



# Pacemaker optimization

Rate response and sensor rate

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- Heart rate increases
- Proportional to exertion



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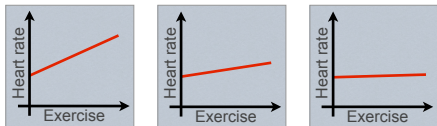
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**Chronotropic incompetence**

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Since a pacemaker can dictate heart rate, a pacemaker could help. If only it could detect exertion...

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Accelerometer 

Respiratory rate 

Contractility 

**Types of sensors**

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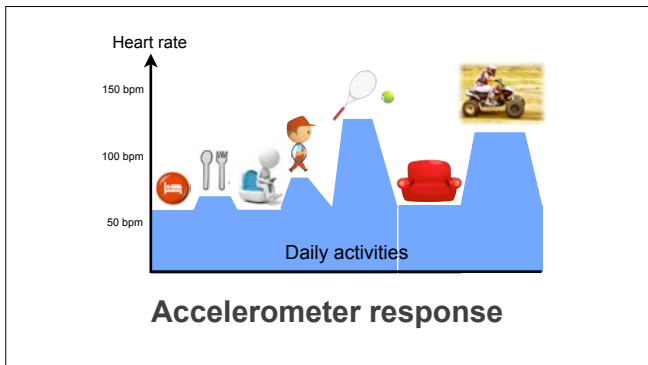
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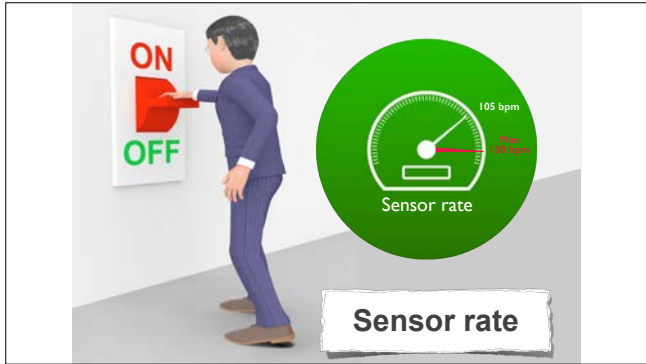
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### Takeaway message



Rate response uses a **sensor** to detect when a patient is active and increases the heart rate accordingly.

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