Here are possible causes of loss of consciousness (LOC) in Mrs. AB, a 65-year-old woman, 3 hours after hearing about her brother's death:  
  
### 1. Neurogenic Causes  
  
\* Stroke (Ischemic or Hemorrhagic): Sudden emotional stress may elevate blood pressure and precipitate a cerebrovascular event.  
\* Transient Ischemic Attack (TIA): Brief, reversible reduction in cerebral perfusion.  
\* Seizure (with post-ictal confusion): Especially if she had prior epilepsy or a seizure threshold is lowered.  
  
### 2. Cardiogenic Causes  
  
\* Vasovagal Syncope (Neurocardiogenic): Strong emotional stress (death of a loved one) can trigger fainting via vagus nerve stimulation.  
\* Arrhythmia (e.g., ventricular tachycardia): Can lead to decreased cerebral perfusion.  
\* Myocardial infarction: Especially stress-induced (Takotsubo cardiomyopathy) in elderly women.  
  
### 3. Metabolic Causes  
  
\* Hypoglycemia: Especially in diabetics or those skipping meals under stress.  
\* Electrolyte Imbalance: Can lead to altered mental status or LOC.  
  
### 4. Psychogenic Causes  
  
\* Psychogenic non-epileptic seizure (PNES): Stress-induced dissociation or conversion disorder.  
\* Acute stress reaction or catatonia: Seen in severe emotional trauma.  
  
### 5. Other  
  
\* Head trauma: From a fall after initial syncope.  
\* Drug or alcohol intoxication: If there’s a history of use.  
  
Would you like a structured table summarizing these with key features for each?  
Loss of consciousness (LOC) is a state in which a person is unaware of themselves and their surroundings, and is unresponsive to external stimuli.  
  
### Key Features:  
  
\* Sudden or gradual onset  
\* Temporary or prolonged duration  
\* Reversible or irreversible, depending on the cause  
  
### Clinical Signs:  
  
\* Unresponsiveness  
\* No verbal or purposeful motor response  
\* May involve loss of postural tone (collapse)  
  
### Causes are broadly grouped into:  
  
1. Neurological (e.g., stroke, seizure)  
2. Cardiac (e.g., arrhythmia, syncope)  
3. Metabolic (e.g., hypoglycemia)  
4. Psychiatric (e.g., conversion disorder)  
5. Toxicologic (e.g., drug overdose)  
  
Would you like the differences between syncope and other causes of LOC?  
Physiologically, loss of consciousness (LOC) occurs when the brain — especially the cerebral cortex and/or reticular activating system (RAS) — does not receive adequate oxygen, glucose, or perfusion.  
  
### Main Physiological Causes:  
  
1. Reduced Cerebral Blood Flow  
  
 \* Causes: Syncope (vasovagal, cardiac), shock  
 \* Mechanism: Drop in blood pressure → ↓ brain perfusion  
  
2. Decreased Oxygen Supply (Hypoxia)  
  
 \* Causes: Respiratory failure, severe anemia  
 \* Mechanism: Less oxygen in blood → brain tissue hypoxia  
  
3. Decreased Glucose Supply (Hypoglycemia)  
  
 \* Causes: Insulin overdose, fasting in diabetics  
 \* Mechanism: Glucose is essential for brain function  
  
4. Structural Brain Disorders  
  
 \* Causes: Stroke, trauma, tumor  
 \* Mechanism: Disrupts neurons in consciousness centers  
  
5. Electrical Disturbance  
  
 \* Causes: Seizure  
 \* Mechanism: Abnormal neuronal firing disrupts normal consciousness  
  
6. Toxins or Metabolic Disturbances  
  
 \* Causes: Drugs, hepatic or uremic encephalopathy  
 \* Mechanism: Toxic substances depress brain activity  
  
In short: Anything that reduces blood flow, oxygen, or glucose to the brain — or directly damages brain activity — can cause LOC.  
  
Want a visual diagram of this flow?  
The RAS (Reticular Activating System) is a network of nerve cells in the brainstem that plays a crucial role in maintaining consciousness, wakefulness, and alertness.