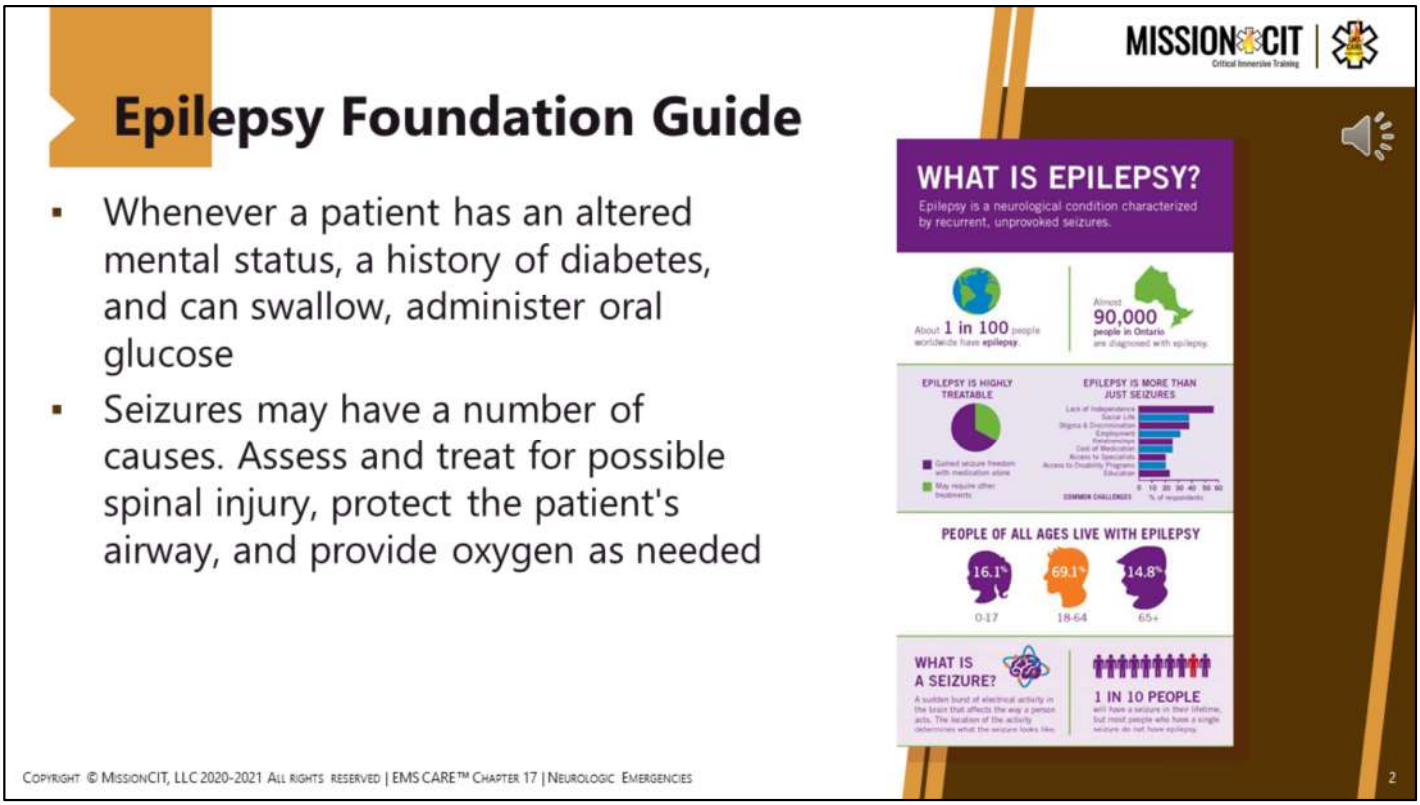


Hi there again. So, it's now time to review the entire topic of Neurologic Emergencies. There were several core concepts in this topic. We began with the Pathophysiology of the reticular activating system; and then continued with the General approaches to assessing a patient with an altered mental status. Then we discussed the causes, assessment and care of the patients, covering:

- A variety of conditions that may cause an altered mental status.
- We then continued with seizure disorders.
- Next we discussed TIA's and stroke, and finished with
- Dizziness and syncope.

Once you have completed the chapter review, there will be a 15-question quiz at the end. You will need to answer 75% of the questions accurately to get credit for this topic. Please don't hesitate to go back and watch again any of the lessons.

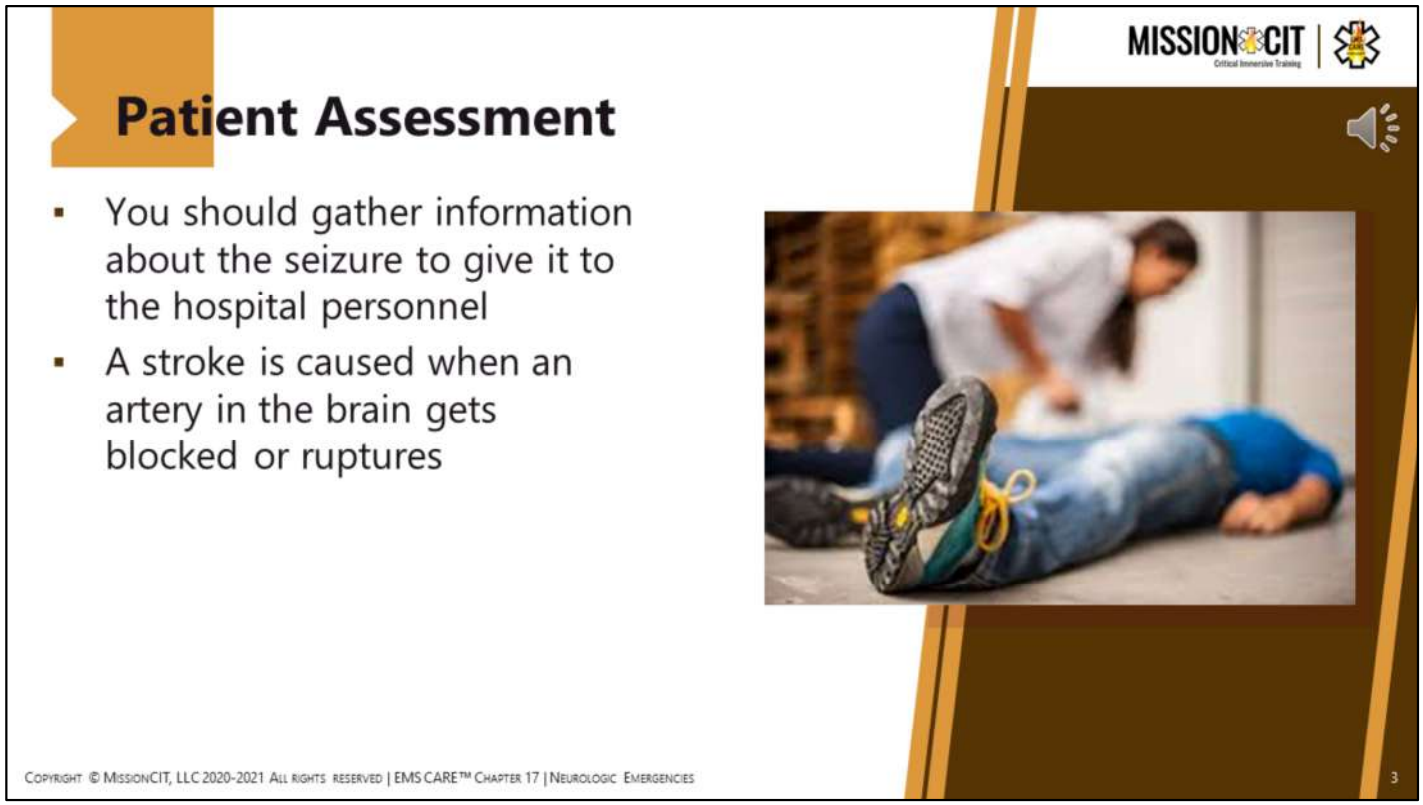


Seizures may have a number of causes. Assess and treat for possible spinal injury, protect the patient's airway, and provide oxygen as needed.

The Epilepsy Foundation Guide for EMS personnel, advises the following 7 steps

1. Establish safety and privacy – create a safe space. Make sure the physical area is safe by removing objects that could hurt the patient. Ensure the scene is safe for rescuers. Use appropriate body substance isolation (BSI) precautions. Then:
2. Check for obvious triggers – look around for obvious seizure triggers such as downed electrical wires or chemical spills.
3. Assess the patient – check the level of consciousness, responses, even look for a medical ID bracelet or necklace.
4. Question witnesses – attempt to find out what preceded the episode. Try to get specifics about the patient's behavior to help you understand the type of seizure the person is experiencing.
5. Establish a timeline – find out how long the person has been in seizure.
6. Conduct a head-to-toe examination – look for trauma, protect the person's head by placing something soft and flat under it but DO NOT restrain the person, and keep the airway clear.

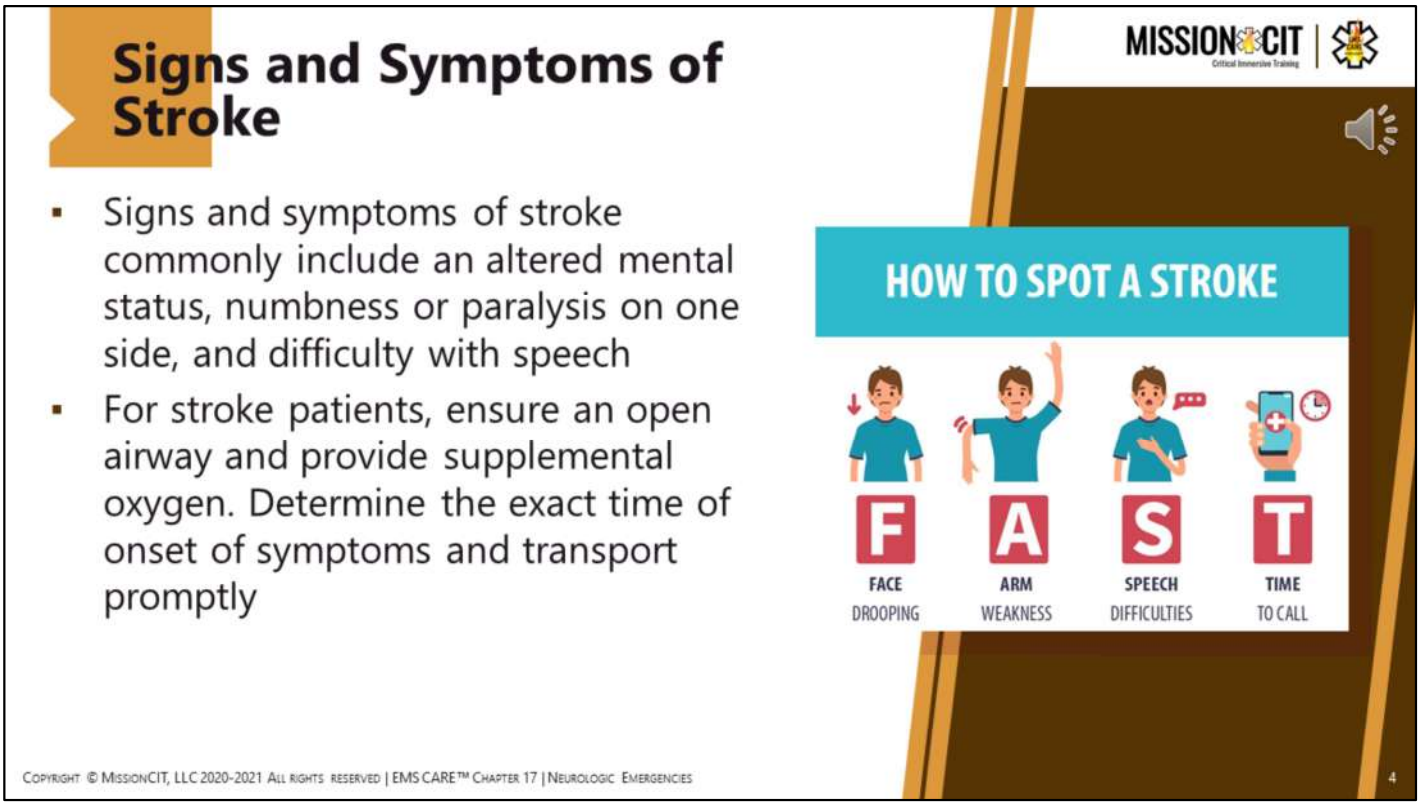
7. Determine the next steps – decide if the person can be safely treated on the scene or requires further medical intervention. Pay attention to what happens in the postictal phase.



During the Assessment of a Seizure patient, look for the underlying cause. Ask:

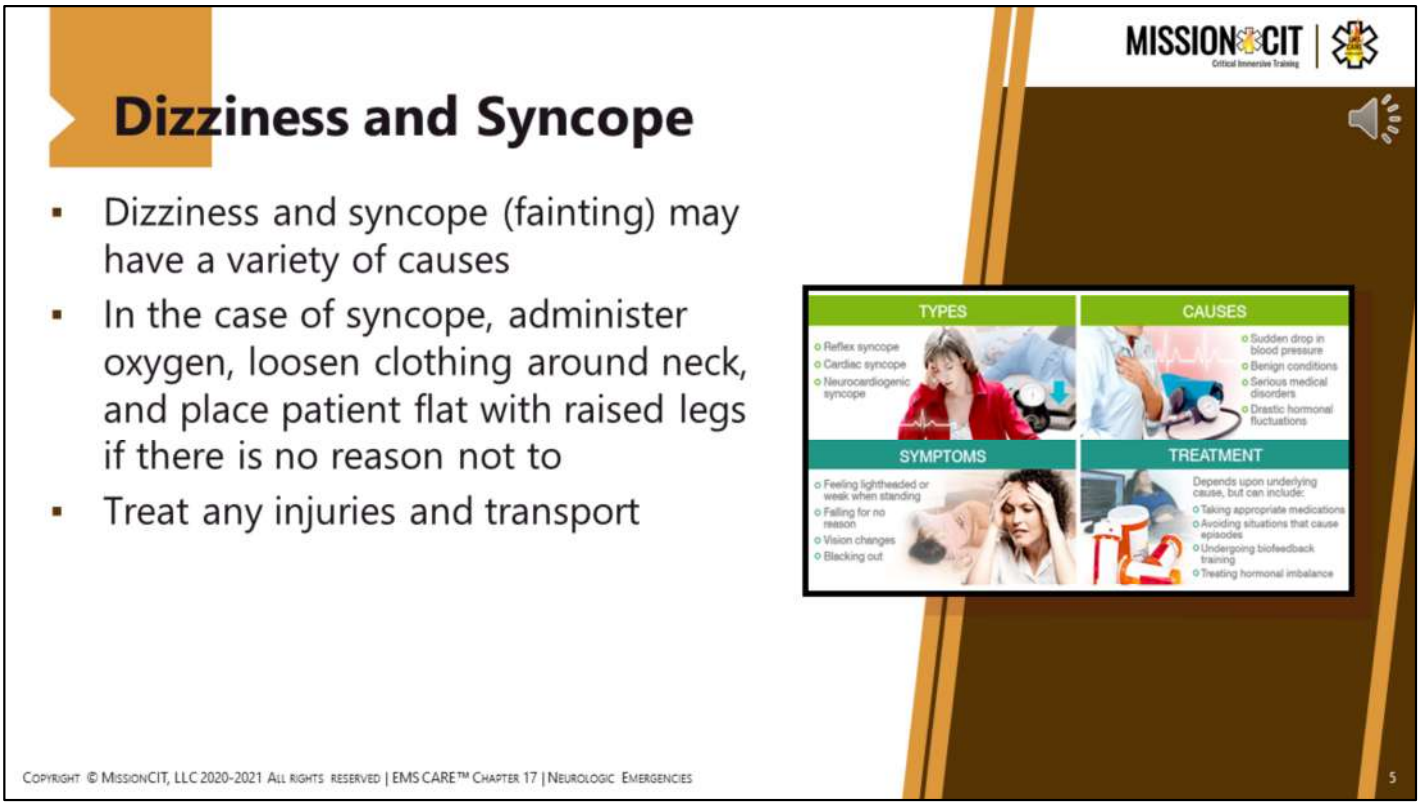
- What was the person doing before the seizure started.
- Exactly what did the person do during the seizure,
- How long did the seizure last,
- And what did the person do after the seizure.

So, remember that, Stroke refers to the death or injury of brain tissue, as a result of a lack of oxygen. This can be caused by an arterial blockage or from bleeding from a ruptured blood vessel. Or by The Blockage of an artery supplying blood to part of the brain.



Signs and symptoms of stroke, commonly include an altered mental status, numbness or paralysis on one side, and difficulty with speech.

For stroke patients, ensure an open airway and provide supplemental oxygen. Determine the exact time of onset of the symptoms and transport promptly.



Dizziness and syncope may have a variety of causes. Syncope is the medical term for fainting or passing out. It is caused by a temporary drop in the amount of blood that flows to the brain.

Syncope can happen if you have a sudden drop in blood pressure, a drop in heart rate, or changes in the amount of blood in areas of your body. If you pass out, you will likely become conscious and alert right away, but you may be feeling confused for a bit.

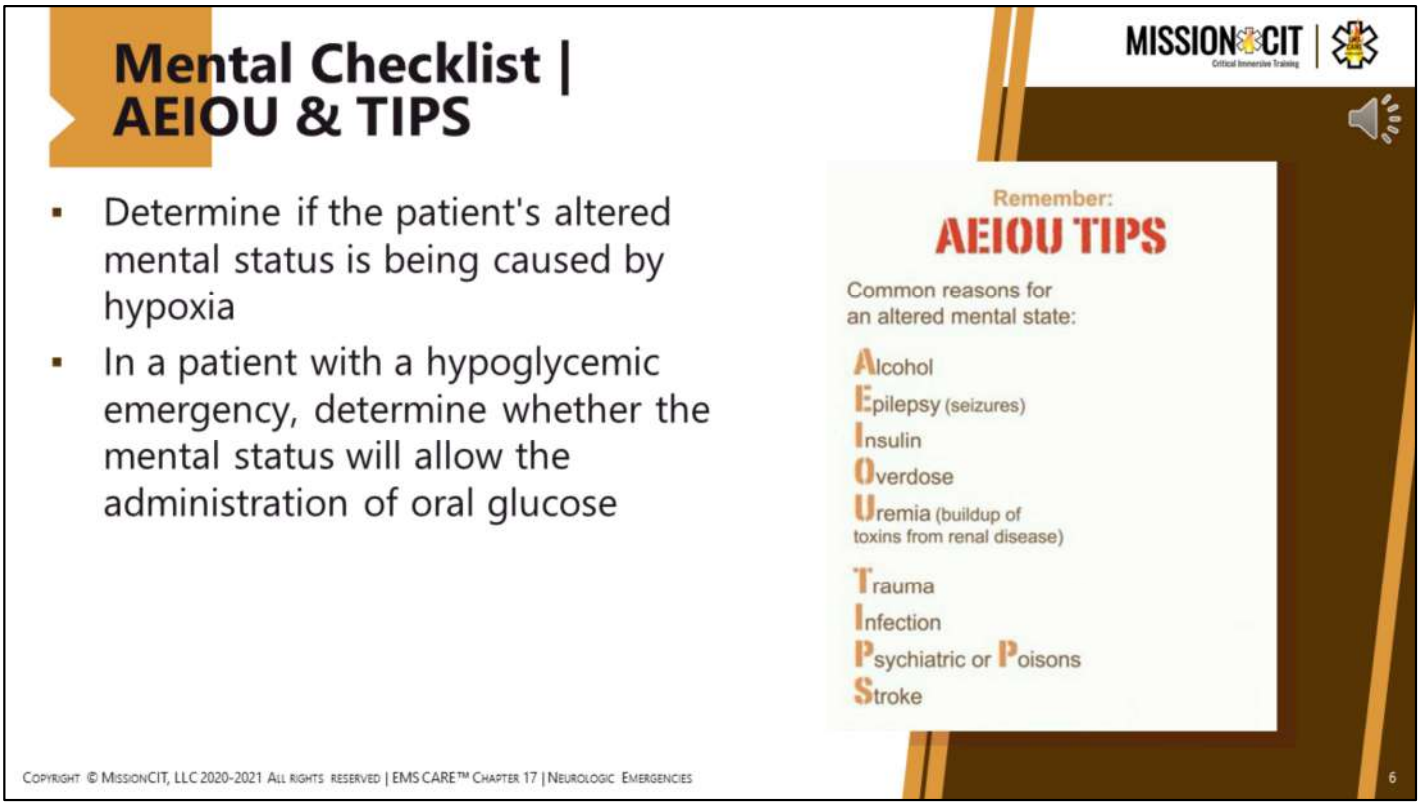
Syncope symptoms include:

- A Brief loss of consciousness with spontaneous recovery,
- Episodes are Typically very short; A few seconds to a few minutes, and
- Patients often have some warning that a syncope episode or fainting spell is about to occur.

So, when caring for the Dizziness and Syncope patient, you should consider:

- With a patent airway, administer oxygen based on the patient's oxygen saturation levels, and level of distress.
- Loosen any tight-fitting clothing around the neck.
- Lay the patient flat.

- Treat associated injuries the patient may have incurred from a fall.
- Call for ALS as warranted per local protocol, and
- Transport.



Determine if the patient's altered mental status is being caused by hypoxia during a primary assessment, as follows:

- Identify and treat any life-threatening problems.
- Consider oxygen administration.
- Be alert to the need for positioning and suctioning if the patient requires it, or if the mental status worsens.

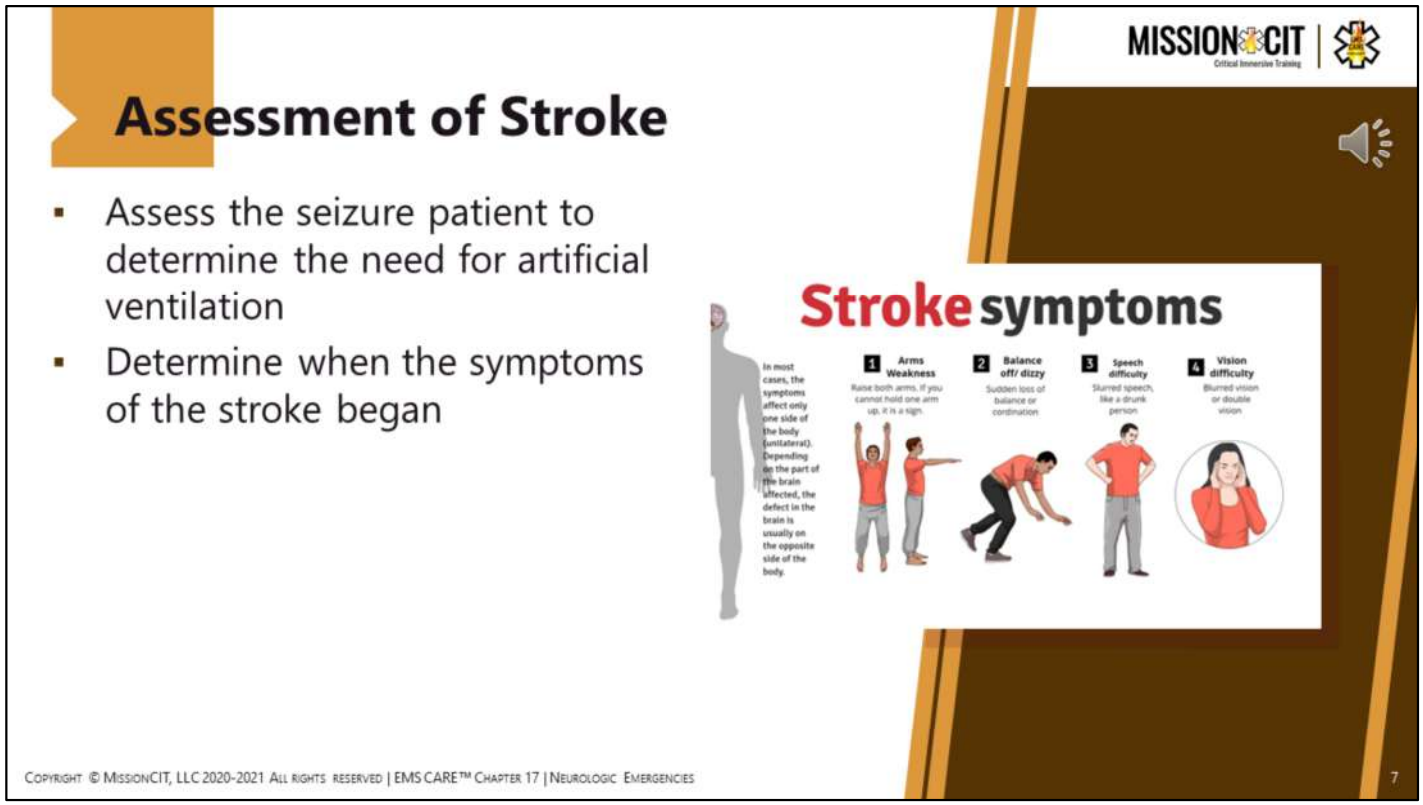
Then, determine a baseline mental status for the patient. Even slightly altered mental status indicates serious underlying issues.

- The A E I O U – T I P S mnemonic is a good way to set up a mental checklist for possible root causes of AMS.
- A: Alcohol, Abuse of substances and Acidosis or Diabetic ketoacidosis;
- E: Ecstasy, Environmental, Epilepsy, Electrolytes, Encephalopathy, Endocrine disease,
- I: Infection, including Encephalitis, meningitis, meningoencephalitis, and sepsis,
- O: Overdose, Oxygen deficiency, hypoxic brain injury due to cardiac arrest,
- U: Underdose or Insufficient dose of prescription medications, and Uremia due to kidney

failure, congestive heart failure, or urinary obstruction.

- T: Trauma due to Concussion or traumatic brain injury,
- I: Insulin indicating a Hypoglycemic or hyperglycemic state,
- P: Poisons including Carbon monoxide poisoning; lead poisoning; and iron poisoning.
- S: for Stroke or Shock or spinal cord injury.

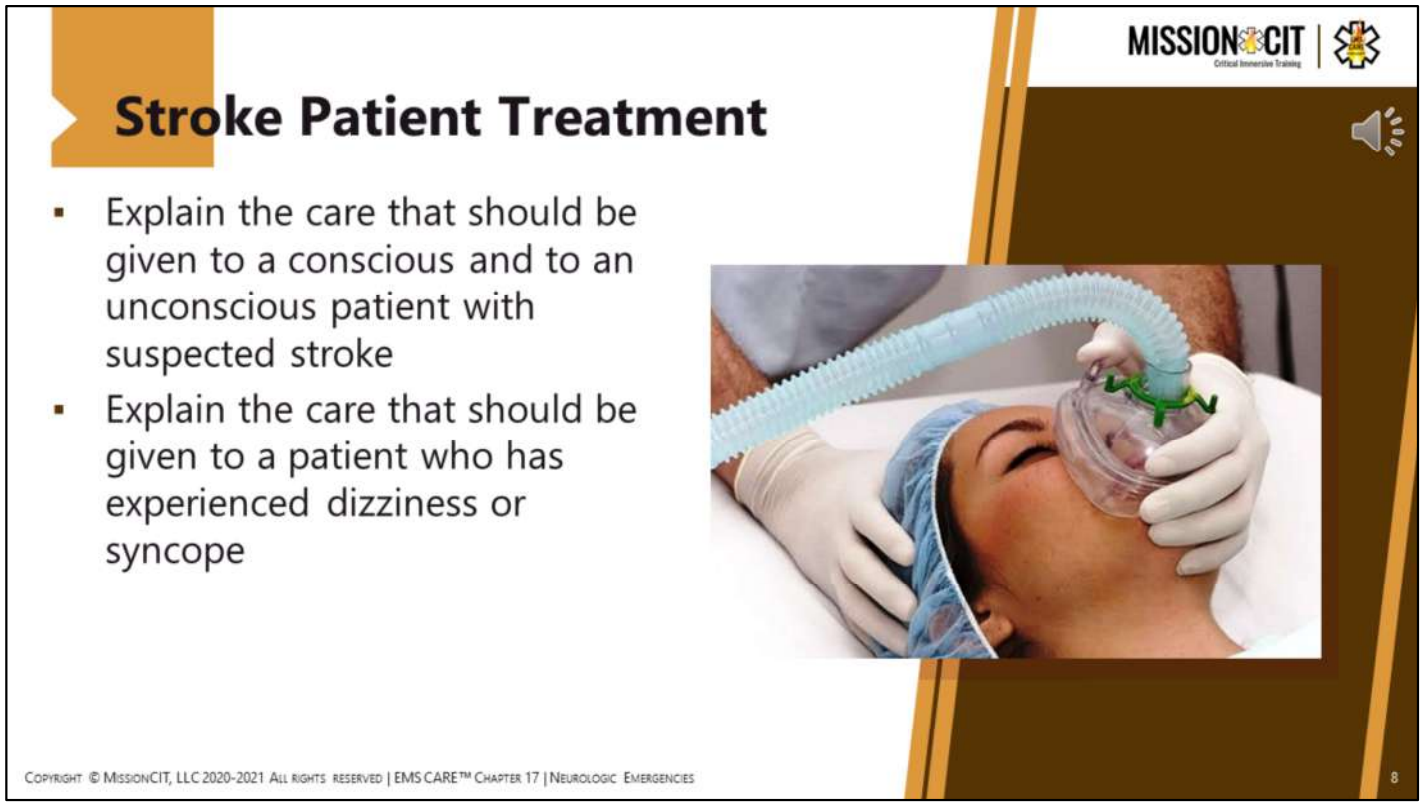
And, in a patient with a hypoglycemic emergency, determine whether the mental status will allow the administration of oral glucose.



Assess the seizure patient to determine the need for artificial ventilation, using your primary assessment protocol. And determine when the symptoms of the stroke began.

The American Heart and Stroke Associations, recommend the following for EMS Management, and clinical assessment of a suspected stroke:

- Assess using ABCs: airway, breathing, circulation – give oxygen if needed,
- Perform prehospital stroke assessment. Use the Cincinnati Prehospital Stroke Scale.
- Establish the time when the patient was last known to be normal,
- Rapidly transport the patient. We recommend triage to a center with a stroke unit if appropriate; consider bringing a witness, family member, or caregiver.
- Alert receiving hospital stroke center, communicating “CODE STROKE”, and
- Check the glucose level if possible.

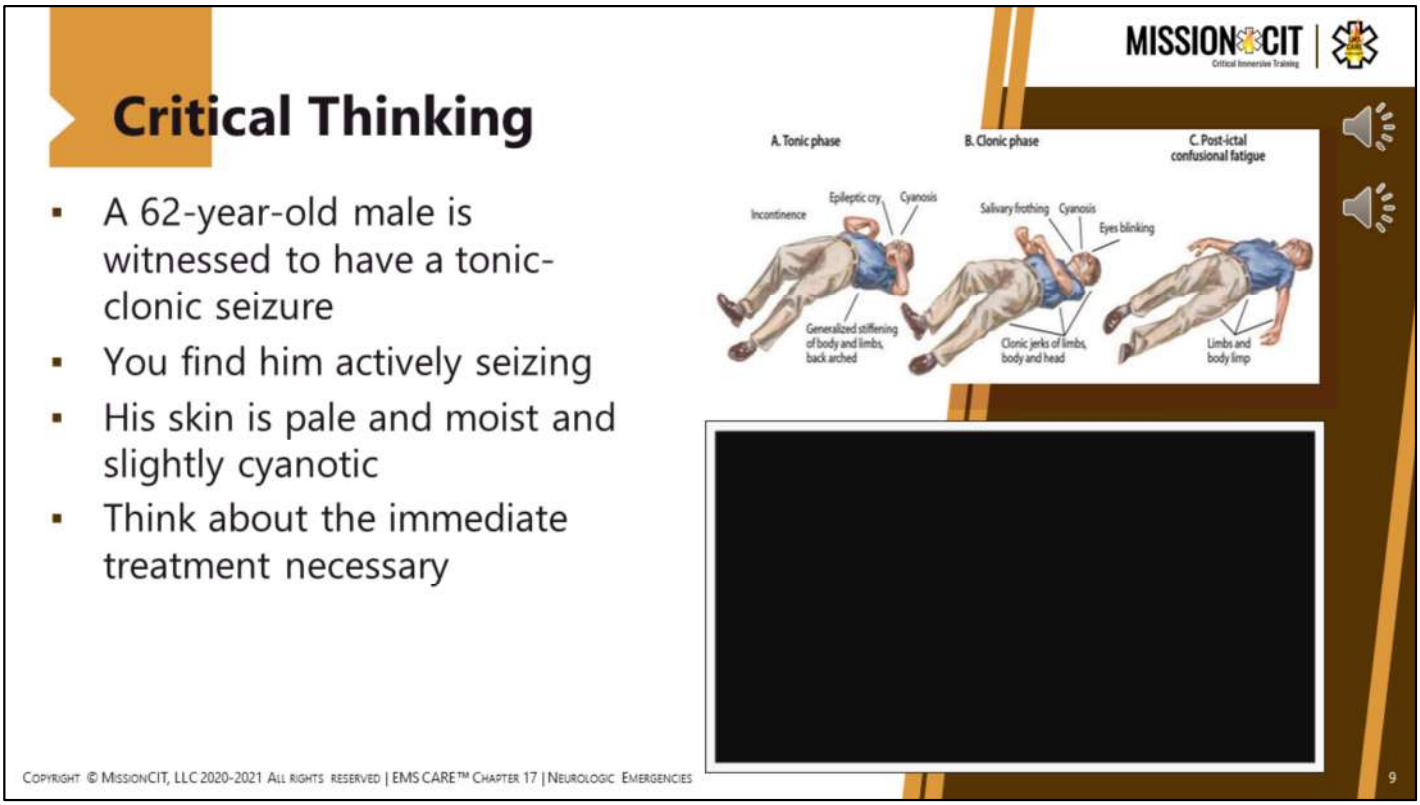


Stroke patients should receive airway management when necessary. Providing high flow oxygen and rapid transport are also important.

Syncope and dizziness often point to a more significant underlying problem. Always complete a thorough patient assessment. Transport the patient lying flat and administer high concentration oxygen.

And now,

- Explain the care that should be given to a conscious and to an unconscious patient with a suspected stroke.
- Explain the care that should be given to a patient who has experienced dizziness or syncope.



A 62-year-old male is witnessed to have a tonic-clonic seizure. You find him actively seizing. His skin is pale and moist and slightly cyanotic. You have 10 seconds to think about the immediate treatment necessary.

Cyanotic skin demonstrates the need for immediate airway management and high concentration oxygen. Once the airway has been secured, the primary assessment must be completed. Be sure to Rule out life-threatening causes of the seizure like hypoxia, hypoglycemia, and stroke.

So, we have completed the Topic of Neurologic Emergencies. Coming up next is a 15 question test. You will need to score 75% or better to pass and receive credit for this topic.

Good Studying and Good Testing.