

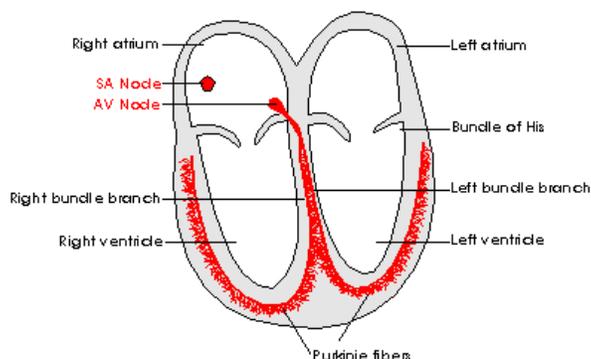


Atrioventricular Blocks (Blocks A-V)

The heart has an electrical system through which impulses travel causing the orderly contraction of heart muscle. There are uniquely different forms of heart blocks, with A-V Blocks being different from the Bundle Branch Blocks previously discussed in Rx #33. AV Blocks can be First Degree, Second Degree, or Third Degree depending on level of severity of the conduction delay.

Delays in conduction through the heart may be congenital (as in congenital lupus) or acquired. Common causes of acquired AV block are: coronary artery disease (CAD), medication toxicity, rheumatic heart disease, heart surgery, and aging of the conduction system. Also, extremely fit (athletic) hearts can show mild forms of block (first degree and Mobitz I) which is of little concern.

Heart blocks of all types are identified via an electrocardiogram (ECG). (See figure below.) A-V blocks are specifically identified via the measure of the P-R interval. The P-R interval is the time it takes for the electrical impulse to travel from the SA (sinoatrial) node where the impulse originates to the AV (atrioventricular) node. (See figure below.) A normal P-R interval is 0.12 to 0.20 seconds.



Prolongation of the PR interval of more than 0.20 seconds is called a *First Degree A-V Block*. There are two types of *Second Degree A-V Blocks*. In Mobitz Type I (also known as the Wenckebach Phenomenon) the P-R interval actually increases with each heart beat until one of the impulses completely fails to conduct to the ventricles. In Mobitz Type II the P-R interval remains constant, but with occasional missed/failed impulses.

(continued on reverse)

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Third Degree Heart Block occurs if all impulses from the AV node are blocked so that the atria and the ventricles beat independently of one another.

Stokes-Adams attack is a complication which may occur in Mobitz Type II Second Degree Heart Blocks & Third Degree Heart Blocks. It is syncope (fainting) due to a slow pulse in combination with the missed impulses. Pacemakers are often required when this combination exists.

Underwriting consideration absent other significant impairment:

First degree AV block:	
PR interval 0.20 to 0.29 seconds	Non-rated
PR interval 0.30 to 0.39 seconds	Class B ^{1,2}
PR interval 0.40 seconds and over	Class C ^{1,2}
¹ One table credit may be given if normal treadmill available or for 2 years of stability.	
² If an evaluation has been done, rate for cause only.	
Second degree AV block of Mobitz I (Wenckebach):	
Heart rate \geq 40, no symptoms (dizziness, chest pain, syncope)	Non-rated
Heart rate < 40 or symptomatic	Postpone for evaluation, then rate for cause only
Second degree AV block of Mobitz II and third degree AV block (complete heart block and AV dissociation)	Postpone for evaluation
Mobitz II and third degree AV block after evaluation and treatment:	
Resolved (as in medication toxicity)	Non-rated
Resolved after acute myocardial infarction (heart attack)	Rate for CAD
Congenital heart block or treated with pacemaker	Rate under pacemaker schedule Rx #20
Unresolved	Usually decline
History of cardiomyopathy, valve disease, congestive heart failure, congenital heart disease (other than congenital heart block) or complications	Decline
Stokes-Adams attacks, no pacemaker	Decline

To get an idea of how a client with Atrioventricular Blocks (A-V Blocks) would be viewed in the underwriting process, feel free to use the *Ask "Rx" pert underwriter* on the next page for an informal quote.

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