

A Simple Step-by-Step Method for Interpreting ECGs

Rate							
Regular Rate:	RR Interval Distance (large boxes)						
# Large Boxes	1	2	3	4	5	6	7
Rate (300/# large boxes)	300	150	100	75	60	50	43

If Irregular Rate: Count QRS complexes/10 seconds and multiply by 6 to get the rate
 1 small box= 0.04 sec (40ms); 1 large box= 0.20 sec (200ms)

Rhythm

- Sinus:
- Regular?
- P before every QRS? QRS after every P?
- P upwards in II?

Intervals

- PR interval (>200 ms = AVB)
- QRS duration (>100 ms = IVCD, >120 ms = BBB)
- QT interval (> 50% RR or >440 ms in males >460 ms in females)

QRS Axis

- To estimate: Take vector sum of lead I and AvF
- OR find isoelectric lead and draw perpendicular line
- (normal between -30° and 90°)
- R wave progression? (Normal transition V3-V4)

Hyper-trophy

- LVH [Cornell criteria: S in V3 + R in aVL > 24 mm (men)
S in V3 + R in aVL > 20 mm (women)]
- RVH (+ QRS vector in V1 suggestive)
- LAA (negative or biphasic P wave in V1)
- RAA (P amplitude >2.5 mm in II)

Ischemia

- Q waves (pathologic = duration > 40ms or deeper than 25% QRS)
- ST segment changes (Elevation or Depression)
- T wave blunting or inversion