Max-Fast™ Forehead Sensor

When Timing is Critical

COVIDIEN

Challenging Conditions

Some patients represent a challenge for monitoring due to:

- Intense vasoconstriction
- Hypovolemia
- Hypothermia
- Therapeutic hypothermia
- Low cardiac index
- Septic shock
- Severe peripheral vascular diseases

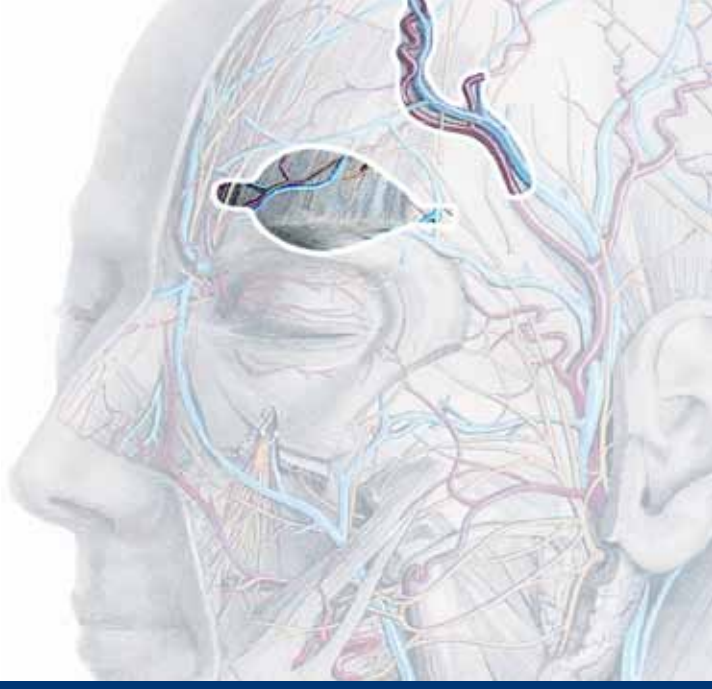
For these patients, it is even more important to have:

- Accurate data correlated to blood gas
- Rapid detection of SpO2 changes

ACCURACY, QUICKLY

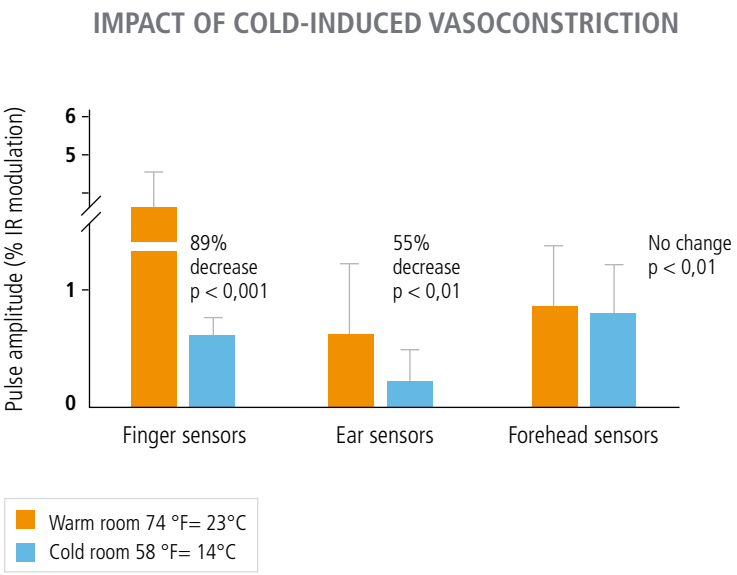
When timing is critical, you can be alerted of changes in SpO2 about two minutes earlier than with digit sensors.[1]

Because forehead circulation is fed by the supraorbital artery, this area is not as prone to vasoconstriction during low perfusion as other sites. Therefore the pulse amplitude is not affected.



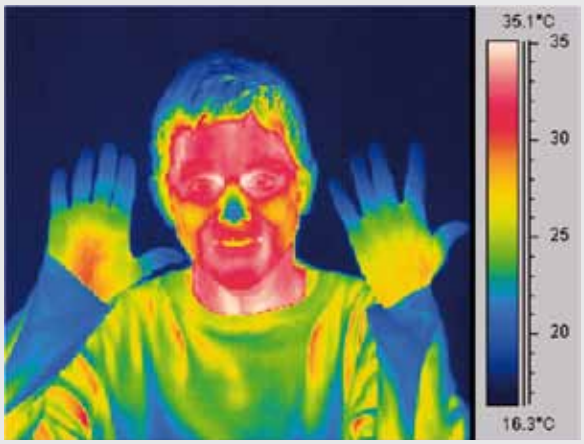
SpO2 OBVIOUS

Arterial blood travelling from the heart reaches the head sooner than it reaches distal sites such as fingers, especially when patients have poor pulse perfusion.



Bebout DE et al.[2]

The head and fingers are warm and well perfused upon initial exposure to the cold room.



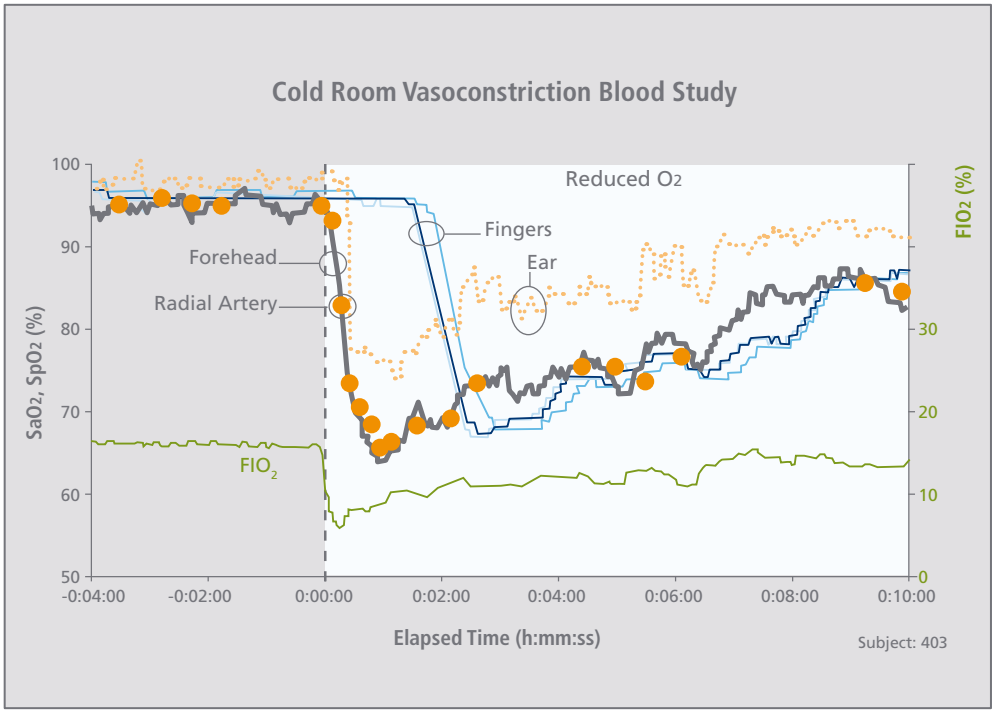
After 45 minutes, the fingers, ears and nose are cold, indicating vasocontriction and low regional perfusion. The forehead temperature is well maintained.

Succeed In Challenging Conditions

- When digit sensors fail to detect pulsatile signal, Max-Fast™ forehead sensors can often obtain SpO2 readings[1]
- During poor peripheral perfusion, the Max-Fast™ forehead sensor typically detects changes in SpO2 about two minutes earlier than conventional sensors[3]
- During conditions of poor peripheral circulation, the forehead site is less prone to peripheral vasoconstriction
- Forehead sensor is less prone to interference from natural movement
- For patients subject to critical desaturations, the unique LoSat™ expanded accuracy range offers clinical information validated down to 60% SpO2.[4]

Know Sooner To Act Faster

The Max-Fast™ forehead sensor detects changes in SpO2 faster than finger sensors, and with an accuracy that correlates closer to arterial blood data.[3]



A technology overview of the Nellcor™ OxiMax™ pulse oximetry system. Internal testing.[3]

Specialty Sensor With Special Design

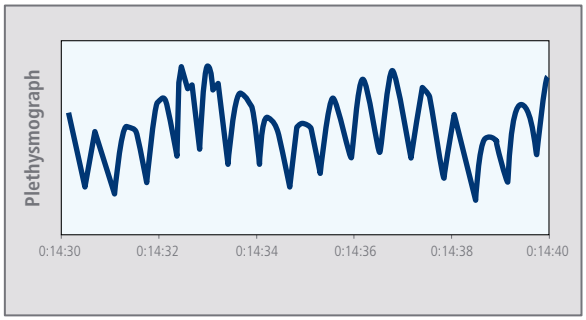
Max-Fast™ forehead sensors have been designed specifically for the forehead:

- Dedicated LED for reflectance technology
- Specific emitter–receptor distance
- Black contact surface to avoid light interference

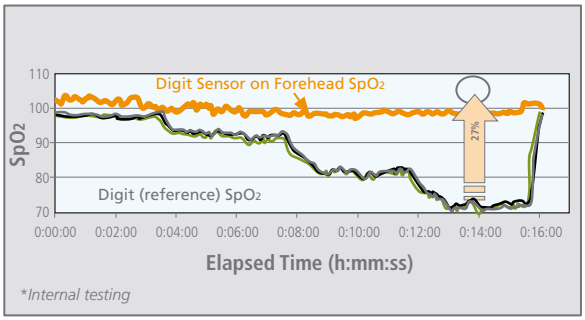
A single Max-Fast™ forehead sensor can be used up to two days with appropriate site inspection and changes, thanks to its four layers of adhesive.

For accurate and reliable reading, use the soft, adjustable headband packaged with the Max-Fast™ forehead sensor to help prevent venous pulsation at the sensor site and maintain proper sensor position.

"Despite providing a seemingly satisfactory waveform and stable oxygen saturation measures, the use of a disposable (transmittal) finger oxygen saturation sensor on the forehead provided inaccurate readings in 11 out of 20 hypoxic ED patients."[5]



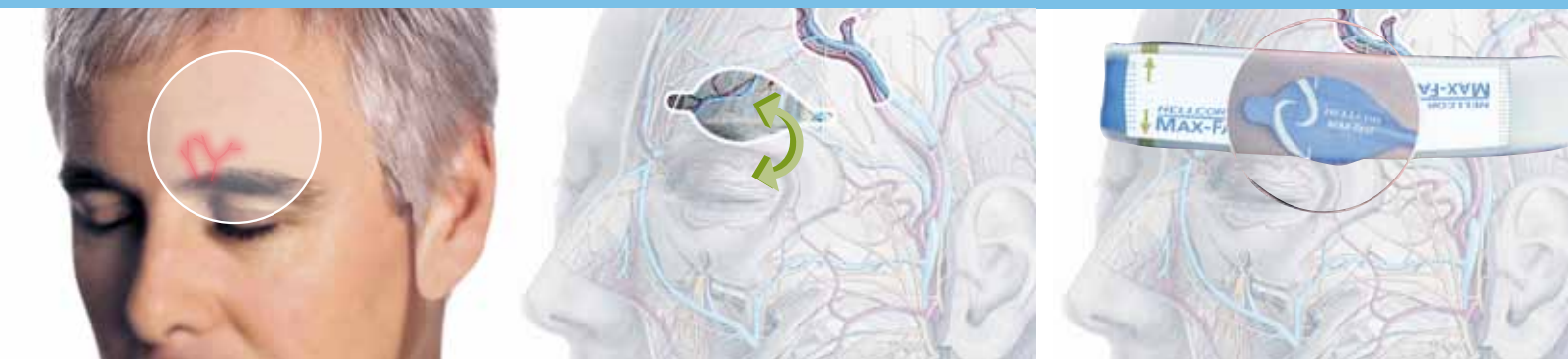
Finger sensors are not designed to be placed on the forehead and should never be used on this site.



Studies show that finger sensor usage on the forehead can lead to wrong SpO_2 readings despite a normal pleth curve.[5]

The data obtained gives false reassurance as SpO_2 remains high even when the true value is at 70%.[3]

Using The Max-Fast™ Forehead Sensor Is Very Easy



Sensors That Span The Entire Patient Spectrum

The Max-Fast™ forehead sensor is part of Covidien's extensive line of sensors, designed to meet the entire patient spectrum and to provide readings in most challenging perfusion and saturation situations.

OxiMax™ Single-Patient-Use Sensors

MAX-A-I
MAX-AL-I

MAX-P-I

MAX-I-I

MAX-N-I

MAX-R-I

SoftCare™
SC-PR-I

SoftCare™
SC-NEO-I

SoftCare™
SC-A-I

D-YS

DS100A

OXI-A/N

OXI-P/I

D-YS
with D-YSE

OxiMax™ Reusable Sensors

YOU CAN BE SURE OF IT

Nellcor™ OxiMax™ Technology At Work

Due to the unique operating characteristics and calibration curve inside the sensor, Max-Fast™ forehead sensors operate only with Nellcor™ OxiMax™ technology, which is integrated into multiparameter solutions of more than 70 OEM partners worldwide.

Nellcor™ OxiMax™ technology is available in most OEM monitoring solutions.

NELLCOR OxiMax WORKS HERE™

Dräger medical
A Dräger and Siemens Company

PHILIPS

GE Healthcare

WelchAllyn®
Advancing Frontline Care™

MINDRAY

Emtel

SPACELABS Healthcare

SCHILLER
The Art of Diagnostics

Oridion®
Smart Solutions One Breath at a Time™

ASK IF YOU ALREADY CAN USE MAX-FAST™ FOREHEAD SENSORS WITH YOUR CURRENT EQUIPMENT

WHEN TIMING IS CRITICAL

Max-Fast™ forehead sensors provide,

- **Reliable information**
  Max-Fast™ forehead sensors give readings when conventional finger sensors fail[6]
- **Accurate readings**
  Max-Fast™ forehead sensors readings are correlated with blood gas analysis and are not affected by vasoconstriction[7-9]
- **Fast response**
  Max-Fast™ forehead sensors detect changes in SpO_2 about two minutes earlier than conventional sensors[10]

USE THE RIGHT SENSOR ON THE RIGHT PATIENT

Use Max-Fast™ SpO_2 forehead sensors to know faster, to secure your reading and to increase your accuracy compared to conventional digit sensors[1, 6-10]

1. Bebout DE, Mannheimer PD, Wun C-C. Site-dependent differences in the time to detect changes in saturation during low perfusion. Crit Care Med. 2001;29(12)A115.
2. Bebout DE, Mannheimer PD. Effects of cold-induced peripheral vasoconstriction on pulse amplitude at various pulse oximeter sensor sites. Anesthesiology. 2002;96:A558. [Abstract]
3. A technology overview of the Nellcor OxiMax pulse oximetry system. Internal testing.
4. FDA 510(k).
5. Smithline HA, Rudnitzky N, Macomber S, Blankrn FS. Pulse oximetry using a disposable finger sensor placed on the forehead in hypoxic patients. J Emerg Med. April 28, 2009 Apr 28. [Epub ahead of print]
6. Schallom L, Sona C, McSweeney M, Mazuski J. Comparison of forehead and digit oximetry in surgical/trauma patients at risk for decreased peripheral perfusion. Heart Lung. 2007;36(3):188-194.
7. Fernandez M, Burns K, Calhoun B, George S, Martin B, Weaver C. Evaluation of a new pulse oximeter sensor. Am J Crit Care. 2007;16(2):146-152.
8. Bebout, DE, Mannheimer PD, Asbagh NA. Detection of hypoxemia during peripheral vasoconstriction at the radial artery and various pulse oximeter sensor sites. Critical Care Med. 2003;31(2):A72 [Abstract].
9. Berkenbosch JW, Tobias JD. Comparison of a new forehead reflectance pulse oximeter sensor with a conventional digit sensor in pediatric patients. Respir Care. 2006;51(7):726-731.
10. MacLeod DB, Cortinez LI, Keifer JC, et al. The desaturation response time of finger pulse oximeters during mild hypothermia. Anaesthesia. 2005;60(1):65-71.

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IMPORTANT : Please refer to the package insert for complete instructions, contraindications, warnings and precautions

Covidien (UK) Commercial Ltd
4500 Parkway
Whiteley
Fareham
Hampshire
PO15 7NY
+44 (0) 1329 224000 [T]
+44 (0) 1329 220213 [F]

Covidien Ireland Commercial Ltd
Block G, Ground Floor
Cherrywood Business Park,
Loughlinstown,
Co. Dublin
+353 (0) 1.4073173 [T]
+353 (0) 1.4073174 [F]

www.covidien.com