Pacemakers as diagnostic tools

Battery life

Battery

If a patient is pacemaker dependent and the battery runs out...

Poor outcome!

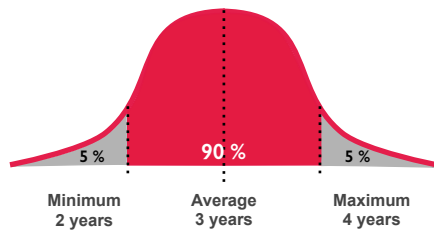---

Pacemaker battery

Variables

- Manufacturer
- Impedance
- Percentage pacing
- Energy of the output pulse

Battery diagnostics

Battery longevity

5 %	90 %	5 %
Minimum 2 years	Average 3 years	Maximum 4 years

Shorthand	Battery indicator	Device behavior	Next step
BOS	Beginning of service	Normal device behavior	Normal follow-up schedule
RRT/ERI	Recommended replacement time / Elective replacement indicator	Some functionality may be lost (e.g. rate response)	Schedule replacement
EOS	End of service	Single-chamber operation DDD → VVI	Immediate replacement

Longevity Indicators

Magnet rate	Battery status
100 bpm	Good
90 bpm	Elective replacement near
85 bpm	ERI
<85 bpm	EOS

Example magnet rate table

Takeaway message

A patient's next appointment is booked no further in the future than **half the minimum** battery life.