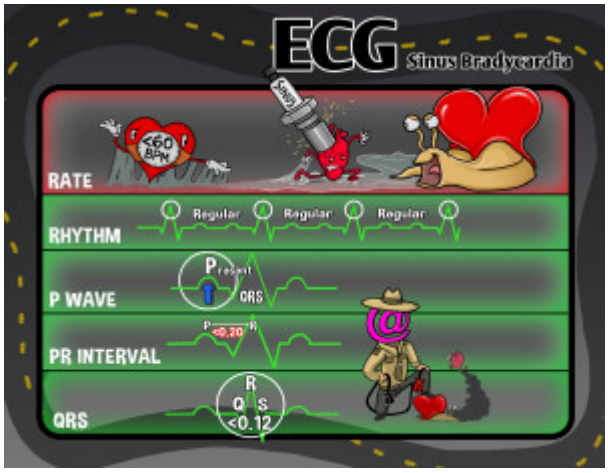
ECG: Sinus Bradycardia

Sinus bradycardia is characterized by a normal conduction pathway with the SA node firing at a regular rate of less than 60 bpm. The ECG will show one upright P wave before every QRS. The PR interval is between 0.12-0.20 seconds while the QRS interval is less than 0.12 seconds. Causes of sinus bradycardia include myocardial infarction, vagal stimulation, carotid massage, and hypoxia. Increased intracranial pressure, hypothermia, hypothyroidism, hypoglycemia, medications such as beta adrenergic blockers and calcium channel blockers may also lead to sinus bradycardia. To treat symptomatic sinus bradycardia, atropine may be administered to increase the heart rate. Sinus bradycardia may be a normal assessment finding in athletes.



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Rate

< 60 bpm
Less than (60) Second Heart-timer
The heart rate of an individual with sinus bradycardia is less than 60 bpm.

Rhythm

Regular
Regular rhythm
The SA node is the pacemaker in individuals with sinus bradycardia and fires at a regular rhythm.

P Wave

Present, Upright, Every QRS
Present with Up-arrow and before QRS
Like normal sinus rhythm, there is one upright P wave before every QRS in the individual with sinus bradycardia.

PR Interval

< 0.20 seconds
Less-than 0.20
Like normal sinus rhythm, the PR interval of individuals with sinus bradycardia is between 0.12 to 0.20 seconds, or for simplicity less than 0.20 seconds.

QRS Interval

< 0.12 seconds
Less-than 0.12
Like normal sinus rhythm, the QRS interval of individuals with sinus bradycardia is less than 0.12 seconds.

Treatment

Atropine
@-trooper
If the patient with symptomatic sinus bradycardia experiences symptoms, such as hypotension, weakness, shortness of breath, or confusion, atropine may be administered to increase heart rate. The anticholinergic drug increases the firing of the SA node. Serious cases may require transcutaneous pacing or a permanent pacemaker.