

APM SpO₂ Sensor Supplying for “COVID Home Care” of Korean Government (KDCA)

Q. What is oxygen saturation (SpO₂)?

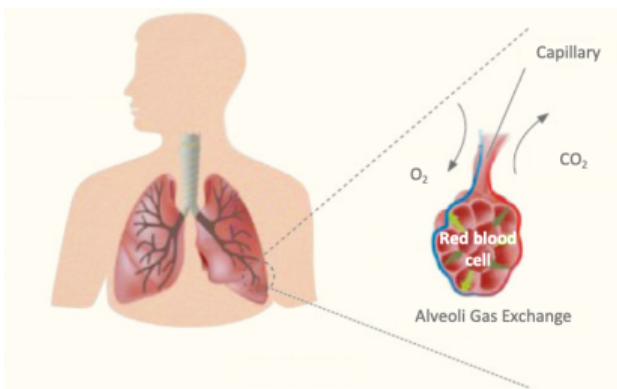


Oxygen absorbed through the lungs binds to hemoglobin included in the red blood cells and moves throughout the body. There is a red blood cell in the artery that sends blood from the heart to the whole body. SpO₂ is an optical measurement of how many percent of hemoglobin contained in red blood cells are combined with oxygen (oxygen saturation) through the skin.

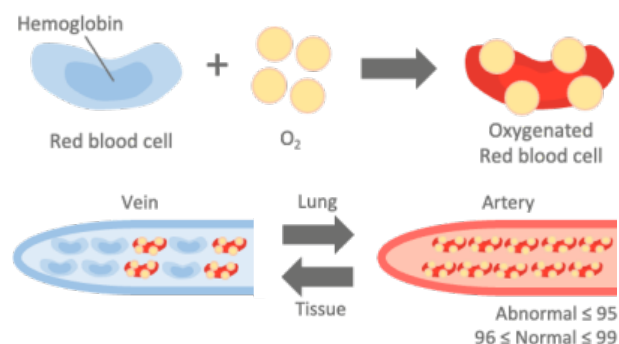
Q. How can oxygen be transported throughout the body?



Oxygen in the air is transferred through breathing to the alveoli with a structure in which small balloons are gathered. These oxygen binds to hemoglobin and moves throughout the body. Hemoglobin contains iron (Fe) and becomes bright red when oxygen is bonded to it. Oxygen binds to about 96 to 99 percent, and its ratio is called arterial blood oxygen saturation (SaO₂). Measurement of light absorption through the skin with pulse oxymeters is SpO₂, which represents almost the same level as SaO₂.



$$\text{Arterial Oxygen Saturation (SaO}_2\text{, saturation, \%)} = \frac{\text{Oxygen-bound Hemoglobin Amount}}{\text{Total Hemoglobin Amount}}$$



Pulse Oximetry with APM Optic Sensors