Lots of ED patients get EKGs often because we don’t want to miss a life-threatening MI, dysrhythmia, or conduction abnormality. Patients may only have abdominal pain, dizziness, or even just weakness.

**EKG interpretation is a CORE SKILL in emergency medicine!!!**

**Approach: 1,2,3 get an old EKG**

1) **Identify the rate and rhythm**, is there a dysrhythmia?
   - Find a P wave and determine if regular (a sinus rhythm)
   - If not consider your differential for tachy/brady dysrhythmias

2) **Systematically look for ischemia**
   - Check for Q waves
   - Check for **ST segment elevation or depression** by comparing the J point (the curvy part after the S wave) with electrical baseline (between T wave and P wave)
   - **Look for peaked T waves and T wave inversions.** Inverted T waves in aVR and/or V1 in isolation are not concerning.
   - If you see an abnormality, look in other anatomical leads (see quick facts section)

3) **Look at intervals**
   - PR – checking for WPW and blocks
   - QS – looking for conduction abnormalities. **LBBB is concerning for potential new/old MI**
   - QT – looking for **long QT** as this is a risk factor for R on T phenomenon and Torsades (a polymorphic ventricular tachycardial!)

4) **Compare all of this with a baseline EKG!!!**

**Quick Facts**

- One method to learn EKGs:
  1) Get “ECG’s for the Emergency Physician” by Amal Mattu and William Brady
  2) Try to figure out the EKG yourself, write down your answer
  3) Read the description, write down what you didn’t know
  4) Repeat 200 times =)

- Know your anatomical leads
  - II, III, aVF
  - I, aVL
  - V1-V4
  - V5-V6

- Sgarbossa’s Criteria = ≥1 mm concordant STE, ≥1 mm concordant STD in V1-V3, ≥1 mm STE ≥25% of depth of preceding S wave.