

## Persistent hypothermia after CPB should be avoided in the early postoperative period.

Class (Strength) of Recommendation	Class I (Strong)
Level (Quality) of Evidence	Level B-NR (Non-randomized)

### Main Points

- Unless active measures are undertaken to maintain patient normothermia during chest closure and transport, the patient's temperature may dip below 35°C prior to arrival in the ICU.
- Even mild hypothermia is associated with multiple physiologic derangements including coagulopathy, increased incidence of wound infection, prolonged hospital stay and death.
- Large registry observational studies suggest that if hypothermia is treated, outcomes can be improved.
- Hypothermia can be reduced by using forced-air warming blankets, and by warming irrigation and IV fluids.

### Key References

1. Insler SR, O'Connor MS, Leventhal MJ, Nelson DR, Starr NJ. Association between postoperative hypothermia and adverse outcome after coronary artery bypass surgery. *The Annals of thoracic surgery*. 2000;70:175-181.
2. Greason KL, Kim S, Suri RM, Wallace AS, Englum BR. Hypothermia and operative mortality during on-pump coronary artery bypass grafting. *The Journal of thoracic and cardiovascular surgery*. 2014;148:2712-2718.
3. Karalapillai D, Story D, Hart GK, et al. Postoperative hypothermia and patient outcomes after elective cardiac surgery. *Anaesthesia*. 2011;66:780-784.
4. Engelen S, Himpe D, Borms S, et al. An evaluation of underbody forced-air and resistive heating during hypothermic, on-pump cardiac surgery. *Anaesthesia*. 2011;66:104-110.
5. Campbell G, Alderson P, Smith AF, Warttig S. Warming of intravenous and irrigation fluids for preventing inadvertent perioperative hypothermia. *Cochrane database of systematic reviews*. 2015:CD009891.

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