



## What is Oxygen Saturation?

Oxygen saturation is a measurement of how much oxygen the blood is carrying as a percentage of the maximum capacity. The [pulse oximeter](#) calculates this percentage using algorithms and its modern day micro-processor.

Hemoglobin molecules are a protein in the blood that carries oxygen from the lungs to the rest of the body's tissues. Each hemoglobin has the capacity of carrying four oxygen molecules. Not all hemoglobin molecules will carry four oxygen molecules when they depart the lungs in the blood stream and that is what a pulse oximeter will help determine. Let's assume that 970 oxygen molecules have attached to 1000 hemoglobin molecules. With a little math, we see the following;  $(970 / 1000) \times 100 = 97\%$ . In this case, the pulse oximeter would display 97% SPO<sub>2</sub>.

The [pulse oximeter](#) does however need strong arterial blood activity to produce an accurate reading. To help obtain a strong signal from the finger, a pulse bar or chart line is displayed by the [pulse oximeter](#). The patient can use that signal to best position the device and in turn maximize its output.