

# IT'S TIME TO CHOOSE NONIN

It's time to stop accepting pulse oximetry technology that doesn't perform when you need it most

As the inventor of fingertip pulse oximetry technology, we have a long-standing history of commitment to creating noninvasive technologies that improve the lives of all people, performing on every single patient, every single time.

Equitable pulse oximetry solutions have been important to Nonin from the beginning. From the release of the world's first fingertip oximeter in 1995, we have been reliable and accurate for patients, regardless of skin pigmentation.<sup>1,2,3</sup>

Our clinically demonstrated and real-world tested technology ensures blood oxygen measurements can be trusted and fast for patients, even in the most challenging hypoxic environments.<sup>2</sup> We have demonstrated time and again that our technology not only exceeds FDA requirements, but also outperforms other medical-grade oximeters.<sup>1,2</sup>

## A LEGACY OF RELIABILITY AROUND THE WORLD

Trusted innovator in pulse oximetry, clinically and real-world proven reliability and accuracy, durability, high-performance and ease-of-use.<sup>1,2</sup>

FOUNDED IN  
**1986**



Trusted leader for accuracy



Inventor of the fingertip  
pulse oximeter



Serving diverse populations in  
more than 125 countries

## IT'S NOT JUST A PULSE OXIMETER

Low-cost pulse oximeters that inaccurately report hypoxic events can have life threatening consequences.<sup>4</sup> When your patient is counting on you, there is no time to second guess your pulse oximeter. **It's not just a pulse oximeter...**

- ❖ When silent hypoxia is masking your patient's true condition
- ❖ When your patient is readmitted hours after discharge
- ❖ When you need an invasive and expensive ABG for a second opinion
- ❖ When you're relying on remote care
- ❖ When unreliable readings give you and your patients uncertainty
- ❖ When it doesn't read accurately in patients of all skin pigmentations<sup>5</sup>

## THE LEADER IN ACCURACY

Nonin's clinically supported PureSAT® technology delivers consistently reliable measurements for informed clinical treatment decisions.<sup>1</sup> The industry-leading accuracy and performance of the FDA-cleared fingertip oximeters are supported by published, peer-reviewed clinical studies and 25 years of real-world use.<sup>2,3,5</sup>

In a leading study performed at Clinimark Laboratories, the Nonin pulse oximeter stayed within 2.1% of the standard, a near perfect match.<sup>2</sup> The competing pulse oximeter showed readings up to 14.4% off the actual value.

In another landmark study led by Bickler, Nonin's technology accurately tracked hypoxic events 97% of the time.<sup>2</sup> Low cost oximeters only accurately tracked hypoxic events 69% and 21% of the time.<sup>4</sup>



1,2. Nonin Medical, Clinical Data on File.

3. Bickler, P. MD, et al. (2005) Effects of Skin Pigmentation on Pulse Oximeter Accuracy at Low Saturation. Anesthesiology Vol. 102, pp 715-9

4. Lipnick, M. S., et al. (2016). The Accuracy of 6 Inexpensive Pulse Oximeters Not Cleared by the Food and Drug Administration. Anesthesia & Analgesia, 123(2), 338-345. doi:10.1213/ane.0000000000001300.

5. Feiner JR, Bickler PE., Severinghaus JW (2007). Dark Skin Decreases the Accuracy of Pulse Oximeters at Low Oxygen Saturation: The Effect of Oximeter Probe Type and Gender, Anesthesiology December;105(6):S18-S23.



## RELIABILITY FOR ALL

You can count on Nonin to read accurately in patients, regardless of skin pigmentation, even in low saturations where measurement accuracy counts the most.<sup>2,3,5</sup>

In another clinical study, the Nonin PureSAT® oximeter with clip sensor had excellent accuracy and the lowest bias compared to the gold standard, blood gas or co-oximetry, throughout the oxygen saturation levels.<sup>5</sup> It was the only clip-on fingertip oximeter that provided accurate, reliable readings in tested individuals, regardless of skin pigmentation.<sup>5</sup> And of particular significance, the authors state “clinically important bias should be considered when monitoring patients with saturation below 80%, especially those with dark pigmented skin.”<sup>5</sup>

“Pulse oximeters should be required to be accurate in patients with dark skin. It is definitely possible to design a pulse oximeter which is accurate regardless of skin color. In fact, Nonin appears to have already solved this problem.”<sup>6</sup>

— JOSH FARKAS, M.D.

ASSOCIATE PROFESSOR OF PULMONARY AND CRITICAL CARE MEDICINE,  
UNIVERSITY OF VERMONT

## WHY NONIN

Nonin’s pulse oximetry technology has always been focused on working on the sickest patients including patients with underlying conditions and low perfusion. The 9590 and 3230 perform accurately within +/-2 digits for saturations even in the 70s.<sup>1,2</sup>

Additionally, we offer other industry-leading benefits including:

- ❖ Drop durability and reliability - after 50 drops from 1 meter onto a hard surface, Onyx remained intact. Two leading competitors broke within 2-4 drops.<sup>7</sup>
- ❖ Fast, automatic averaging that quickly adjusts in challenging conditions.<sup>2</sup>
- ❖ Industry-leading four-year warranty, compared to most competitors’ 1-year warranties.
- ❖ Provides about 6,000 spot checks or 36 hours of continuous monitoring on two AAA batteries.<sup>8</sup>
- ❖ American-made and built to last - products designed and made with quality materials; latex-free and lead-free.

6. Farkas, J. December 21, 2020. PulmCrit - "Dismantling the systemic racism of pulse oximetry." <https://emcrit.org/pulmcrit/racism-oximetry/>

7,8. Nonin Medical, Clinical Data on File.

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To learn more, please contact your sales representative, or visit: [www.nonin.com/choose-nonin/](http://www.nonin.com/choose-nonin/)



## REJECT SKIN PIGMENTATION BIAS

Pulse oximetry is one of the key tools in dire need on the front lines of managing COVID-19 to quickly measure patients’ blood oxygen levels. Consequently, even small biases in pulse oximetry could have real clinical impact. According to Farkas in *Dismantling the systemic racism of pulse oximetry*, he notes “the amount of bias seems to vary in a haphazard fashion between devices and probes. Some devices suffer from unacceptable amount of bias within clinically relevant ranges.”<sup>6</sup>

## TRUST PROVEN ACCURACY

With the importance of pulse oximetry in monitoring patients with COVID-19, this is an unacceptable risk and only pulse oximeters with data to prove accuracy in patients, regardless of skin pigmentation, should be used in both clinical and home settings. **It's time to stop accepting pulse oximetry technology that doesn't perform when you need it most.**

**Inc.**  
**Best in**  
**Business**

2020

Nonin was named to the Inc. 2020 Best in Business list, which recognizes the most inspiring and innovative companies of the year. Nonin was selected based on the significant impact our work has had on the world during the pandemic.

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