How do pacemakers work?
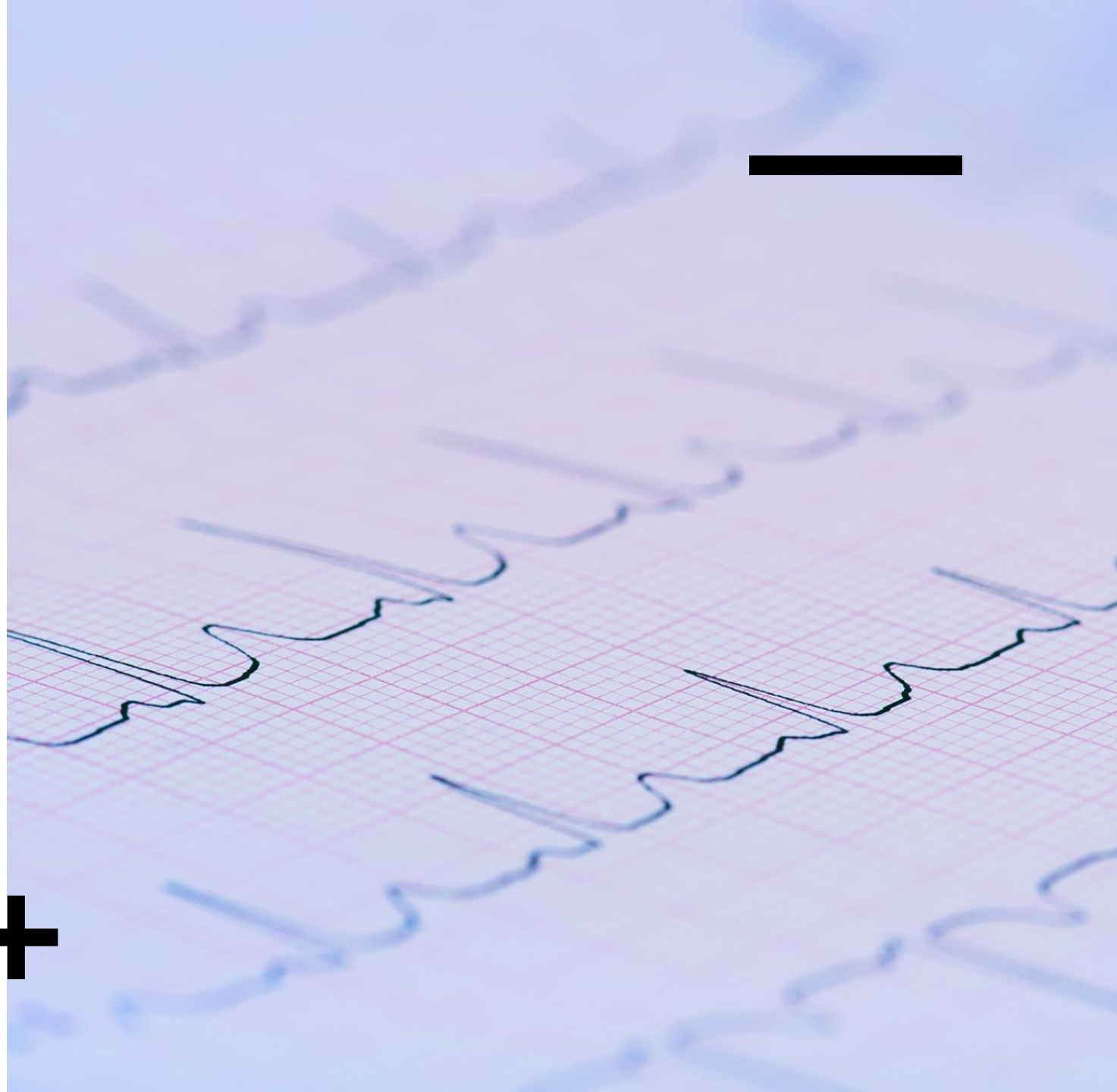
By Jhan Oriach

Different types of pacemakers

1st Position	2nd Position	3rd Position	4th Position	5th Position
Chamber Paced	Chamber Sensed	Response to Sensing	Rate Modulation	Multisite Pacing
A	A	T	O	O
V	V	I	R	A
D	D	D		V
	O	O		D

A = atrium, D = dual (both chambers), I = inhibited, O = none, R = rate adaptive, T = triggered, V = ventricle.

– Modern pacemakers have multiple functions, but the two simplest modes are VVI and AAI

– Most common mode is DDD

Programming pacemakers

- Pacemakers are programmed by an electrophysiology tech or cardiologist

- Pacemakers can be temporarily "reprogrammed" by placing a magnet over it

- Programming a pacemaker may be fairly simple, but it would require the use of many loops and recursions

- Some pacemakers have remote remote monitoring capabilities, which make them vulnerable to malicious tinkering