



- [Garmin Support Center](#)
- Article
- [Garmin Support Center](#)

Select your product to confirm this information applies to you

Enter a Product Name or Serial Number

Enter Product Name or Serial Number 1 or more characters for results.

Optical Heart Rate Sensor vs. Heart Rate Chest Strap

Garmin offers two different ways to measure your heart rate: the optical sensor from a watch, or by wearing a heart rate chest strap.

How Does Each Method Work?

Each method detects and records your heart rate differently. The below information will help you better understand how these methods work

Optical Heart Rate

Optical heart rate sensors work by using lights that can measure small changes in blood volume in the capillary layer just below the epidermis (outermost of the three layers that make up the skin) as blood flows through the wrist area. This information is stored for either all-day heart rate analysis or recorded activity analysis on the watch.



Advantages of Using a Built-in Optical Heart Rate Sensor

- Convenient for all day monitoring
- Does not require an additional accessory
- Can provide Advanced Sleep Monitoring on compatible watches; see [What is Advanced Sleep Monitoring in Garmin Connect?](#) for more information

Chest Strap

A chest strap features a module and contact patches that can detect and measure your pulse via electric signals emitted by your heart. This information is then transmitted to a connected device that records the data during an activity. For more information on available Garmin® heart rate monitor straps, [click here](#).



Advantages of Using a Chest Strap Heart Rate Monitor

- Can give greater accuracy in activities with lots of motion
- Compatible straps can provide additional Running Dynamics data to compatible watches; see [Garmin Watches That Support Running Dynamics](#) for more information
- Compatible straps can provide compatible watches with heart rate data for activities where wearing a watch is not possible or the watch does not support optical heart rate for swimming activities; see [How Does the Store and Forward Feature on the HRM-Pro/Pro Plus/Swim/Tri Strap Work?](#) for more information

Related

- [When Does a Chest Strap Provide Heart Rate Data to My Watch?](#)
- [Garmin Watch Optical Heart Rate Accuracy Tips](#)

Was this page helpful?

- ☐ Yes
- ☐ Somewhat
- ☐ No

[Contact Us for More Help](#)

United States

[Site Map](#)

[Terms of Use](#)

[Privacy](#)

[Security](#)

[Digital Accessibility](#)

© Garmin Ltd. or its subsidiaries. All rights reserved.