

CO-oximeter

A **CO-oximeter** is a device for detecting hypoxia, a medical condition relating to oxygen deficiency at tissue level.

The device measures absorption at several wavelengths to distinguish oxyhemoglobin from carboxyhemoglobin and determine the oxyhemoglobin saturation: the percentage of oxygenated Hb compared to the total amount of hemoglobin (Hb), including carboxy-Hb, met-Hb, oxy-Hb, and reduced Hb. When a patient presents with carbon monoxide poisoning (CO), the CO-oximeter will detect this Hb and will report the oxyhemoglobin saturation as markedly reduced.

Measurement

Traditionally, this measurement is made from arterial blood processed in a blood gas analyzer with a CO-oximeter.^{[1] [2]} More recently, pulse CO-oximeters have made it possible to estimate carboxyhemoglobin with non-invasive technology similar to a Pulse oximeter.^[3] The use of a pulse oximeter is not effective in the diagnosis of CO poisoning as patients suffering from carbon monoxide poisoning may have a normal oxygen saturation reading on a pulse oximeter.^[4]

References

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Finger tip carboxyhemoglobin saturation monitor.

Article Sources and Contributors

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