# Is your pulse oximeter **treating all patients equally?**

A recent prospective study from a leading hypoxia lab enrolling healthy volunteers evaluated the **effects of skin pigmentation and perfusion** on pulse oximetry accuracy.[†,‡]

**Performance challenge:**
The combination of dark skin and low perfusion can cause errors in pulse oximeter readings.[1]

**The technology you choose can make a difference.**

## Nellcor™ pulse oximetry

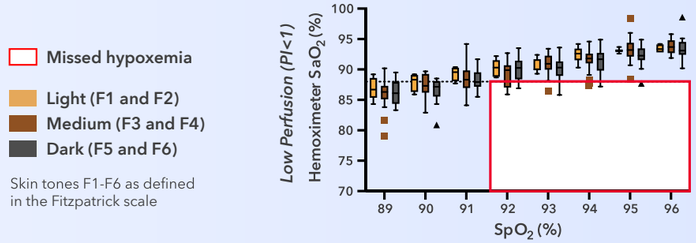
**Nellcor™** pulse oximetry missed

**74%** **fewer hypoxemic events** for subjects with dark skin and low perfusion than Masimo SET™* pulse oximetry.[1]

**7.9%**
missed hypoxemic events in subjects with dark skin and low perfusion.[1]

**Nellcor™** pulse oximetry had

**31%** **greater precision** in all dark skin readings than Masimo SET™* pulse oximetry.[2]



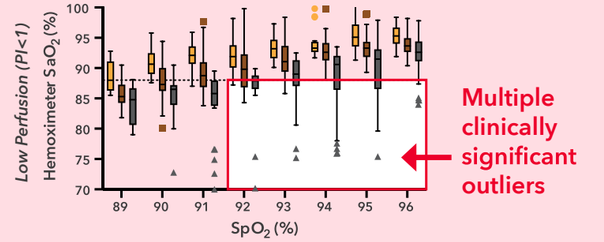

**Nellcor™** pulse oximetry experienced only

**10%** **as many data dropouts** as Masimo SET™* pulse oximetry.[1]

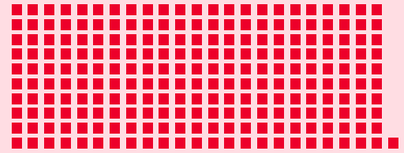
**23**
dropouts[1]

## Masimo SET™* pulse oximetry

**30.2%**
missed hypoxemic events in subjects with dark skin and low perfusion.[1]




**231**
dropouts[1]



**Medtronic** is working **to close the inequity gaps**

**We are collaborating** with regulators, academics, and clinicians to enhance guidelines and standards.

**We are including** 40% enrollees with dark skin in future testing to ensure performance for all patients.

**We are investing** in science and innovation to improve our pulse oximetry portfolio.

**We are expanding** education on Nellcor™ technology use to enable clinicians to serve all patients.

**The Nellcor™ pulse oximetry monitoring system should not be used as the sole basis for diagnosis or therapy and is intended only as an adjunct in patient assessment.**

†Oxygen saturation accuracy can be affected by certain environmental, equipment, and patient physiologic conditions that influence readings of $SpO_2$. Please consult the instructions for use and manual for full safety information.

‡The study (not funded by Medtronic) enrolled 146 healthy subjects in the 92-96% saturation range and examined paired readings from Nellcor™ N-595§ and Masimo Radical 7™* pulse oximeters generated simultaneously.

§The Nellcor device N595 used in the referenced study is no longer licensed by Health Canada. Although the Nellcor products currently licenced with Health Canada use the same technology.

This study was not designed for head-to-head comparison of the respective devices.

1. Gudelunas MK, Lipnick M, Hendrickson C, et al. Low Perfusion and Missed Diagnosis of Hypoxemia by Pulse Oximetry in Darkly Pigmented Skin: A Prospective Study. *Anesth Analg*. 2024;138(3):552-561. doi:10.1213/ANE.0000000000006755

2. Gudelunas MK, Lipnick M, Hendrickson C, et al. Low Perfusion and Missed Diagnosis of Hypoxemia by Pulse Oximetry in Darkly Pigmented Skin: A Prospective Study. Supplemental Digital Content, eTable 2. Pulse oximeter bias (SpO2 - SaO2) for different skin pigment categories. http://links.lww.com/AA/E575. *Anesth Analg*. 2024;138(3):552-561. Accessed May 15, 2024. doi:10.1213/ANE.0000000000006755. eTable 2 specifies precision percentage error for all dark skin readings with Masimo at 3% vs. Nellcor at 2.2%.



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**Read the study**
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