

# How accurate is Fitbit's sleep tracking?

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Sleep is one of the activities we expect smartwatches and fitness trackers to track. This is especially true of Fitbit products, which advertise features like 'sleep scores' and 'smart wake'. But how does Fitbit's sleep tracking feature actually work, and is it reliable? Join TipsMake.com.com to find the answer through the following article!

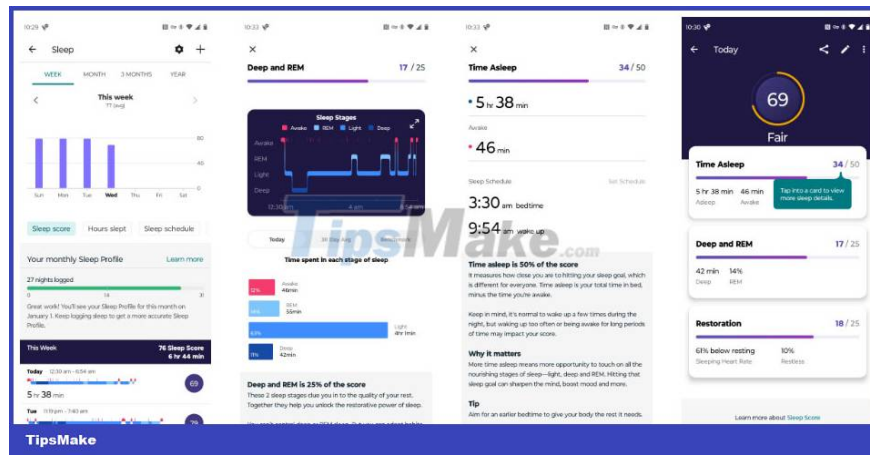
## How Fitbit sleep tracking works

Fitbit wearables, including smartwatches like the Google Pixel Watch that use Fitbit technology, detect information needed to track sleep using a multitude of sensors. According to Fitbit, these include a multi-path optical heart rate monitor, multi-function electrical sensors (ECG and EDA), gyroscope, altimeter, 3-axis accelerometer, temperature sensor, sensor ambient light and GPS receiver (with GLONASS).

Together, these sensors can track movement and direction, changes in height, distance from your wrist, blood oxygen levels (large changes can be a sign of hypotension), breathing during sleep, heart rate per minute, body temperature and your skin's resistance to small amounts of electrical energy (a method called bioimpedance, used to estimate body fat and muscles). Honestly, Fitbit devices pack a lot of technology into making sleep tracking work effectively.

Early Fitbit models determined whether the wearer was sleeping by measuring movement. Newer devices also track your heart rate to provide deeper insight into the stages of sleep, such as light, deep and REM sleep (when we dream). All newer Fitbits use this information to create a "sleep score" - as long as you have a Fitbit Premium subscription.

## How to see your Fitbit sleep score



Fitbit's sleep score ranges from 1 to 100 based on the duration and quality of your sleep. Sleep score appears as soon as you open the Fitbit app on your phone. You can tap on the sleep score to see more details, and Fitbit gives you multiple layers of information. There are many ways to use Fitbit's sleep profiles to help you sleep better.

In addition to the amount of time you sleep, the horizontal graph shows the nuances of your rest. The red part is when you are awake. Light blue represents REM sleep, slightly darker blue represents light sleep, and the darkest blue represents deep sleep. Fitbit doesn't always use the same colors across devices, so don't be confused if your Google Pixel Watch uses purple shades instead of blue.

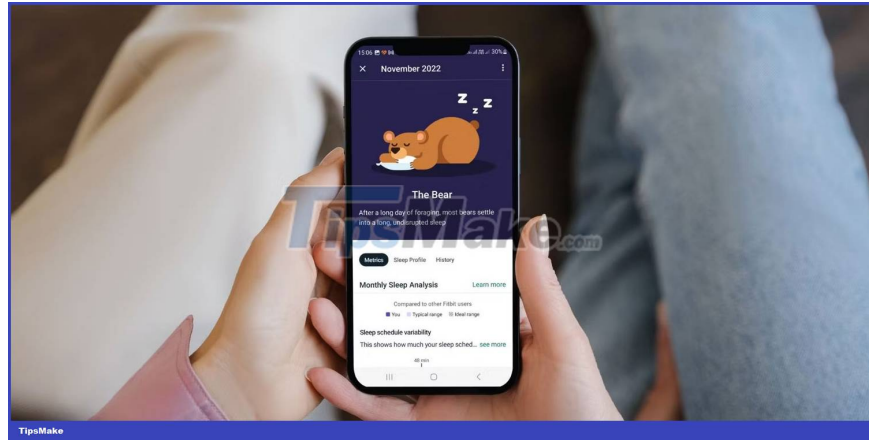
50% of the score is determined by the length of your sleep, 25% is based on the time you spend in deep sleep or REM sleep, and 25% is based on how peaceful or agitated you are during sleep.

## What affects Fitbit accuracy?

As something you wear on your wrist, your Fitbit needs to fit snugly to deliver reliable results. You need to wear the device consistently night after night - for at least 14 days - to get truly valuable feedback. You should also make sure your device is charged enough to last overnight.

Some factors are beyond your control. Research by the Sleep Research Society shows that the optical green light on the back of many fitness trackers makes it more difficult to measure heart rate in people with darker skin tones.

## Have third parties verified Fitbit's accuracy?



Wearable devices such as those offered by Fitbit have become popular among sleep researchers due to their ease of use and low cost.

A 2019 study in the *Journal of Medical Internet Research* analyzed several previous articles related to Fitbit to see what researchers had to say about the product's feasibility for academic research. The results show that Fitbit devices provide useful trend data, but the results are not accurate enough to replace polysomnography.

Polysomnography pulls in more data by tracking your brain waves, breathing, and eye movements, in addition to the type of information Fitbit can collect. Even if you choose a smart mattress instead of a sleep tracker, you won't get as much data.

## Compare Fitbit to other sleep trackers

It's difficult to directly compare the results of fitness trackers, even if you own multiple devices. Sure, you can wear multiple devices at the same time, but you can only have one device in the optimal position on your wrist at a time. That makes it impossible to compare different sleep tracking devices accurately.

ZDNet did this type of head-to-head comparison between the Fitbit Inspire 2 and the Apple Watch Series 7, finding slight differences in the results. This type of anecdotal observation doesn't show whether one is more accurate than the other; but there are notable differences.

A previous 2020 study published by the National Library of Medicine confirmed these results, noting that many consumer sleep trackers display inconsistent information about sleep stages. sleep and concluded that no device can replace laboratory sleep analysis. Another 2020 study in *Nature and Science of Sleep*, published by Dovepress, reported similar observations:

In general, commercial sleep technologies show lower error and variance values ??when quantifying the sleep/wake state compared to the duration of sleep organization. However, these findings suggest that there is a very high degree of variability in the accuracy of commercial sleep technologies.

Different outputs will give you different recommendations on which fitness tracker is best. Warable and Verywell Health list Fitbit devices as the best tracker picks of 2023. CNN also lists Fitbit, among other options, as one of the best sleep trackers of 2024 However, the Sleep Foundation and Wirecutter do not list the name Fitbit at all.

The main difference between all of them has more to do with comfort and features than the reliability of the results. In short, Fitbit's sleep accuracy is no better or worse than many competing products.

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