QUICK GUIDES

SPO2
BLOOD OXYGEN

SpO2 Blood Oxygen

- Fundamentals of Oxygen
- Estimating Blood Oxygen
- SpO2 Estimation with Helo Wearable Devices

SpO2 Blood Oxygen

The Importance of Physical Activity

Oxygen is an element critical for the chemical reactions that most complex organisms require to maintain life.

100%
↑
95%

In humans, blood oxygen saturation levels are typically 95 to 100 percent.

A saturation below 90 percent is hypoxemia and saturation below 80 percent is life-threatening.

Given the critical importance of oxygen to maintaining life, a convenient and accurate method of measuring oxygen saturation is not only useful but also potentially lifesaving.

SpO2 Blood Oxygen

Estimating Blood Oxygen

- A blood-oxygen saturation reading is the percentage of hemoglobin molecules in the blood.
- When measured by pulse oximetry, the reading is an estimate and is designated SpO2.
- Pulse oximetry uses light and a photodetector to estimate oxygen based on hemoglobin in the bloodstream.
- Deoxygenated hemoglobin absorbs red light and allows infrared to pass through it, while oxygenated does just the opposite. This differing behavior enables the measurement.

SpO2 Blood Oxygen

SpO2 Estimation with Helo Wearable Devices

- Photoplethysmography (PPG) uses optical sensors to conveniently measure volume changes in blood and is widely used in pulse oximetry.
- Modern technology means these sensors are small enough to be built into wearable devices, making them suitable and convenient for consumer use.
- Helo wearable devices are equipped with PPG functionality which can estimate SpO2.

SpO2 Blood Oxygen

SpO2 Estimation with Helo Wearable Devices

- The BioSense health band and LifeWatch Generation 2 from Helo are equipped with a patented, clinical-grade fingertip sensor for highly accurate, on-demand readings of SpO2, in addition to regular monitoring.
- This gives device users highly useful insights into their blood oxygen levels so they can take steps to address any concerns if necessary.
- PPG is an effective, accurate method for in-home monitoring, including pulse oximetry. Estimating blood saturation is just one of many personal health metrics Helo wearable devices provide users.

Thank you!

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