

Normal Sinus Rhythm



Rate 60 – 100
 Rhythm Regular
 P Wave? Yes. Upright and normal
 PR Interval? Less than 4 small boxes
 QRS Complex? Narrow. Less than 3 small boxes
 Ectopy?

Sinus Tachycardia



Rate Above 100

Sinus Bradycardia



Rate Less than 60

Sinus Arrhythmia



Rate 60 - 100
 Rhythm Irregular

Sinus Arrest



Rate 60 - 100
 Rhythm Irregular –period of inactivity (Arrest)
 P Wave? Yes. Upright and normal
 PR Interval? Less than 4 small boxes
 QRS Complex? Narrow. Less than 3 small boxes
 Ectopy?

MIAMI DADE FIRE RESCUE



MIAMI, FL

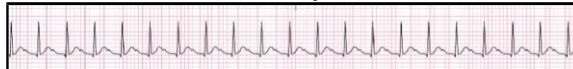
Always Ready, Proud To Serve

Wandering Pacemaker



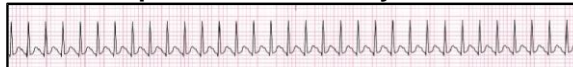
Rate 60 - 100
 Rhythm May be irregular
 P Wave? Yes. Different appearance
 PR Interval? Less than 4 small boxes, but can have varying PR intervals
 QRS Complex? Narrow. Less than 3 small boxes
 Ectopy?

Atrial Tachycardia



Rate 150-250
 Rhythm May be irregular
 P Wave? Yes. May be multiform
 PR Interval? Less than 4 small boxes, but can have varying PR intervals
 QRS Complex? Narrow. Less than 3 small boxes
 Ectopy?

Supraventricular Tachycardia



Rate 150-250
 Rhythm Regular
 P Wave? Unable to see P waves – buried in T-wave
 PR Interval? Usually unable to see
 QRS Complex? Narrow. Less than 3 small boxes
 Ectopy?

Atrial Flutter



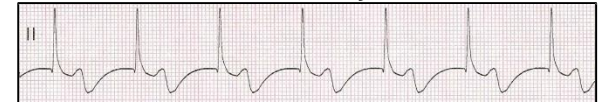
Rate 60 - 100
 Rhythm May be irregular
 P Wave? Multiple p waves for each QRS
 PR Interval? Less than 4 small boxes, but can have varying PR intervals
 QRS Complex? Narrow. Less than 3 small boxes
 Ectopy?

Atrial Fibrillation



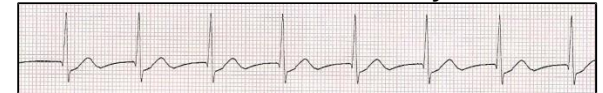
Rate Atrial - ≥ 350 , Ventricular rate may vary
 Rhythm Irregularly irregular
 P Wave? "Fib waves" showing atrial activity
 PR Interval? Unidentifiable
 QRS Complex? Narrow. Less than 3 small boxes
 Ectopy?

Junctional Rhythm



Rate 40 - 60
 Rhythm Regular
 P Wave? Absent – may be inverted or buried
 PR Interval? None (short if inverted)
 QRS Complex? Narrow. Less than 3 small boxes
 Ectopy?

Accelerated Junctional Rhythm



Rate 60 - 100
 Rhythm Regular
 P Wave? Absent – may be inverted or buried
 PR Interval? None (short if inverted)
 QRS Complex? Narrow. Less than 3 small boxes
 Ectopy?

Junctional Tachycardia



Rate	> 100
Rhythm	Regular
P Wave?	Absent – may be inverted or buried
PR Interval?	None (short if inverted)
QRS Complex?	Narrow. Less than 3 small boxes
Ectopy?	

1° AV Block



Rate	Depends on underlying rhythm
Rhythm	Regular
P Wave?	Yes. Upright and normal
PR Interval?	MORE than 4 small boxes
QRS Complex?	Narrow. Less than 3 small boxes
Notes:	Wide or prolonged PR interval

2° AV Block type 1 (Wenkebach)



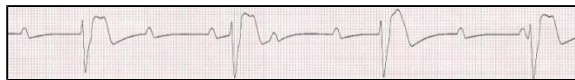
Rate	Depends on the rate of the underlying rhythm
Rhythm	Irregular
P Wave?	Yes. Normal. More P waves than QRS Complexes
PR Interval?	Progressively longer until a QRS complex is dropped
QRS Complex?	Narrow. Less than 3 small boxes
Notes:	Widening PR interval until dropped QRS, then PR starts over.

2° AV Block Type 2



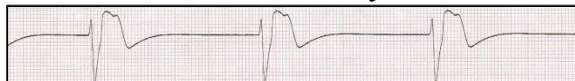
Rate	Atrial – 60-100, Ventricular rate may be slower
Rhythm	Irregular
P Wave?	Yes. Upright and normal Can be normal or prolonged but constant. QRS dropped
PR Interval?	
QRS Complex?	Usually wide but can be normal.
Ectopy?	Constant PR intervals with dropped QRS Complexes

3° AV Block



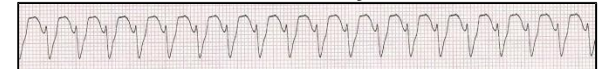
Rate	Atrial 60-100 / Ventricular 40-60
Rhythm	Usually Regular
P Wave?	Yes. Upright and normal
PR Interval?	Variable
QRS Complex?	Normal or wide
Notes:	P waves and QRS are independent of each other.

Idioventricular Rhythm



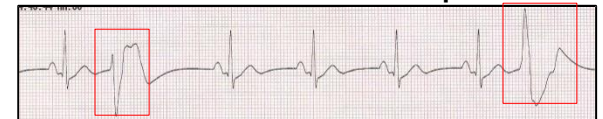
Rate	40-60
Rhythm	Usually Regular
P Wave?	NO
PR Interval?	None
QRS Complex?	Wide Complex
Notes:	QRS generated from below the AV Node creating a wide complex

Ventricular Tachycardia



Rate	150-250
Rhythm	Usually Regular
P Wave?	NO
PR Interval?	None
QRS Complex?	Wide Complex
Notes:	QRS generated from below the AV Node creating a wide complex

Premature Ventricular Complex



Premature Atrial Complex



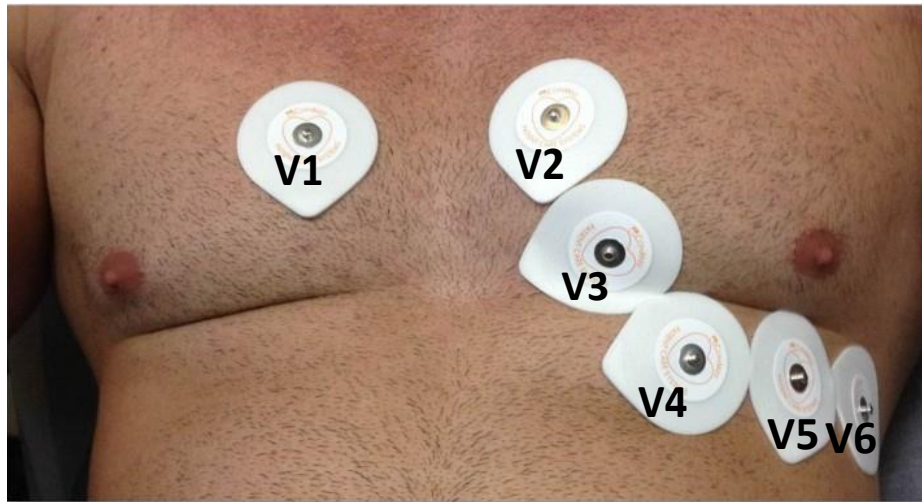
Premature Junctional Complex



Torsades de Pointes



V-LEADS ELECTRODE PLACEMENT

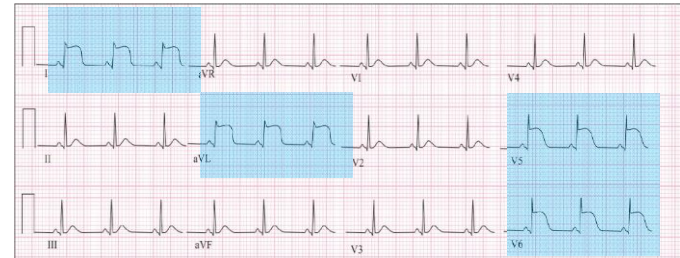


V1 – 4th Intercostal Space, Parasternal
V2 – 4th Intercostal Space, Parasternal
V4 – 5th Intercostal Space, Midclavicular Line
V3 – In a straight line between V2 and V4
V6 – 5th Intercostal Space, Midaxillary Line
V5 - In a straight line between V4 and V6

Inferior Wall MI



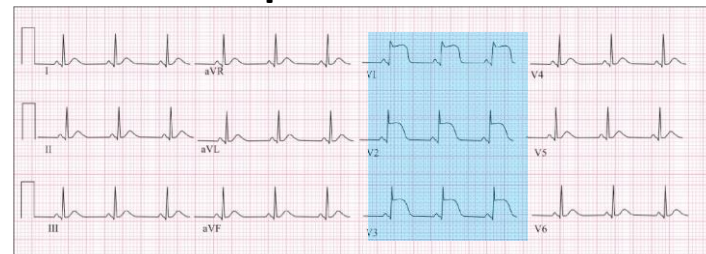
Lateral Wall MI



Anterior Wall MI



Septal Wall MI



Anteroseptal MI



Anterolateral MI

