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### Allaying Fear of Anesthesia in Children

*To the Editor:*—Dr. Simmonds' concern about the phrase "put to sleep" frightening children who have had a pet "put to sleep" is very appropriate.<sup>1</sup> For some years now I have avoided (and have taught others to avoid) this locution. Instead we say "help you take a nap." Nap may not always be welcome in childhood, but it is familiar, benign and reversible, and therefore not threatening.

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#### REFERENCE

1. Simmonds RL: Anesthesia and pet euthanasia. *ANESTHESIOLOGY* 53:522, 1980

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### Rectal Temperature is Best Indicator of Adequate Rewarming during Cardiopulmonary Bypass

*To the Editor:*—I also have observed hypothermia following cardiopulmonary bypass (CPB) as reported by Noback and Tinker in a recent issue of *ANESTHESIOLOGY*.<sup>1</sup> It has been my impression that rectal, rather than nasopharyngeal or esophageal temperature monitoring, is the better guide for adequate whole body rewarming during CPB.

To confirm this impression I studied 30 consenting patients, 18 men and 12 women, ages 32-75 years, scheduled for coronary artery bypass (16), aortic (12), or mitral (2) valve replacement. Thermistor probes, calibrated against a mercury thermometer, were placed in the rectum, esophagus, and nasopharynx of each patient. Hypothermia during CPB was induced by cooling the perfusate to about 25° C and rewarming by warming the perfusate to about 38° C. CPB was concluded when rectal temperature rose to about 35° C. Temperatures were recorded every 15 min during the rewarming phase and for 1 h after the conclusion of CPB. The results, summarized in table 1, were analyzed statistically using Student's *t* test; *P* values below 0.05 were considered significant. Rectal temperature remained stable during the first post-CPB hour while esophageal and nasopharyngeal temperatures drifted downwards until they reached the same level as rectal temperature.

Highly perfused tissues, such as the heart and brain, constitute only 9 per cent of body mass but receive 75 per cent of the cardiac output.<sup>2</sup> Their temperatures, as represented by esophageal and nasopharyngeal temperatures, respectively, equilibrate quickly with the perfusate's temperature, but they represent only a small part of the body mass. In contrast, rectal temperature lags behind esophageal and nasopharyngeal temperatures, but it represents the temperature of a larger part of the body mass.

TABLE 1. Rectal, Nasopharyngeal (NP), and Esophageal Temperatures during the Rewarming Phase of CPB

State	Temperatures (°C)*		
	Rectum	NP	Esophagus
Before rewarming	27.7 ± 0.1	25.1 ± 0.4†	24 ± 0.4†
Rewarming 30 min	33.2 ± 0.4	38.2 ± 0.3†	37.8 ± 0.2†
CPB off	35.6 ± 0.2	37.5 ± 0.2†	36.9 ± 0.2†
CPB off 30 min	35.8 ± 0.1	36.3 ± 0.1	35.8 ± 0.1
CPB off 60 min	35.6 ± 0.1	35.8 ± 0.1	35.2 ± 0.1

\* Values are means ± SE.

† *P* < 0.005 when compared to rectal temperatures.