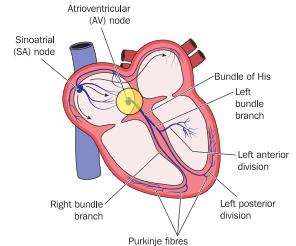




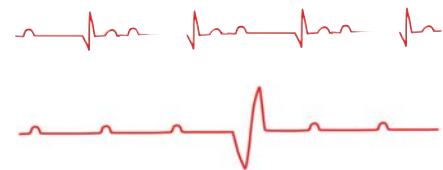
## Cardiac pacemakers in medicine

Pacemakers and heart block

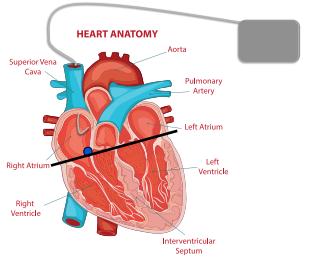


**Heart block**

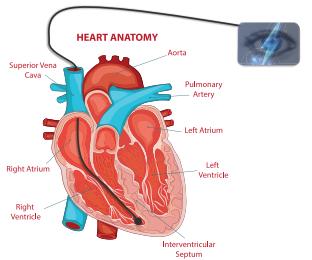
- A heart rate that is....**
- too slow
  - pauses



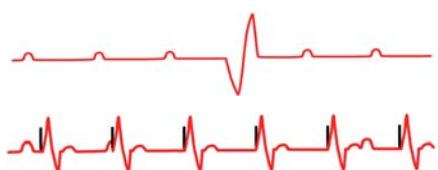
**Heart block**



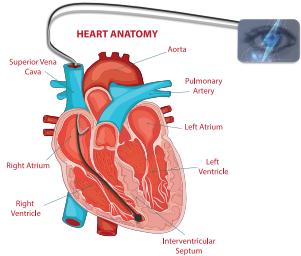
**Single-chamber pacemaker (atrial)**



**Single-chamber pacemaker (ventricular)**



**Single-chamber ventricular pacemaker**

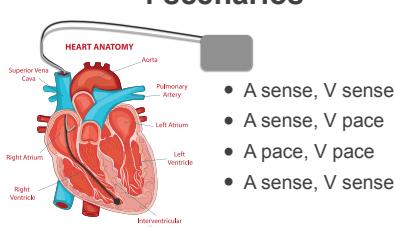


## Dual-chamber pacemaker



## Beautiful P waves (info)

## 4 scenarios



- A sense, V sense
- A sense, V pace
- A pace, V pace
- A sense, V sense

## Takeaway message



P waves provide great information.  
If they are present we can use them,  
and a dual-chamber pacemaker is  
the best way to do this, especially in  
heart block!

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