



## Recommended Air-Forced Warming Solution 充气式加温性能优势

### 电加热毯与充气式加温毯预防围术期低体温的效果比较 John, M., et al., British Journal of Anesthesia, 2016.

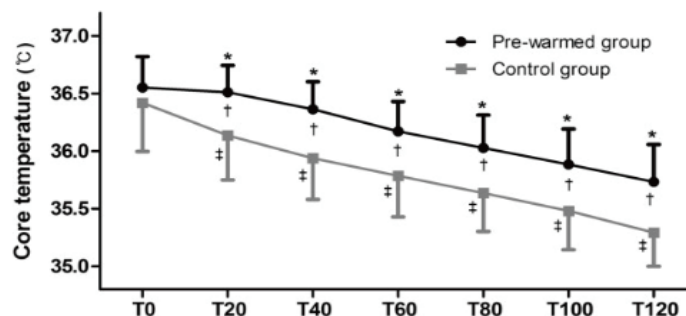
研究者用160例患者的随机对照研究,评估了电阻加热与充气式加温设备在预防围手术期意外低体温症中作用。患者随机分配到两组,一组使用Bair Hugger 充气式加温系统,另一组使用身下导热床垫。在手术结束时,

- 充气式加温组的患者平均核心体温比导热床垫组更高。
- 充气式加温组在手术结束时的低体温率为36%,电阻式加热组为54%。
- 在预防术后低体温症的应用中,充气式加温比传导加热更有效。

### 预保温对动脉瘤手术术中低体温发生率的影响

### The efficacy of pre-warming on reducing intraoperative hypothermia in endovascular coiling of cerebral aneurysms Shin KM, et al., BMC Anesthesiol. 2015

- 随机对照试验入组病例72名
- 预保温组(36例采取3M Bair Hugger™充气式加温30分钟) Vs. 对照组(36例)
- 结果显示:
  - 手术开始后预保温组及对照组的体温都有下降趋势,但预保温组术中核心体温都高于对照组
  - 采取预保温措施能够显著降低术中低体温发生率



## 骨科手术中的空气细菌污染:一项随机对照试验

### Airborne bacterial contamination during orthopedic surgery: A randomized controlled pilot trial. Oguz R, et al., J Clin. Anesth. 2007

这项随机对照研究分析了骨科手术中手术室的细菌数量。实验中包括了有或没有单向层流系统的手术室。80例骨科手术患者随机分为充气式保温组(使用Bair Hugger™上半身加温毯)和电热毯保温组。使用沉降法,选择手术间内6个标准位置放置琼脂平板用于监测。

相较于层流手术间,没有单向层流系统的手术间内可以发现随手术时间增加或延长,细菌计数明显增加。其中,两组保温患者的细菌计数并无明显差异。

结论:应用单向层流系统的手术间,可以降低骨科手术中空气细菌数量。而应用充气式保温系统并不会增加空气中细菌的数量。

## FDA声明关于充气式加温(压力暖风)的说明

### Forced Air Thermal Regulating Systems: Healthcare Provider Letter—Information About Use. U.S. Food & Drug Administration. 2017-08-30

- 充气式体温调节系统,被证明可以减少出血,加快复苏时间,减少感染的风险。
- FDA经过对现有数据的回顾分析后,无法界定出充气式体温调节系统与空气细菌数量的相关性。

The screenshot shows the FDA website's 'Safety' section. The main heading is 'Forced Air Thermal Regulating Systems: Healthcare Provider Letter - Information About Use'. Below the heading, there are social media sharing icons for Facebook, Twitter, LinkedIn, Print, Email, and Print. The text indicates the alert was posted on 08/30/2017 and is intended for an audience of Surgery, Nursing, and Anesthesia. The 'ISSUE' section states that the FDA is reminding healthcare providers that using thermoregulation devices during surgery, including forced air thermoregulating systems, have been demonstrated to result in less bleeding, faster recovery times, and decreased risk of infection for patients. The text further explains that the FDA recently became aware that some healthcare providers and patients may be avoiding the use of forced air thermal regulating systems during surgical procedures due to concerns of a potential increased risk of surgical site infection (e.g., following joint replacement surgery). After a thorough review of available data, the FDA has been unable to identify a consistently reported association between the use of forced air thermal regulating systems and surgical site infection. Therefore, the FDA continues to recommend the use of thermoregulating devices (including forced air thermal regulating systems) for surgical procedures when clinically warranted. Surgical procedures performed without the