

## The Simple Solution to Active Patient Warming



## Conductive Thermal Blankets for Improved Patient Care



- ▶ PRE-OP for prevention of perioperative hypothermia.
- ▶ POST-OP for overall patient health and well-being, reduced recovery time, minimized risk of infection.

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# The Importance of Patient Warming

**Manage Temperature • Maintain Normothermia • Improve Patient Outcomes • Reduce Costs**

All patients under general anesthesia, regardless of age, weight or other factors, are at increased risk of hypothermia. Body temperature drops precipitously during surgery due to environmental cold operating room temperatures and anesthetic-induced inhibition of thermoregulation.

Research indicates that warming patients prior to a surgical procedure significantly reduces this risk, improving recovery rates and long term patient health and overall well-being.

## The Risks of Perioperative Hypothermia

### ▶ **Surgical Site Infections (SSI's)**

Hypothermia has been shown to triple the incidence of Surgical Site Infection in certain cases. Studies show that "even mild hypothermia reduces resistance to SSI's by directly impairing immune function and decreasing cutaneous blood flow, which reduces the delivery of oxygen to the tissue (Sessler, 2008)"

### ▶ **Impaired Blood Coagulation**

Coagulation is impaired by mild hypothermia. Research has indicated that mild hypothermia significantly increases blood loss during hip arthroplasty and increases allogeneic transfusion requirements (Sessler, 2008)

### ▶ **Increase in Morbid Myocardial Events**

Hypothermia is uncomfortable and psychologically stressful, elevating blood pressure, heart rate, and plasma catecholamine concentrations. As a result, hypothermic patients exhibit a three-fold increase in morbid myocardial outcomes (Kurz and Sessler, 1997).

### ▶ **Delayed Wound Healing**

Hypothermia delays wound healing and increases hospital stays by 20%, even in patients who do not contract infections.

### ▶ **Post Anesthetic Shivering**

Shivering occurs in approximately 40 percent of non-warmed patients who are recovering from general anesthesia and is associated with substantial adrenergic activation and discomfort.

### ▶ **Patients Remember Being Cold**

Some patients report the discomfort of postoperative shivering and the sensation of cold to be even worse than the surgical pain (Kurz and Sessler, 1997). Warming patients improves patient comfort and reduces psychological stress, lowering the risk of post-op complications.

### ▶ **SCIP-Inf-10**

SCIP mandates that all patients, regardless of age, undergoing surgical procedures under general or neuraxial anesthesia one hour or longer must be kept normothermic. Facilities must demonstrate a target temperature of 36 °C or greater within 30 minutes immediately before or 15 minutes after anesthesia end time.

1. Sessler DI: Temperature monitoring and perioperative thermoregulation. *Anesthesiology* 2008; 109: 318-38.
2. Kurz A, Sessler DI, Mild Perioperative Hypothermia. *New England Journal of Medicine* 1997; 336:1730.

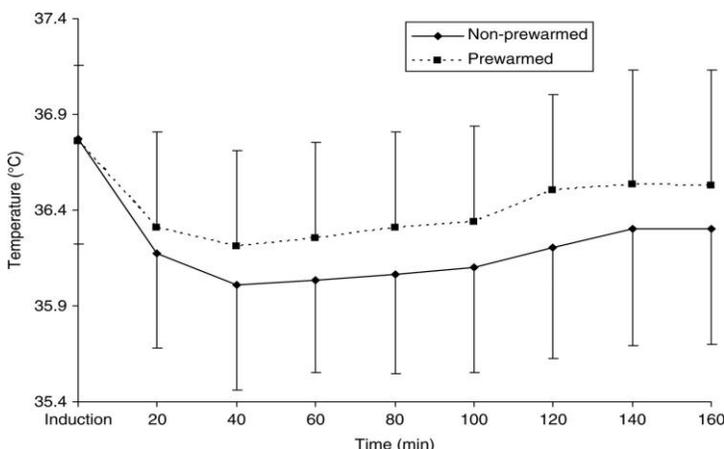
# Efficient, Effective, Eco-Friendly, Economical



**100% Reusable - 100% Silent**

- ▶ Provides active conductive warmth to maintain patient normothermia.
- ▶ X-Ray safe and radio translucent.
- ▶ Temperature settings available in:
  - °C: 37°, 38°, 39°, 40°
  - °F: 99°, 100°, 102°, 104°
- ▶ Operates in total silence. Noise-free.
- ▶ 100% Reusable. Eliminates expense of disposable blankets, storage space requirements and Haz Waste.
- ▶ Energy efficient – utilizes a fraction of the energy (75W compared to 1550W) of forced air convection systems.
- ▶ Durable outer cover allows for wipe-down disinfection between patients.

## The Power of Pre-Warming to Improve Patient Outcomes, Minimize Health Risks

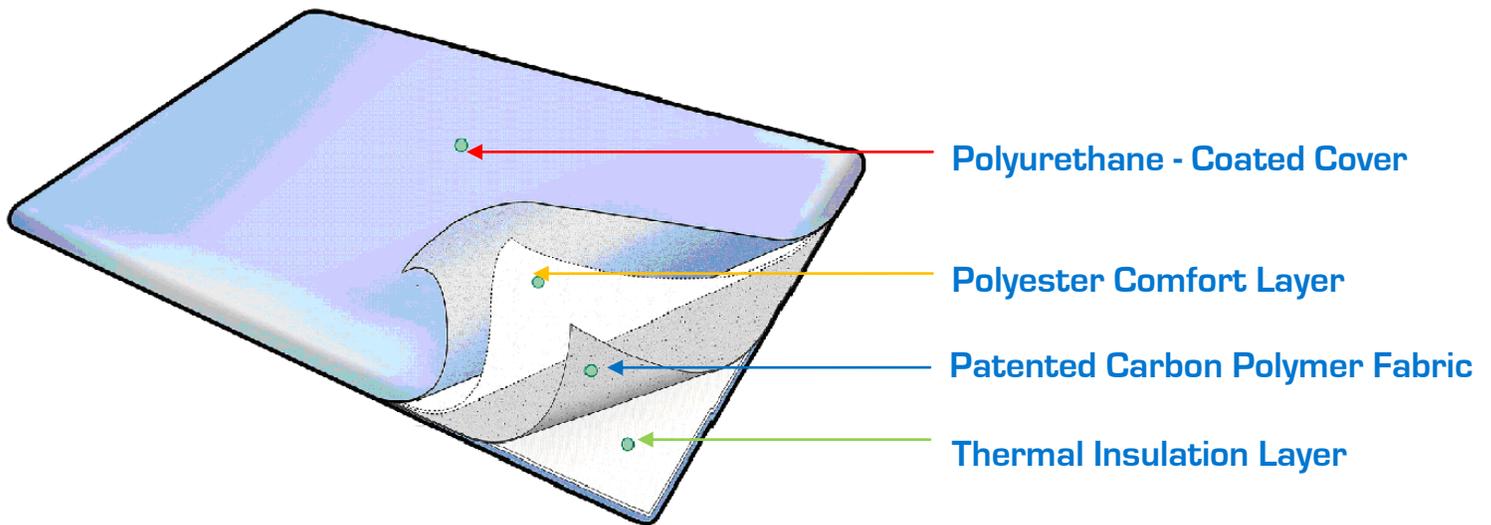


In this study in the *British Journal of Anesthesia*, temperature was maintained above the hypothermic threshold of 36°C in 68% of patients in the pre-warmed group, compared with 43% of patients in the control group. All surgical patients were warmed inter-operatively.

Figure 1 – *British Journal of Anesthesia* (2008) 101 (5): 627-631.



## Multi-Layer Thermal Blankets



Product Description	Part Number	Dimensions
KOALA Control Unit, 110V	29 - KOR - CON	
<b>PRE-OP Blankets</b>		
KOALA PRE-OP Blanket, Long	29 - KOR - ORBLL	20" x 42"
KOALA PRE-OP Blanket, Short	29 - KOR - ORBLS	20" x 23"
<b>PACU / Recovery Room Blankets</b>		
KOALA Recovery Room Blanket, Full Length	29 - KOR - RBFL	65" x 32"
KOALA Recovery Room Blanket, Full Length, Wide	29 - KOR - RBFLW	65" x 47"

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