Yesterday’s standard practice = Intra-op hypothermia

Anesthesia causes hypothermia
• Anesthesia causes vasodilatation and a free flow of warm blood from the core to the cooler legs (periphery). This causes a rapid drop in core temperature—“redistribution hypothermia.”

<table>
<thead>
<tr>
<th>Time (hr)</th>
<th>Core Temp (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>37</td>
</tr>
<tr>
<td>1</td>
<td>35</td>
</tr>
<tr>
<td>2</td>
<td>34</td>
</tr>
<tr>
<td>2.5</td>
<td>33</td>
</tr>
<tr>
<td>3</td>
<td>32</td>
</tr>
</tbody>
</table>

Pre-warming prevents hypothermia
• A review of 10 published studies reveals the average pre-induction temperature loss is 0.61°C (1-10) and the average post-induction redistribution temperature loss is 1.11°C (6-13).
• Forced-air warming typically begins immediately following induction, but it does nothing to prevent the initial combined 1.72°C drop in temperature. Most patients quickly become hypothermic after induction.

Continuing to warm the patient intraoperatively will maintain a normothermic body temperature throughout the case.
• The patient never becomes hypothermic and avoids the risks associated with hypothermia: increased wound infections, increased bleeding and increased morbid cardiac events.

Tomorrow’s standard practice = Flatline™ normothermia

Pre-warming the legs prior to induction is the only way to prevent the “redistribution hypothermia” resulting from anesthesia.

Intra-op forced-air warming cannot prevent redistribution hypothermia
• The average of 10 published studies shows Bair Hugger® (forced-air warming) intraoperatively warms patients at only 0.1°C per hour (4-9,11,13-15).
• In a 2.5 hour surgery patients are frequently hypothermic from incision to the last stitch.
• Intraoperative warming with forced-air does not reliably prevent hypothermia, and it’s also expensive.

Pre-op warming is designed to warm patients at every stage of the surgical process in a low-cost, highly effective manner.

Anesthesia causes vasodilation and a free flow of warm blood from the core to the cooler legs (periphery). This causes a rapid drop in core temperature—“redistribution hypothermia.”

A continuum of warming throughout the perioperative process is necessary to prevent unintended hypothermia. Pre-warming the legs prior to induction is the only way to prevent the “redistribution hypothermia” resulting from anesthesia.
## Flatline™ Normothermia and Flatline Costs

### Total Cost per Operating Room per Day

<table>
<thead>
<tr>
<th># of Patients per OR per Day</th>
<th>Total Cost per OR per Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$10</td>
</tr>
<tr>
<td>2</td>
<td>$20</td>
</tr>
<tr>
<td>3</td>
<td>$30</td>
</tr>
<tr>
<td>4</td>
<td>$40</td>
</tr>
</tbody>
</table>

### # of Patients per OR per Day

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>$10</td>
<td>$20</td>
<td>$30</td>
<td>$40</td>
</tr>
</tbody>
</table>

**Normothermia isn’t the only Flatline you’ll get with Hot Dog®!**

- Hot Dog warming provides Flatline normothermia for a Flatline cost of less than $10 per day—that’s $10 total for all patients in that operating room that day!

- Even if yesterday’s standard practice of only warming intra-op is your preference, try Hot Dog warming at around $5.25 per OR per day!

### References


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**Not All Flatlines Are Bad.**

**The NEXT WAVE in Temperature Management:**

**Flatline™**

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**FLATLINE COST**

Need yet another reason to go [air-free] in the operating room with Hot Dog? Visit www.BlowingAirIsRisky.com to learn about the risks of blowing air in the OR.

**What's growing inside your hot-air blowers?**

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**The NEXT WAVE in Temperature Management: Flatline™**

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**References**