

BAIR HUGGER SAFETY



Learning Agenda

- Introduction
- Definition
- History
- Indications
- Contraindications
- Benefits
- Function
- Areas of application
- Reviews of Literature
- Summary
- References



Introduction

- Hypothermia is commonly encountered as a sequel to general anesthesia in surgical patients. Maintenance of normothermia during anesthesia reduces rates of surgical site infection, mortality, and decreases the length of hospital stay in surgical patients.
- To warm patients during the postoperative period, the Bair Hugger forced air warming device was developed.

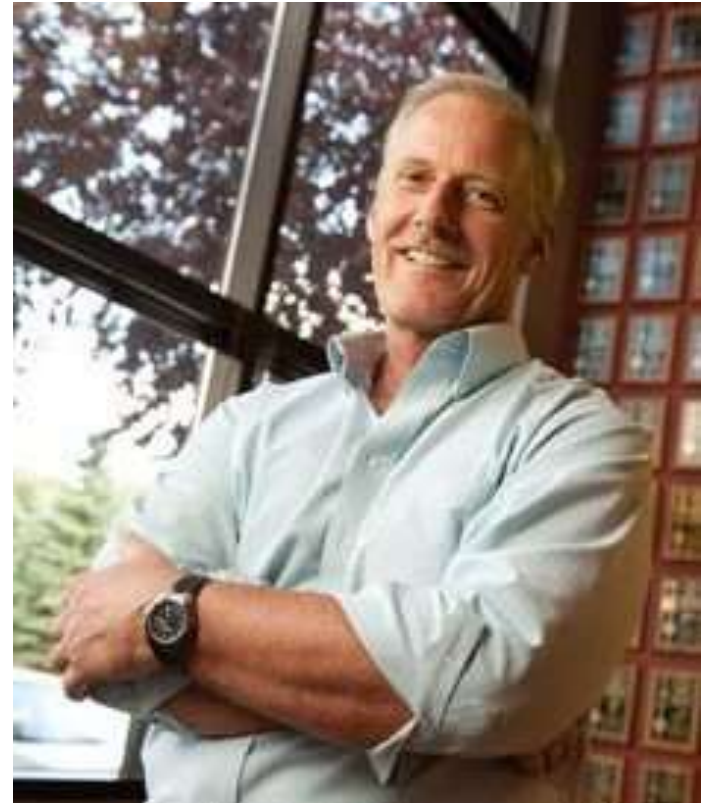
Definition

- The Bair Hugger system is a convective temperature management system often utilized within a hospital or surgery centre to maintain a patient's core body temperature.



History

- Anaesthesiologist and Entrepreneur Dr. Scott Augustine invented the Bair Hugger patient warming system in the 1980s and this medical device was launched in 1987.
- Today, the system features 25 blanket models and globally has warmed more than 200 million patients.



Indications

Body temperature drops below 36°C
(96.8°F)

Patient exhibits shivering

Patient complains of being
uncomfortably cold

Contraindications



Aortic cross-clamping

Ischemic limbs

Benefits

Peri-operative
normothermia in
surgical patients

Reduction of
surgical site
infection (SSI)

Components

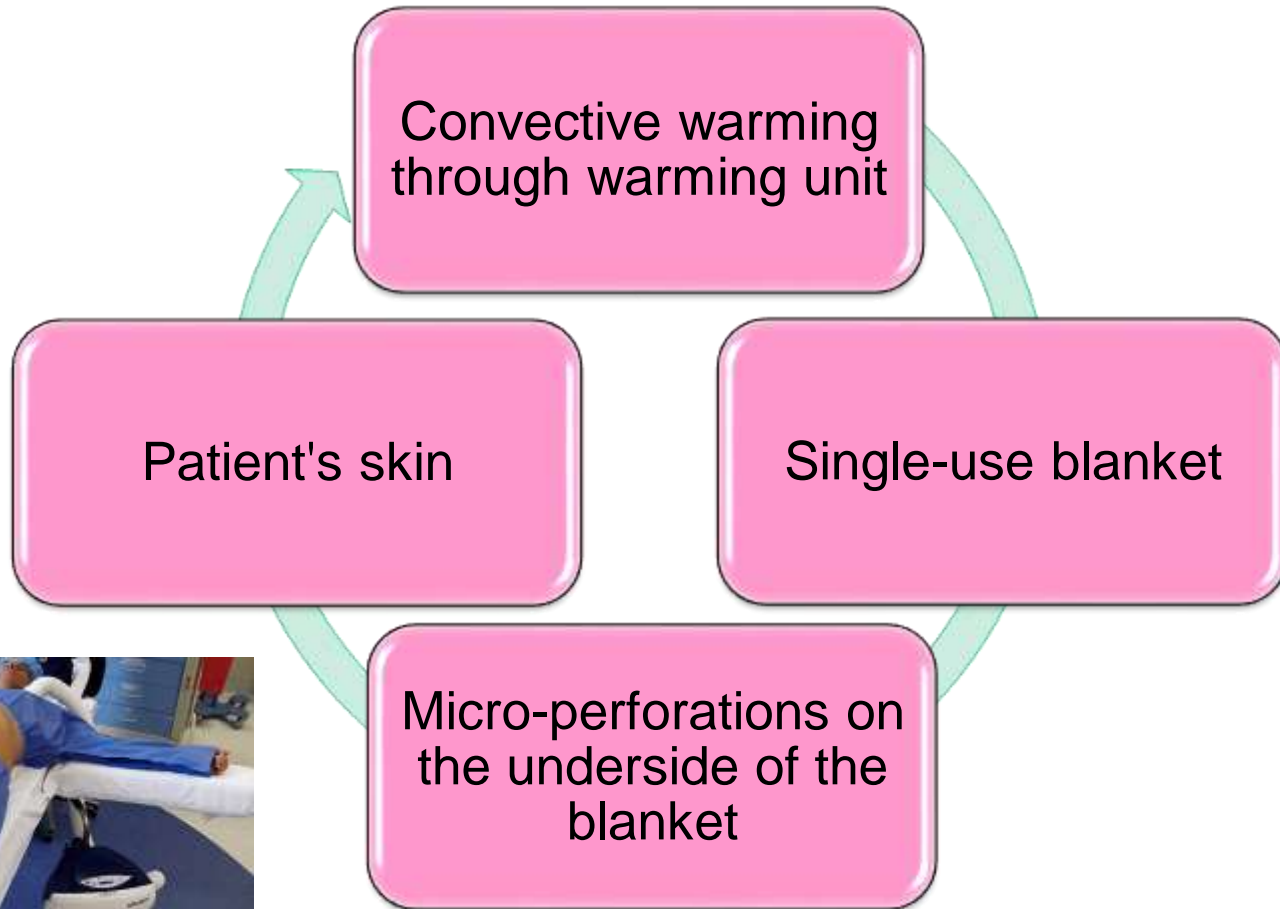


**Warming
unit**



**Disposable
blanket**

Function



- <https://www.youtube.com/watch?v=IfTd9ayTKFM>
- [**https://www.youtube.com/watch?v=s1sz9XhuO-M**](https://www.youtube.com/watch?v=s1sz9XhuO-M)

Areas of Application



Post anaesthesia care

Recovery rooms

Operating rooms

Emergency departments

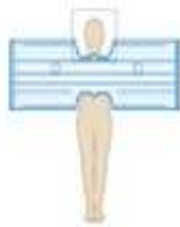
Obstetrical suites

Intensive care areas

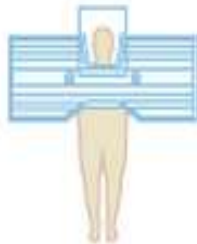
INTRAOPERATIVE BLANKETS: UPPER, LOWER & TORSO

PACU BLANKETS

Upper Body
Model 522



Upper Body
Model 523 XL



Lower Body
Model 525



Torso
Model 540



Dual Port Torso
Model 542



Full Body
Model 300



Chest Access
Model 305



Pediatric
Model 310



Multi-Access
Model 315



PEDIATRIC BLANKETS*

Small Lower Body
Model 537



Pediatric Long
Model 530



* Also see
Underbody Series
& PACU blankets

UNDERBODY SERIES BLANKETS

Pediatric
Underbody
Model 555



Large Pediatric
Underbody
Model 550



Adult
Underbody
Model 545



Spinal
Underbody
Model 575



Lithotomy
Underbody
Model 585



Full Access
Underbody
Model 635



Sterile Full Access
Underbody
Model 637



SPECIALTY & CARDIAC BLANKETS

Outpatient w/booties
Model 110



Outpatient
Model 111



Cath Lab
Model 560



Surgical Access
Model 570



Full Body Surgical
Model 610



Sterile Cardiac
Model 630



Surgical Cardiac Access
Model 645



Paediatric Blankets



Review of literature

- **Joanna F, Pete P (2015)** conducted random controlled trials (RCTs) to assess the effectiveness of intra-operative warming with Forced air warming (FAW) versus circulating water (CW) warming in adult patients undergoing elective surgery where hypothermia is not actively induced. Data collection was by searching general web, contacting manufacturers and

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Review of literature

accessing clinical trial web sites to identify relevant studies (both published and unpublished) from Pubmed, EMBASE and CENTRAL (Cochrane library) between 2000 to 2015. Once the search for publications had been carried out, abstracts of each paper were searched to identify papers which compared FAW with CW warming devices in patients undergoing elective surgery.

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Review of literature

Ten papers (all published) were selected for full analysis. Results showed that when FAW was compared with a CW mattress or CW sleeve with vacuum, FAW was better at preventing hypothermia.

Review of literature

- **Joseph KC H, Elizabeth FS, Narayanan V, Hegarty MA and Robert A G (2003)** conducted a prospective study whether use of the Bair Hugger patient warming system increased bacterial contamination of the operating theatre and the surgical wound during prolonged surgery at West Midlands, UK. Sixteen (twelve male and four female) consecutive patients undergoing aortic surgery with prosthetic graft insertion were

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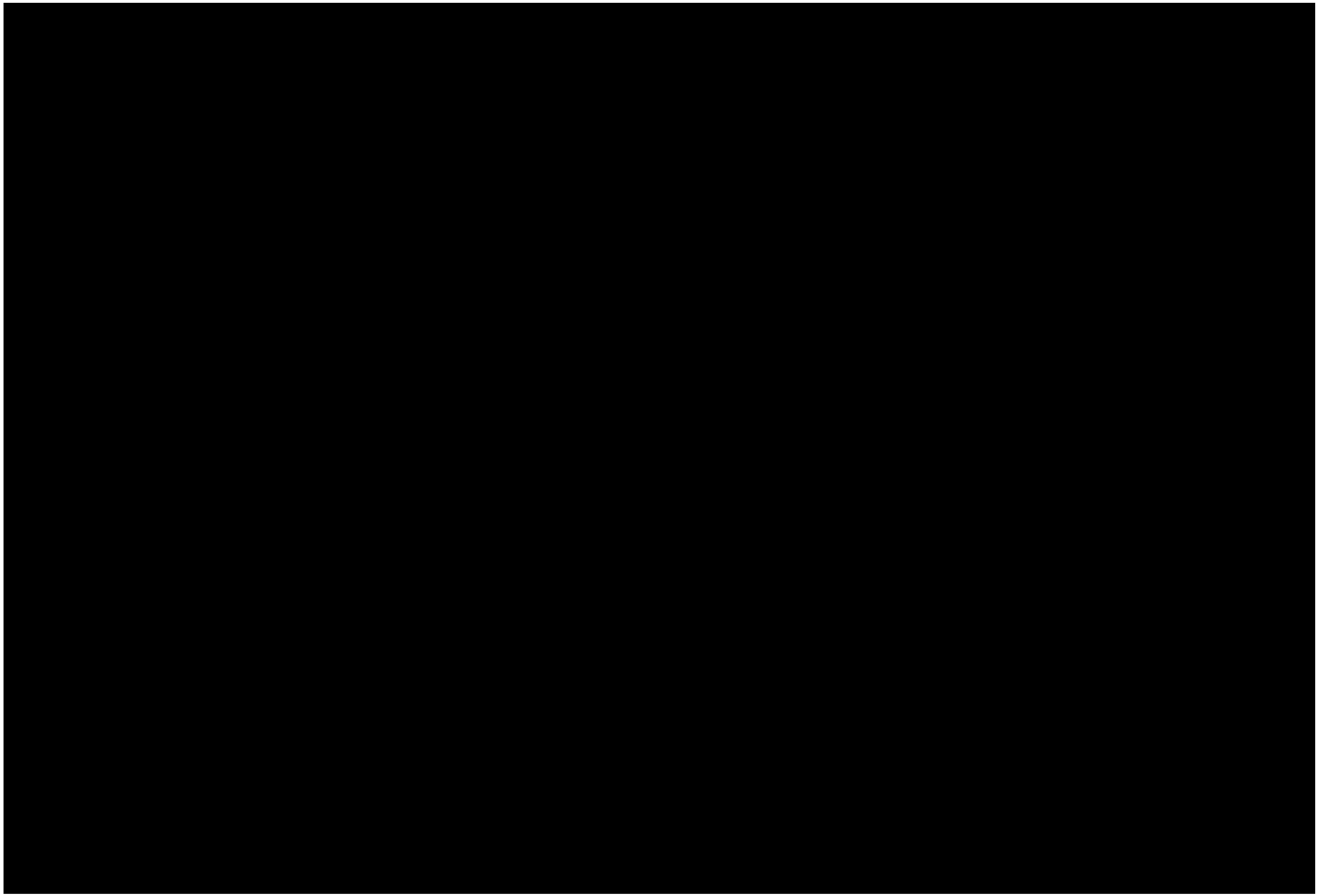
Review of literature

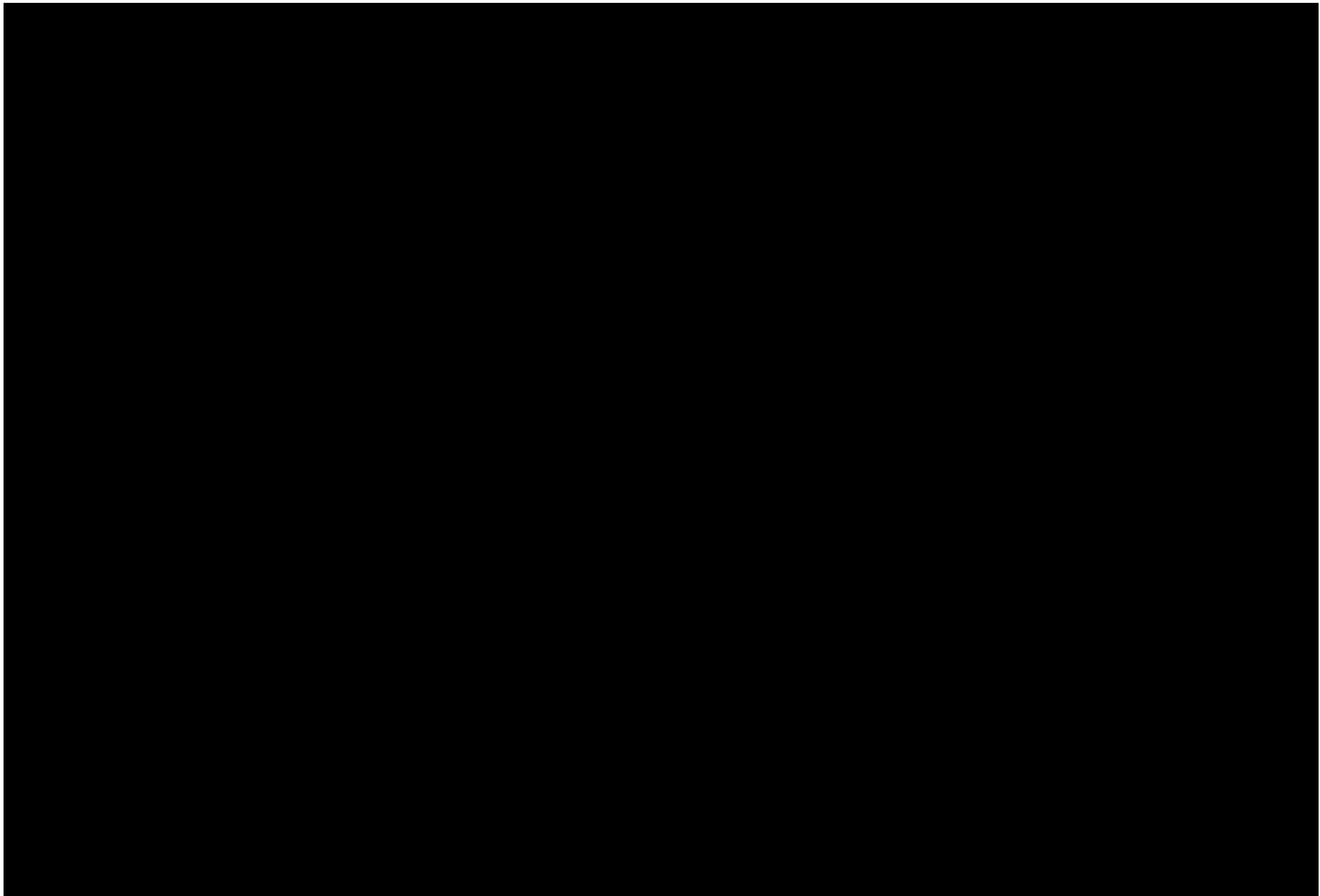
studied by analyzing bacterial content in air and wound specimens collected during surgery who were on Bair Hugger upper body blanket warming system. The bacterial colony counts from the beginning and the end of surgery were compared, and the data was analyzed using the Wilcoxon matched pairs test. The results showed not only that there was no increase in bacterial counts at the study sites, but

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Review of literature

also that there was a decrease ($P < 0.01$) in air bacterial content around the patient and in the operating theatre after prolonged use of the patient warmer. No wound or graft infections occurred. None of the patients developed postoperative wound or prosthetic infections during a 6-month follow-up period.





Summary

- The Bair Hugger system warms effectively due to the properties of convection and radiation; heat transfer improves with the movement of warmed air across the surface of the patient's skin thereby maintaining normothermia.

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Thank You