Setting your own heart-rate thresholds for pacing

Why a threshold built from your own data beats an age-predicted formula

Prepared 2026 · Energy Lab R&D analysis · descriptive, per-user normalized · not medical advice

COMMUNITY QUESTION - GROUP CASE

A question that came across the Energy Lab community: how to set personalized resting and exertion heart-rate thresholds for pacing apps when the heart could increase for reasons other than metabolic effort.

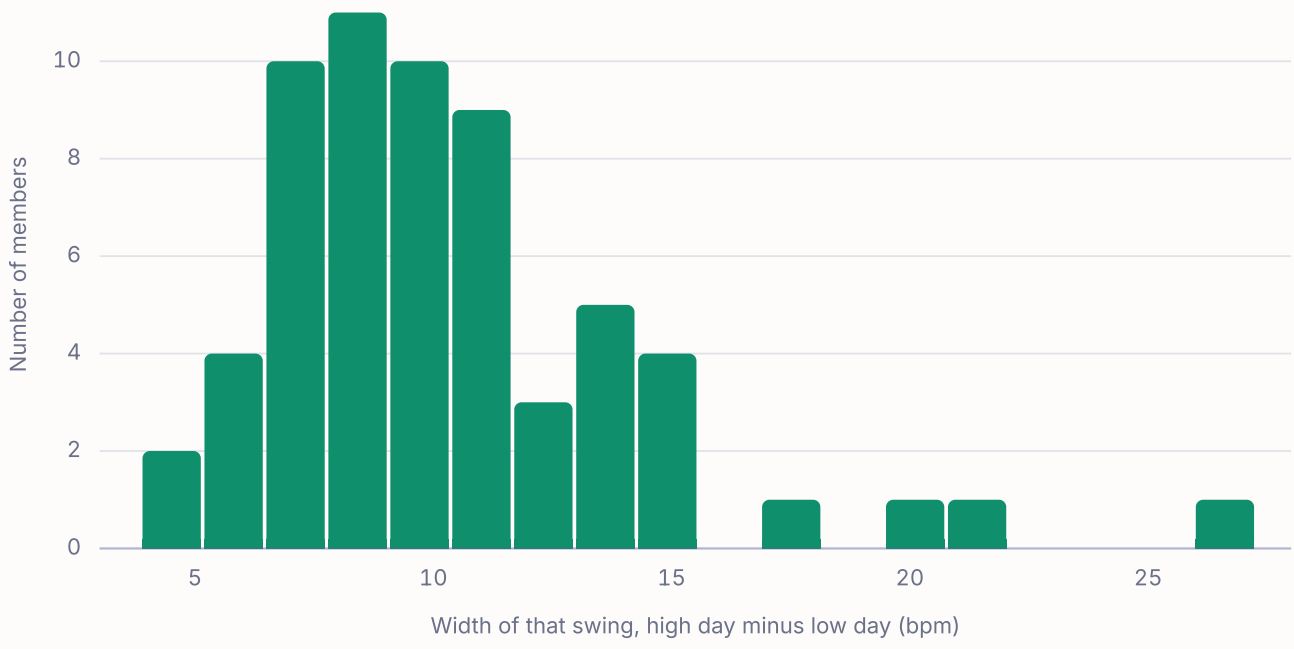
THE SHORT VERSION

If you only have energy for one page

There isn't a single number that works for everyone, and an age-predicted formula assumes a heart-rate-to-effort relationship ELC conditions might break. The steadier path is building both thresholds from your own data: check your resting heart rate every day for 2-3 weeks, at the same time and under the same conditions, ignore at least two most unusual days - single highest and single lowest reading. Use the range covered by the rest of your readings as your guide for personal limits. And the most important as always - use the delayed 1-3 day response as the real test of whether this ceiling is right. None of this is medical advice — bring any specific threshold changes to your own clinician, especially if you're on a heart-rate-affecting medication.

How much resting HR swing between quiet and busier days varies across community members

Example: a member whose resting HR is usually 65 bpm on quiet days and 75 bpm on busier days has a swing width of 10 bpm on this chart — not a resting HR of 10.



Based on 62 community members with at least 3 weeks of data (as of 2026-07-26). Median swing: 9.6 bpm.

Read whichever parts you have energy for, and skip the rest.

Why one number doesn't fit

A percent-of-age-predicted-max-HR ceiling, and a fixed resting number set from a year of averages, both assume something ELC conditions might break.

- In ELC patients with orthostatic intolerance or POTS, the heart can race not from effort but to keep blood reaching the brain - when blood pools in the legs, vessels don't tighten enough, or the fight-or-flight system is overactive. Heart rate and effort come apart both ways: the heart can race during little activity (orthostatic tachycardia) or fail to rise enough at peak effort (chronotropic incompetence). Any formula assuming a faster heart means harder work - the MET number or the age-predicted maximum-heart-rate formula - breaks down whenever heart rate is driven by something other than exertion.
- The popular resting-HR-plus-15-bpm shortcut used in some pacing communities is yet to be validated in ME/CFS or other ELC conditions – so it might be used as a rough starting point at most.
- A single ceiling can't fit everyone anyway: in our own community, 8 out of 10 members have their own aerobic ceiling (max MET) between 8.33 and 12.84 — a wide spread from person to person. No single percentage from any formula can match everyone at once.

Building the resting threshold from a trend, not one reading

The median member's resting heart rate ranges across 9.6 bpm between a quiet day and a busier one. A single set number set, like the 70 bpm many of us start with, is measuring a moving target.

- Check your resting heart rate every day for 2-3 weeks. Ignore your one or two most unusual days — your single highest reading and your single lowest reading. Use the range covered by the rest of your readings as your guide, not one fixed number.
- Expect it to shift with illness, activity, stress, or just a different week - that's how the range moving.

Mind the way your own number might be distorted

Two opposite distortions run through this community - a POTS-type pattern that over-reads effort, and an ME/CFS-type pattern that under-reads it - and a passive daily reading can't tell them apart on its own.

A lying-to-standing heart-rate check - the kind of orthostatic test measuring your heart rate lying down, then standing, can reveal the direction (like a NASA lean test). We're currently working on a way for our community to do a version of this test at home using their own device. Stay tuned for the guide!

A jump of 30 or more beats per minute on standing might be a sign of the compensatory pattern POTS is defined by (Mathias 2011; Chopra 2026) — worth a conversation with your clinician, not just an app setting.

Judging the threshold by what happens a day or two later

Survey data indicate people with ME/CFS report that pacing with a heart-rate monitor helps them understand and manage their PEM (Clague-Baker et al., 2023, Work — an international survey, n=488). Whichever numbers you land on, the more reliable test isn't how the reading looks in the moment — it's what your body can still do one to three days after a slightly bigger effort, repeated more than once.

- A single "it held" is one data point, not proof. The same test holding safely several times over a few weeks is what suggests a threshold is tuned reasonably.
- A delayed flare after a small step-up is a signal to lower the ceiling; several weeks without one is a signal it might have room to move — then watch again.

What's worth keeping an eye on

It can help to keep an eye on a few things over time — your resting heart rate, how your heart rate responds when you stand, and how you feel in the 1–3 days after different activities — to get a sense of how your body responds and what tends to precede a harder patch. This is for your own understanding, not a fixed rule, and it's worth going over with a clinician. One limitation: if your heart rate doesn't seem to match how hard you're actually working — racing when you're resting, or staying flat when you're pushing — it may not be a reliable guide for you.

References

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4. Bateman Horne Center - orthostatic (NASA Lean) testing & energy-management resources. — https://batemanhornecenter.org/
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