

Polar Heart Rate Monitors and Implantable Devices

BACKGROUND INFORMATION

Polar heart rate monitors are commonly used to monitor heart rate during normal daily activity or during aerobic activities such as running and cycling.

This article provides a brief overview of the Polar heart rate monitor components and describes the potential interaction between the monitor and Boston Scientific implantable pacemakers and defibrillators. It also provides suggestions to minimize potential interactions.

ICD: Implantable Cardioverter
Defibrillator

CRT-D: Cardiac Resynchronization
Therapy Defibrillator

CRT-P: Cardiac Resynchronization
Therapy Pacemaker

CRM PRODUCTS REFERENCED*

All ICDs, CRT-Ds, CRT-Ps and Pacing
Systems

*Products referenced herein may not be approved in all
geographies. For comprehensive information on device
operation, reference the appropriate product labeling.

CRM CONTACT INFORMATION

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Technical Services – Europe
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Polar wireless heart rate monitors are commercially available, non-prescription devices designed to monitor intrinsic heart rate. They are comprised of a transmitter (chest strap) and receiver (wristwatch). The chest strap, which includes two electrodes housed within an elastic band, is designed to detect each heartbeat and send a corresponding low-frequency electromagnetic signal directly to the wristwatch. The wristwatch then displays the current heart rate.

Potential interaction

Occasionally, a pacemaker or defibrillator patient may want to wear a heart rate monitor so that they can monitor their heart rate during exercise. Because the signals generated by the chest strap transmitter are very low energy, these heart rate monitors should not interfere with the functionality of Boston Scientific implantable pulse generators.

It is possible, however, that the heart rate monitor may report an inaccurate heart rate when the pulse generator delivers pacing pulses (stimuli). This can happen if the monitor detects pacing stimuli in addition to heart activity. If the pulse generator is not delivering pacing stimuli, the heart rate monitor should function normally.

Minimizing potential interference

If an implanted pacemaker or defibrillator is suspected of interfering with the use of Polar heart rate monitors, Boston Scientific recommends that the electrodes within the heart rate monitor chest strap be placed on the side of the torso *opposite* the implant site.

NOTE: Boston Scientific has not evaluated wireless heart rate monitors made by manufacturers other than Polar. For questions regarding other brands, please contact Boston Scientific CRM Technical Services.