

EKG Fundamentals

Approach to Syncope

The differential diagnosis of syncope is long and involves many etiologies that are entirely non-cardiac. Regardless, every syncope patient should have an EKG performed to screen for particularly high risk etiologies. Context is important to the interpretation of any EKG but it is vital in the setting of syncope. Finally, remember that EKG abnormalities are not necessarily constantly present and the EKGs of patients with Complete Heart Block, WPW, Brugada Syndrome, or Sick Sinus Syndrome may not be diagnostic. Below is a general list of high risk features:

Symptoms—Chest pain, dyspnea, lack of a prodrome (sometimes referred to as a “drop attack” this refers to patients who syncope with no prior symptoms)

Physical State—both syncope at complete rest (sitting or laying) or during exercise

Family History—sudden cardiac death, drowning, unexplained death at a young age, nocturnal agonal respirations, need for a pacemaker at a young age

Please match the following causes of cardiac syncope with the EKG images

- A. Wolff Parkinson White
- B. Brugada Syndrome
- C. Long QT
- D. Arrhythmogenic Right Ventricular Cardiomyopathy
- E. Left Ventricular Hypertrophy (seen with Aortic Stenosis or Hypertrophic Cardiomyopathy)
- F. Complete Heart Block
- G. Sick Sinus Syndrome

Please match the following causes of cardiac syncope with the EKG images



