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Noninvasive core temperature monitoring made easy

Setting the standard in core temperature monitoring

The limitations of many temperature monitoring methods — whether accuracy, invasiveness or the technology itself — are requiring hospitals to stock and use multiple modalities throughout the perioperative journey. Each method introduces variation based on its accuracy and technique.

The 3M™ Bair Hugger™ Temperature Monitoring System is an accurate, noninvasive, easy-to-use temperature monitoring system that continuously measures patients' core body temperature and provides standardization throughout the perioperative journey

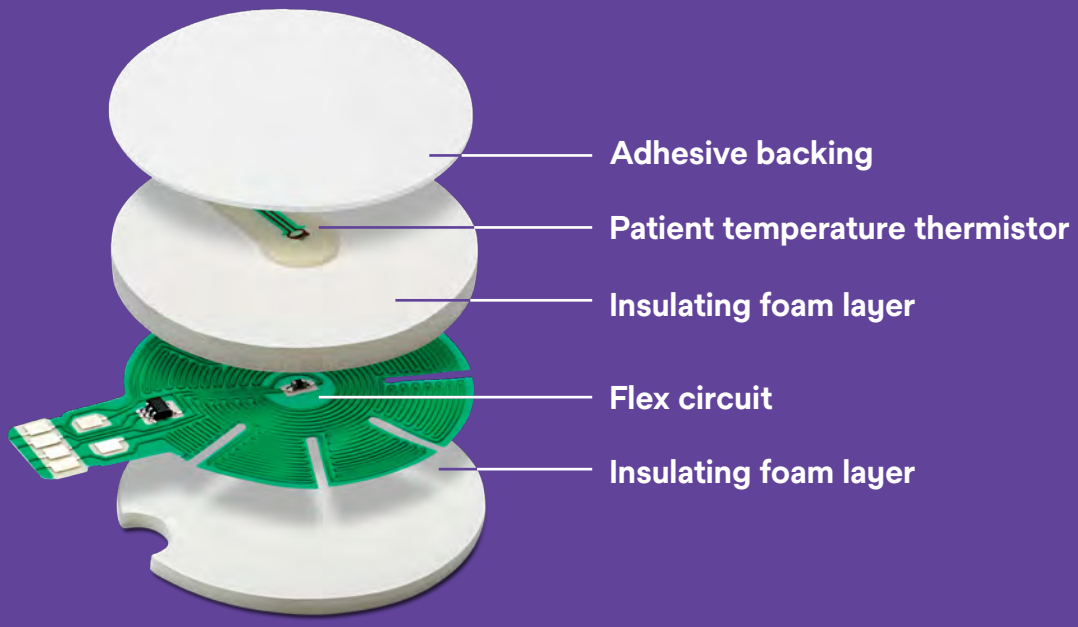
Consisting of a single-use sensor and reusable control unit, the Bair Hugger temperature monitoring system simplifies the existing temperature monitoring process while delivering accurate patient temperatures normally associated with more-invasive systems like esophageal, bladder, rectal or PA catheters.

Standardizing with one temperature monitoring system can help improve consistency, reduce opportunity for error, and eliminate the duplication of effort required to purchase and carry multiple products. The Temperature Bair Hugger temperature monitoring system provides clinicians with a single temperature monitoring method that can be used through each phase of the perioperative journey, improving clinical efficiency by streamlining the patient temperature monitoring process.

The Bair Hugger temperature monitoring system is a comprehensive solution that works seamlessly throughout the perioperative process to effectively and efficiently measure and manage patient temperature.

How it works

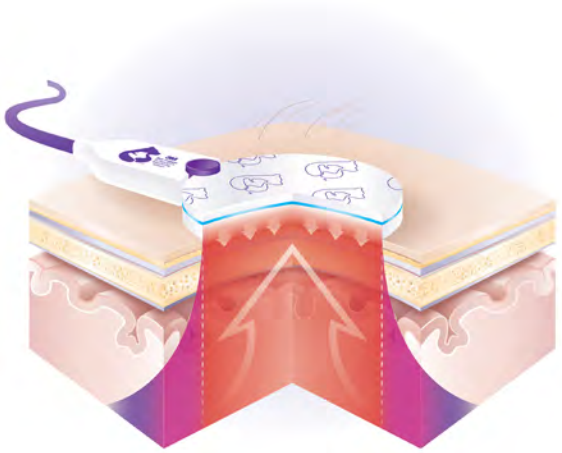
A technology that is anything but skin deep:



Unlike passive skin surface temperature sensors, the Bair Hugger temperature monitoring system's single-use sensor consists of a thermal insulator adjacent to the skin than is covered by a flex circuit. Once connected to the Bair Hugger control unit, the flex circuit actively regulates its temperature to create a zone of perfect insulation — a condition that eliminates heat loss to the environment.

Formation of the isothermal pathway

Core temperature rising to the surface through isothermal pathway

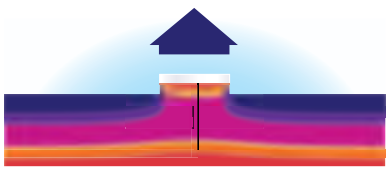


A clinical need

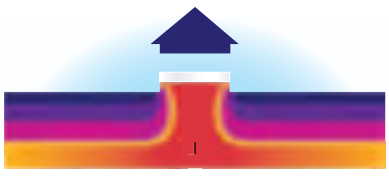
- Most invasive devices accurately measure core body temperature, but are limited to use with patients under general anesthesia or heavy sedation, typically only used in the OR.
- For patients under regional anesthesia or who are awake, noninvasive devices are typically used — however, these devices mostly estimate core body temperature.
- Wide variations exist in methods and techniques for measuring patient temperature, which can lead to inaccuracies.
- Accurate temperature measurement is crucial for providers to be able to actively manage patient normothermia and avoid the costly complications of unintended hypothermia.

The Bair Hugger temperature monitoring system provides an accurate, noninvasive, easy-to-use temperature measuring method that can be used perioperatively with both anesthetized and awake patients.

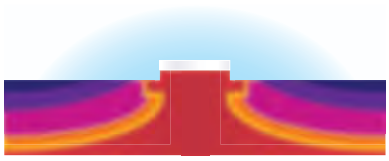
When the skin is covered with “perfect insulation,” heat is prevented from leaving the body under the sensor



Start of pathway formation



Pathway forming



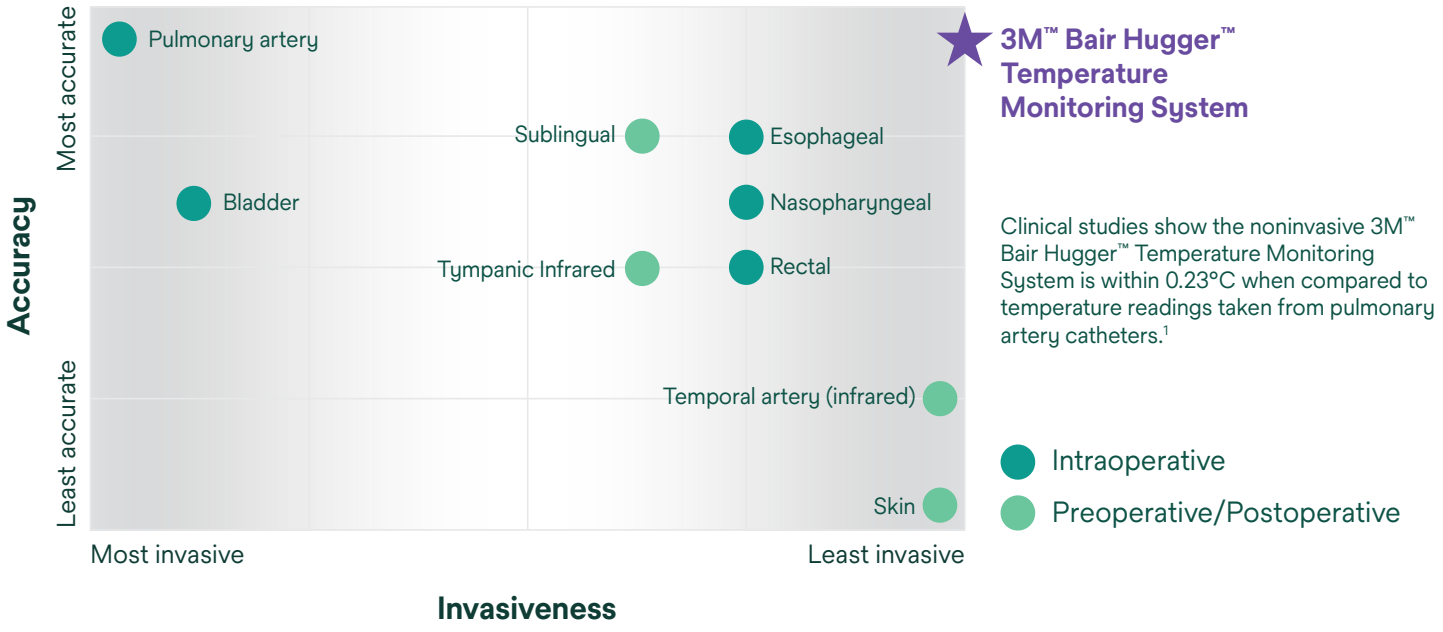
Complete pathway

Equilibration occurs within a few minutes, creating an isothermal pathway, bringing the core temperature to the surface.

Clinical evidence confirms core temperature

The Bair Hugger temperature monitoring system has been compared with known invasive core temperature monitoring systems in both published clinical studies and abstract presentations. Sessler et al. (2012) compared 36,000 paired readings of the Temperature Monitoring System and pulmonary artery catheter during non-emergent cardiac surgery, with results showing a -0.23°C bias.[1]

In other studies comparing the Bair Hugger temperature monitoring system with nasopharyngeal, esophageal and sublingual probes, the Bair Hugger temperature monitoring system had a bias of 0.05 to -0.37°C.[2-5]



Graph based upon analysis taken from: Wartzek T, Mühlsteff J, Imhoff M. *Temperature measurement. Biomedizinische Technik/Biomedical Engineering*. 2011;56(5):241-257.

Accurate. Noninvasive. Continuous. Consistent.

Accurate

In a clinical trial comparing the Bair Hugger temperature monitoring system to pulmonary artery catheters, the Bair Hugger temperature monitoring system bias was less than 0.23°C.[1]

Continuous

The temperature is always displayed, allowing health care professionals to actively manage patient warming protocol as needed, when needed.

Noninvasive

A single-use sensor is placed on the patient's forehead before surgery and is worn throughout the perioperative journey.

Consistent

The sensor stays on the patient and is disconnected from the sensor cable and reconnected at each point of care, eliminating the variability associated with clinician technique and use of multiple monitoring devices.

3M™ Bair Hugger™ Temperature Monitoring System ordering information

Product	Part Number	Sizes	Units
3M™ Bair Hugger™ control unit	37000	Dimensions of control unit 9.3 cm (3.7 in) high, extendable to 11.4 cm (4.5 in) high, 7.1 cm (2.8 in) wide, 4.3 cm (1.7 in) deep Weight of control unit 128 g (4.5 oz) Length of the sensor cable 400 cm (158 in)	1/case
3M™ Bair Hugger™ sensor	36000	Dimensions of sensor 4.1 cm (1.6 in) diameter, 0.5 cm (0.2 in) thick	25/case

Visit **bairhugger.com**

To order, please contact your local Solventum sales representative or call customer service at 800-228-3957.

References:

1. Eshraghi Y, Sessler D. (2012), Exploratory *Method-Comparison Evaluation of a Disposable Non-Invasive Zero Heat Flow Thermometry System.* 2012 American Society of Anesthesiologists Annual Meeting; A63.
2. Eshraghi Y, Nasr V, Sessler D (2014), *An Evaluation of a Zero-Heat-Flux Cutaneous Thermometer in Cardiac Patients.* Anes Analg 119(3):543-9.
3. Iden T, Horn EP et al (2015), *Intraoperative temperature monitoring with zero heat flux technology in comparison with sublingual and nasopharyngeal temperature: An observational study.* Euro Journal Anaesthesiolog, 32:387-391.
4. Zaballos J, Salinas U (2014), Clinical Evaluation of SpotOn, a New Non-Invasive and Continuous Temperature Monitoring System. ASA Abstract A4270.
5. Cullen S, Brown J (2015), Measuring Core Temperature — an audit. AAGBI Abstract (47), Anaesthesia 70,(3):11-101.

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