

Sequence of EKG Interpretation

1. Calibration: Check 1.0mV vertical box inscription (normal standard = 10mm)

2. Rhythm: Sinus rhythm is present, if :

- (1) each P wave is followed by QRS
- (2) each QRS is preceded by a P wave
- (3) P wave is upright in leads I, II, & III and inverted in lead aVR
- (4) PR interval is 0.12-0.20 sec (3-5 small boxes)

If these criteria are not met, determine type of arrhythmia

3. Rate: Use one of three methods :

- (1) $1500 / (\text{number of mm between beats})$
 - (2) Count off method : 300-150-100-75-60-50
 - (3) Number of beats in 6-second strip $\times 10$
- Normal rate = 60-100 bpm (bradycardia < 60, tachycardia >100)

4. Intervals

Normal PR = 0.12-0.20 sec (3-5 small boxes)
Normal QRS ≤ 0.10 sec (≤ 2.5 small boxes)
Normal QT \leq one-half of the R-R interval, if heart rate is normal

5. Mean QRS axis

Normal if QRS is primarily upright in leads I and II (-30° to +90°)
Otherwise, determine axis by isoelectric/perpendicular method

6. P wave abnormalities

Inspect P in leads II and V1 for left and right atrial abnormalities

7. QRS complex abnormalities

Inspect for left and right ventricular hypertrophy
Inspect for bundle branch blocks, hemiblocks
Inspect for pathologic Q waves : What anatomic distribution?
Inspect for poor R wave progression

8. ST segment / T wave abnormalities

Inspect for ST elevations :

Q wave infarct pattern

Pericarditis

Inspect for ST depressions / T wave inversions :

Ischemia or non-Q wave infarct pattern

Repolarization abnormalities accompanied by bundle branch blocks and hypertrophy

Metabolic and chemical abnormalities

9. Compare with patient's previous EKGs