

ATRIOVENTRICULAR (HEART) BLOCKS ON THE ECG

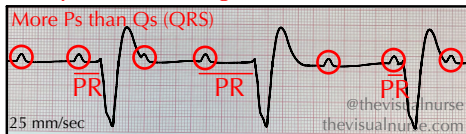
WHAT IS A HEART BLOCK?

- Occurs when an atrial impulse is **delayed or fails to reach** the ventricles entirely
- May be permanent or transient
- Classically 3 categories by severity
 - First, second, or third degree

ON THE ECG

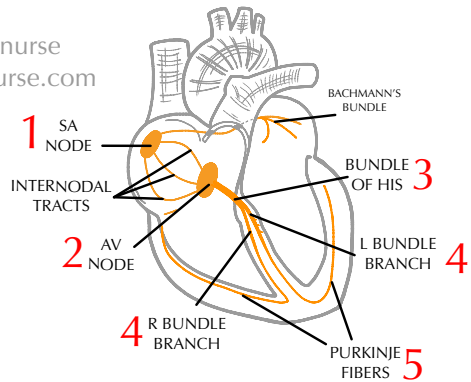
- Notice more P waves present than QRS
- Evaluate the PR interval for clues to relationship between atria and ventricles

Complete (third degree) heart block



CONDUCTION SYSTEM

Can occur many places along the conduction pathway including but not limited to intra-atrial, AV node (2), bundle of His (3), or bundle branches (4)

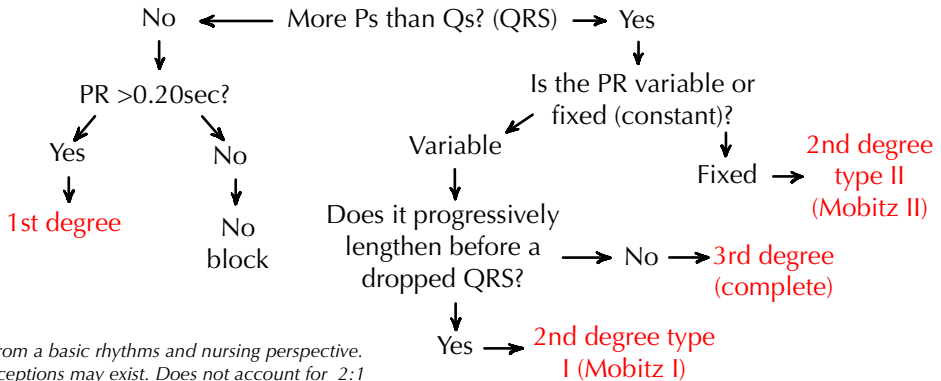


Illustrative purposes only

1st degree: may be at level of AV node, His-purkinje, or intra-atrial; **2nd degree type I:** commonly at the AV node; **2nd degree type II:** commonly at or below His-purkinje system; **3rd degree:** may be above or below His bifurcation.

HEART BLOCK DECISION TREE

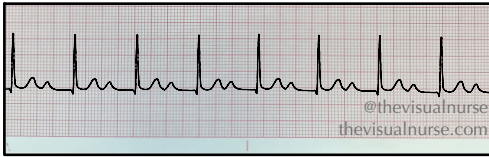
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*From a basic rhythms and nursing perspective. Exceptions may exist. Does not account for 2:1 AV block or high grade AV block.

ATRIOVENTRICULAR (HEART) BLOCKS ON THE ECG

First degree AV block (delay)



Second degree type I AV block / Mobitz I



Second degree type II AV block / Mobitz II



2:1 AV block



Complete heart block with narrow QRS



Complete heart block with wide QRS



ECG FEATURES

- One P wave per QRS
- PR consistent and >0.20 seconds
- PR intervals up to 0.60 seconds (600 ms) to 1 second have been documented

- More P waves than QRS
- Progressive lengthening of PR before "dropped QRS"
- "Longer, longer, drop! Then you have a Wenckebach"

- More P waves than QRS
- Underlying PR is constant before "dropped QRS"
- "If some Ps don't get through, you may have a Mobitz II"

- More P waves than QRS
- Underlying PR is constant; every other beat is dropped
- Not enough information to determine type I vs. type II

- More P waves than QRS
- PR variable and changing
- Not a true PR since no communication
- Narrow QRS suggests junctional escape

- More P waves than QRS
- PR variable and changing
- Not a true PR since no communication
- Wide QRS suggests ventricular escape

From a basic rhythms and nursing perspective. Exceptions may exist in the real world.

ATRIOVENTRICULAR (HEART) BLOCKS ON THE ECG

First degree AV block (delay)



Second degree type I AV block / Mobitz I



Second degree type II AV block / Mobitz II



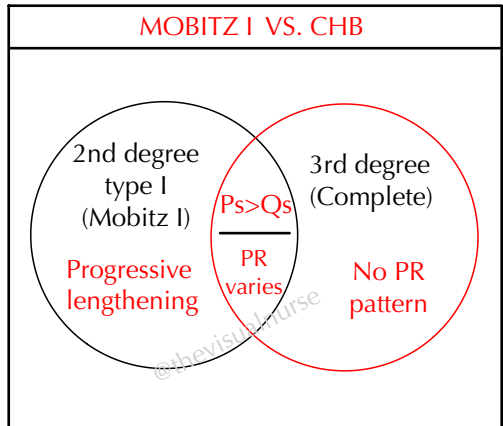
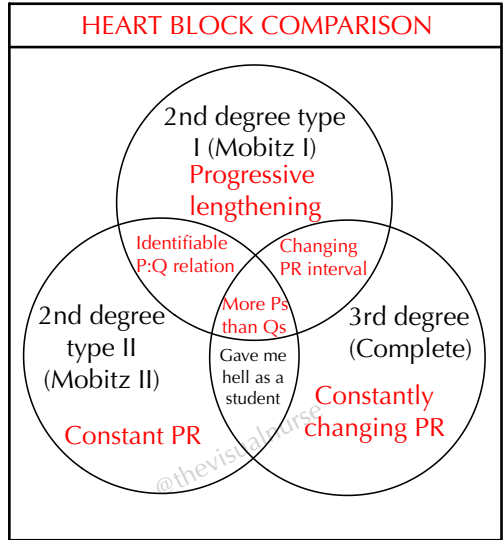
2:1 AV block



Complete heart block with narrow QRS

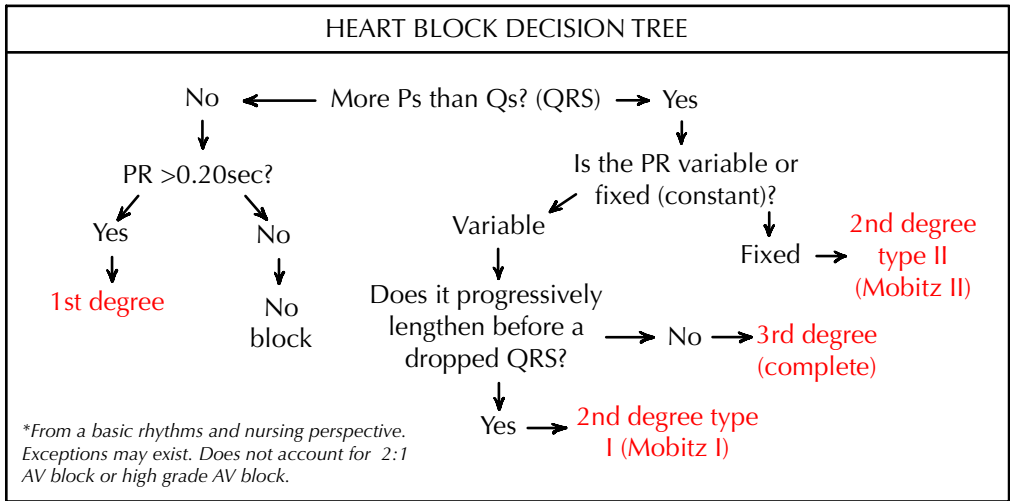


Complete heart block with wide QRS



From a basic rhythms and nursing perspective. Exceptions may exist in the real world.

ATRIOVENTRICULAR (HEART) BLOCKS ON THE ECG



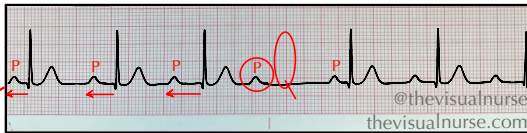
FIRST DEGREE AV DELAY



May be AV node, His-purkinje, or intra-atrial

From a basic rhythms and nursing perspective. Exceptions may exist in the real world.

SECOND DEGREE TYPE I AV BLOCK



Commonly at AV node

SECOND DEGREE TYPE II AV BLOCK



Commonly His-purkinje

THIRD DEGREE (COMPLETE) AV BLOCK



May be above or below His bifurcation

