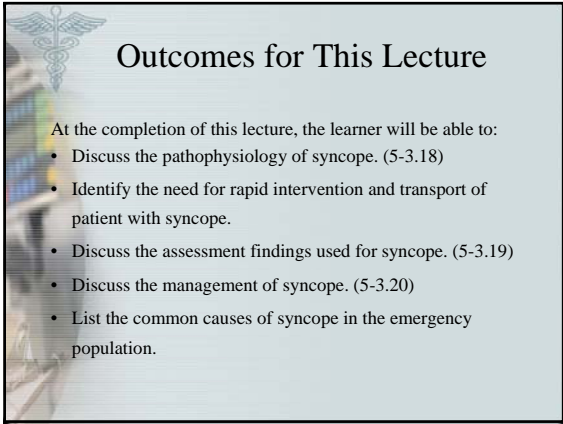




EMC 370 Introduction to Medical Emergencies

07 Syncope

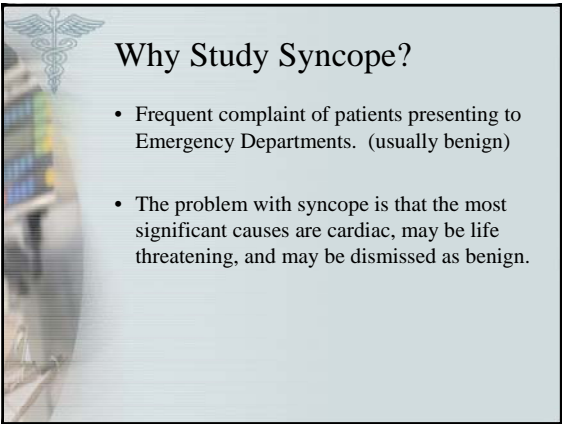
David Trigg, MD



Outcomes for This Lecture

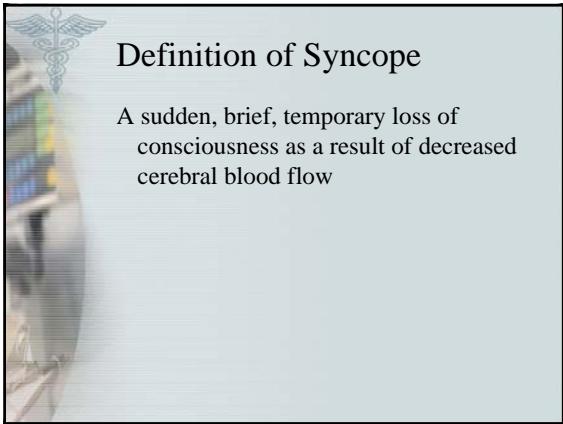
At the completion of this lecture, the learner will be able to:

- Discuss the pathophysiology of syncope. (5-3.18)
- Identify the need for rapid intervention and transport of patient with syncope.
- Discuss the assessment findings used for syncope. (5-3.19)
- Discuss the management of syncope. (5-3.20)
- List the common causes of syncope in the emergency population.



Why Study Syncope?

- Frequent complaint of patients presenting to Emergency Departments. (usually benign)
- The problem with syncope is that the most significant causes are cardiac, may be life threatening, and may be dismissed as benign.



Definition of Syncope

A sudden, brief, temporary loss of consciousness as a result of decreased cerebral blood flow



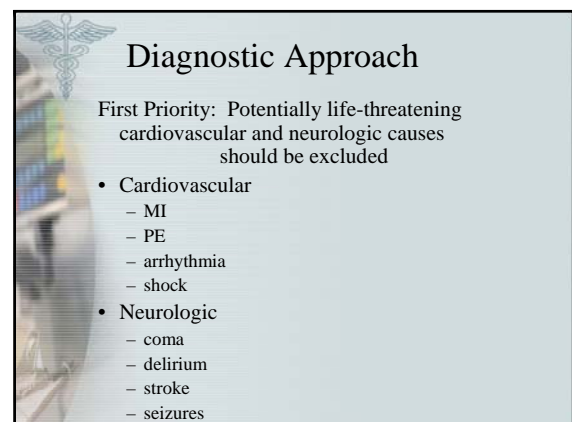
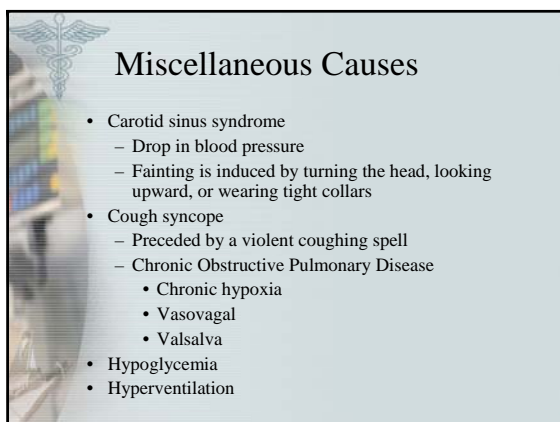
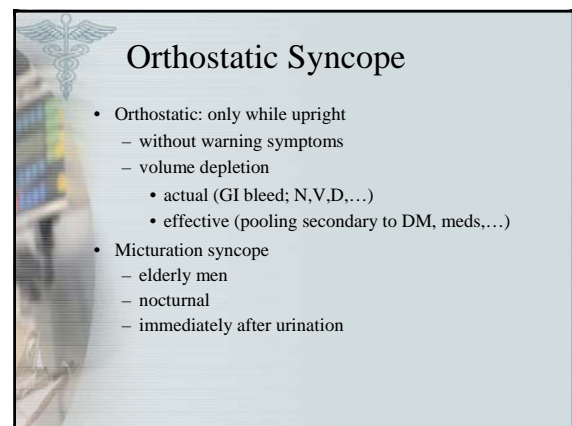
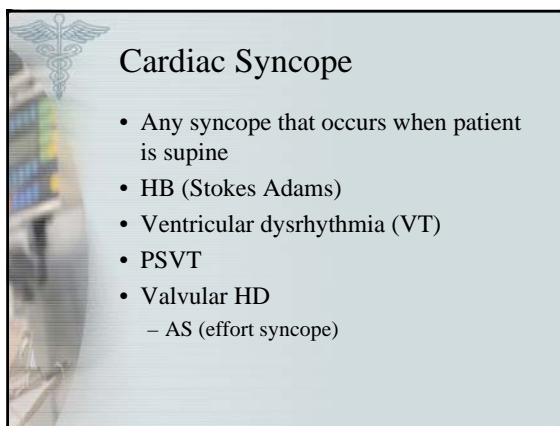
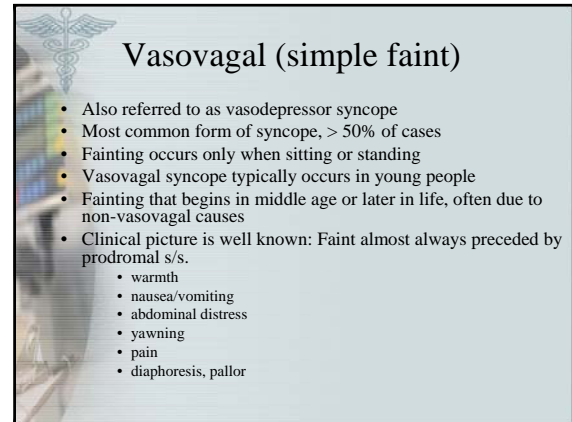
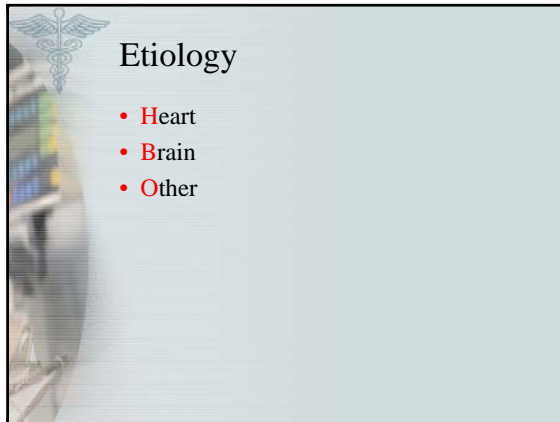
Causes


- Vasovagal, >50% ("simple")
- Cardiac
- Orthostatic (decreased BP upon standing)
- Cerebrovascular
- Misc. (hypoglycemia, micturation...)



Causes of Brief LOC


- Syncope
 - Vasovagal 55%
 - Cardiovascular 10%
- CNS
 - "1st ever seizure" 10%
 - Other CNS Dz. 5%
- Drug – Metabolic 5%
- Undiagnosed (including hysteria) 15%






History

- Age
- Circumstances of the attack
- Rate of recovery
- Premonitory symptoms
- Systemic conditions
 - Cardiac
 - DM
 - ↑ BP; stroke or TIA history
 - predisposing to volume depletion
 - medications




Potential Causes

- Numbness, paresthesias of extremities hyperventilation
- Preceded by prolonged standing orthostatic
- Absence of warning symptoms cardiac or orthostatic




Potential Causes

- Syncope during sleep (who would know ?) hypoglycemia
cardiac
epileptic
- During fasting state or long after a meal hypoglycemia
- During exercise aortic stenosis




Effect of Posture

- Vasovagal - always upright
- Orthostatic - after prolonged standing
- Cardiac - upright position with little or no warning
- in recumbency




PE and Differential Diagnosis

- Hypoglycemia
- Neurologic
- Anxiety
- Cardiovascular
 - life-threatening
 - benign, vasovagal
- Seizure



Differential Diagnosis of Syncope and Seizures


	SYNCOPE	SEIZURES
Onset	Gradual	Sudden
Warning	Usual	Aura common
Duration	Brief	Prolonged
Position	Usually erect	Any
Convulsions	Rare	Common
Incontinence	Rare	Common
Tongue biting	Rare	Common
Postictal	Usually absent	Usually present



Syncope Treatment Plan


CABCDE and

- **C** spine, if any question of trauma
- **O₂** NRB or NC
- **M₃** BP / cardiac / O₂ sat. pulse oxymetry
- **E** expose (possible trauma)
- **B** blood for labs ("all tubes" - red, purple + blue)
- **I** IV NS 10 mL / hr or fluid challenge
- **G** glucose check



Approach to Syncope

- **COMEBIG**
- **O₂** / IV volume / rule out arrhythmias
- keep patient flat or Trendelenburg
- **VS**
- loosen tight clothing
- secondary survey
 - trauma signs
 - seizure signs
 - hypoglycemia signs



Summary

We have discussed:

- Pathophysiology of syncope.
- Assessment findings in syncope.
- Common causes of syncope.
- Potentially life-threatening causes of syncope.
- Comparing the various causes of syncope.
- Need for rapid intervention and transport of patient with syncope.
- The management of syncope.