I – Infection
- P – Psychosis
- S – Sepsis, Stroke, Shock
- H – Hypotension
- H – Hypoxia
- H – Hypo / Hyperthermia
- U – Unknown

Etiology

Syncope (fainting) is a common cause of altered level of consciousness, particularly in a patient that isn't suffering from other known acute health issues. Syncope is a sudden, temporary loss of consciousness with interruption of awareness of oneself and one's surroundings. It is characterized by an altered level of consciousness (LOC) and caused by insufficient cerebral blood flow. The patient recovers almost immediately after becoming supine. Many serious causes of altered level of consciousness are inaccurately attributed to the ingestion of alcohol or other drugs.

Determine the position of the patient just before they experienced their syncopal event. In patients that experience syncope while in a sitting or lying position, there should be a high index of suspicion that the underlying cause is cardiac. Obtaining a 12-lead ECG will assist the practitioner in determining the cause of syncope, as syncope may be attributed to the following cardiac causes:

- a. Dysrhythmias.
- b. Bradycardias.
- c. Tachycardias.
- d. Mechanical problems leading to hypoxia (e.g. atrial septal defect).

Vasovagal syncope, in which an unknown etiology causes a failure in the patient's autoregulation of blood pressure, is the most common cause of syncope. Medical science is still researching the cause, but the foremost theory is that a vasovagal reaction is an exaggeration of an adaptive response meant to assist in homeostasis when experiencing physical trauma. Vasovagal syncope often has premonitory (warning) signs such as dizziness, yawning, nausea, diaphoresis, abdominal discomfort, dimming of vision or roaring sound in ears and is usually precipitated by some form of stress.

Some other causes of altered level of consciousness can include postictal seizure state, head injury, hypoglycemia, psychiatric disorders, poisoning, infection, heat exposure, neurological illnesses, overdoses, stroke and conditions causing low oxygen saturation.

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Interventions**Spinal Motion Restriction**

1. Techniques used to restrict the movement of a patient's spinal column are detailed in the Adult C-Spine Assessment MCP notes.

Airway Management

1. Ensure a patent airway using, as necessary:
 - a. Patient positioning.
 - b. Suctioning.
 - c. Oropharyngeal airway, nasopharyngeal airways.
 - d. If more invasive adjuncts are required, refer to Airway– Basic Protocol.

Postural Vital Signs

Postural vital signs measure heart rate and blood pressure while the patient is in different positions (lying, sitting, standing) in order to determine whether the patient is able to compensate when they require a higher blood pressure or change in heart rate to maintain cerebral perfusion (blood to the brain).

Measure postural vital signs in a patient with a history suggestive of volume depletion (e.g. GI bleeding) or syncope.

- a. Measure pulse rate and blood pressure in the supine patient.
- b. Have the patient sit upright, (Caution, be prepared to help the patient lie down promptly if lightheaded).
- c. After the patient sits for three minutes, measure the pulse rate and blood pressure again; repeat with patient standing.
- d. Normally when a person stands, blood shifts to the lower body, leading to compensatory increases in heart rate, cardiac output, and systemic vascular resistance. In a healthy young person, the heart rate increases 10 bpm with standing and systolic BP falls slightly.

Positive postural vital signs are defined as:

- a. Symptoms of light-headedness preventing the patient from standing.
- b. Increase in heart rate 30 bpm or greater with standing.
- c. Systolic blood pressure drop 20 mm Hg or greater with standing.
- d. Severe light-headedness and heart rate increase of 30 bpm are the most specific indicators of intravascular volume depletion.
- e. Note: Autonomic insufficiency, the inability to adequately regulate heart rate and blood pressure in response to physical demands, is common in the elderly and in patients with neuropathy and can also cause positive postural vital signs.

Important History Questions

If you have time, it may help to gather some pertinent history about the patient. For example:

- Does the patient have a known condition or a cardiac history?
- Has the patient ever had a similar syncopal episode in the past? If so, what was the medical diagnosis?
- Did they hit their head when they fell? Did anyone witness the episode?
- Do they have any allergies that require an EpiPen?
- What were they doing before the event took place? What were they doing when the episode occurred?
- How long was the patient unconscious?

Finding out any other pertinent medical history is important.

- Is the patient diabetic? Had the patient used any drugs or alcohol prior to the episode? Have they recently experienced any physical or emotional trauma?
- All vital signs are important when there has been an unexplained syncopal episode, including pupil size and a blood glucose level.

Altered Level of Consciousness / Syncope

What to expect when the EMS crew arrives

If the patient is still unconscious, the incoming crew may attach their cardiac monitor and initiate an IV and fluid treatment before packaging the patient. The crew may ask you about specific vital signs. If you have taken multiple blood pressure readings, having them written down may be helpful.

Pharmacology

Not applicable

Special Circumstances

Not applicable