

# Is Fitbit's heart rate monitor accurate?

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Fitbit is undeniably one of the most popular health and fitness watch brands today with millions of users worldwide. Fitbit's smart wearables offer many in-depth features, but you may wonder whether you can really trust its heart rate monitor.

How accurate is Fitbit's heart rate monitor, and should you use it for reliable results?

## How Fitbit tracks your heart rate



There are many bio-metrics that Fitbit can track, including:

1. Number of steps taken
2. Calories burned
3. Oxygen saturation
4. Changes in skin temperature
5. heart rate changes

Measuring each of these factors involves different types of monitoring. For example, by combining the number of steps you've taken with your basal metabolic rate (BMR), your Fitbit device can calculate how many calories you've burned.

Heart rate variability is measured by Fitbit using a specialized sensor, called an optical heart rate sensor. According to Fitbit's help page, this sensor *'flashes a green LED multiple times per second and uses light-sensitive photodiodes to detect these changes in the capillaries above your wrist'*. The sensor also uses infrared light to determine when the device is on your wrist so it doesn't accidentally read your heart rate when you're not

wearing it.

But movement is also important here, as the device will monitor your resting heart rate, including monitoring your heart rate while sleeping and while awake. The Fitbit device must track how much you move to determine whether you are awake or asleep so it can calculate your resting heart rate.

Even with this technology, can Fitbit misread your heart rate? Let's explore the accuracy of Fitbit's heart rate measurement.

## Can Fitbit track heart rate accurately?



In short, Fitbit cannot measure heart rate 100% perfectly. This is something that is difficult for any smart watch to achieve. But how accurately can your Fitbit track your heart rate?

On the Fitbit website it says the following:

*Fitbit has developed products and services to track certain health information in the most accurate way possible. The accuracy of Fitbit products and services is not intended to be comparable to that of medical devices or scientific measurement equipment.*

Keep the above quote in mind when you use Fitbit to track your heart rate variability. While Fitbit strives for high accuracy when designing its smartwatch heart monitors, these devices may not be able to perform as precisely as specialized scientific instruments.

Therefore, it is much safer to consult a doctor if you want a highly accurate heart rate reading, as Fitbit watches are not designed to be a substitute for medical devices. Fitbit also states on its help page that you should also consult your doctor if.

1. You have a medical condition or heart disease.
2. You are taking photosensitizing medication.
3. You have epilepsy or are sensitive to light.
4. You have reduced circulation or bruise easily.
5. You have a musculoskeletal disorder (tendonitis, carpal tunnel syndrome, etc.).

But this doesn't mean you can't use your Fitbit to see what your heart rate variability looks like. According to a JMIR research project conducted in March 2022, the Fitbit Charge 4 has an average error percentage of less than 10%. In an Annals of Internal Medicine study conducted in April 2017, it was found that devices like Fitbit are accurate enough to rely on for heart rate readings.

Depending on the Fitbit model you are using, heart rate accuracy may vary. An older Fitbit model may have lower accuracy, but as mentioned before, even the 2017 study concluded that the Fitbit is accurate enough to be trusted. So you shouldn't worry too much about having the latest model or not.

Fitbit has received a lot of criticism for the accuracy of its heart rate monitoring. On Fitbit's community forum, some customers have complained about their heart rate readings being inconsistent, with many reporting that the readings were especially out of sync during exercise. However, many users confirm that the Fitbit's heart rate accuracy when walking is noticeably better.

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