



# Pacemaker optimization

Base rate and lower rate limit

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## Base rate



- An adjustable setting
- The slowest heart rate that the pacemaker will allow

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- Programmed / described in bpm
- 60 bpm does not actually mean 60 beats in 1 minute
- Computers are too literal...

**Computers are not intelligent**

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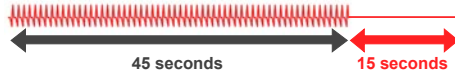
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 60 beats per minute



<Faint> hit floor </faint>

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### Lower rate limit



- Uses bpm to calculate a **lower rate limit**
- Beat to beat timer
- $60 \text{ bpm} = 60/60 = 1 \text{ bps}$
- or 1 beat every 1000ms

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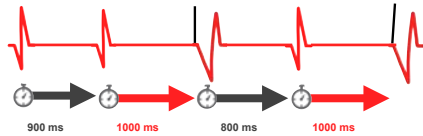
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### Lower rate limit 1000 ms



**No pauses**

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### Base rate can be adjusted to:



- Decrease percentage pacing
- Increase percentage pacing
- Increase or decrease perfusion

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### Takeaway message



A pacemaker will not allow your heart rate to drop below the programmed base rate.



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