



Pacemakers and the ECG

Pacing spikes

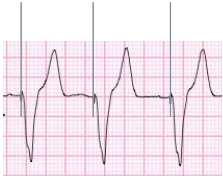
What are pacing spikes?



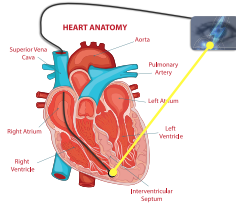
Pacing spikes are vertical signals on an ECG that are produced by the pacemaker's output pulse.



Unipolar pacing spikes



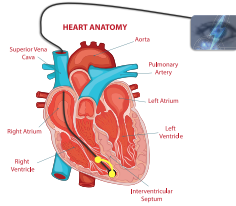
Unipolar pacing circuit



Bipolar pacing spikes



Bipolar pacing circuit

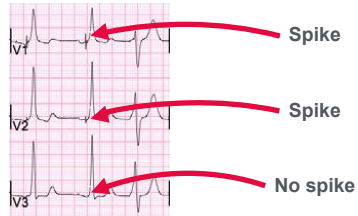


Common misconceptions



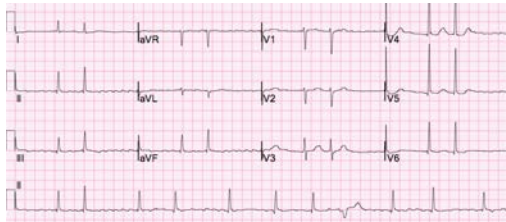
- No spikes = no pacing?
- No spikes = pacemaker malfunction?

V1-V3 from ECG



No spikes = bipolar?

VVI @ 50 bpm



No spikes = sensing only?

Takeaway message



No pacing spikes does not mean that the pacemaker is **not pacing** or **faulty**.
