tions confirmed this prediction. We recommend that, during integrated electromyography, electrode placement and hand fixation, as described in figure 2, be used to minimize movement induced twitch response changes.

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In Reply—Our experience* † with intraoperative integrated electromyography partially supports the conclusions of the authors. We agree that improper fixation of the recorded muscle(s) may result in altered evoked EMG responses. Constant pretension on the specific recorded muscle, not the simple limb fixation recommended by Kosek et al., is essential to avoid movement artifact. However, the nature of the waveform alteration cannot be reliably predicted; response amplitude may increase or decrease. Therefore, movement-related changes are an unlikely explanation for the commonly observed “incomplete” recovery of EMG waveforms at the end of surgery.

Mechanomyographic (twitch!) and electromyographic methods of monitoring neuromuscular function do not measure the same process, so that discrepancies between the two often occur. In the absence of artifact, EMG monitors reliably document depressed muscle responsiveness to motor nerve stimulation. This phenomenon is described by the manufacturers.1,2 It apparently relates to residual effects of anesthetics and neuromuscular blocking agents. Signs of residual depression are not often visually detected from twitch because of the inherent lower sensitivity and reliability.3

Optimal placement of stimulating and recording electrodes depends both on the needs of the anesthesiologist and the clinical circumstances. Therefore, we challenge the notion that there is one best, all-purpose recording site. The upper facial and diaphragmatic muscles are far more resistant to non-depolarizing neuromuscular blockers than are the hand muscles.4 Thus, complete block of abdominal muscles is better monitored from facial than hand muscles. In contrast, this differential sensitivity illustrates the value of hand muscle monitoring during recovery, to assure the responsiveness of respiratory muscles. Interpatient EMG response variation is largest for the muscles of the hand, due to occupational differences. The flexor hallucis brevis provides an attractive alternative for those wishing to either minimize variation or monitor infants.

The authors’ figure 2 seems inconsistent with their recommendation. The stimulating electrodes appear to lie midway between the ulnar and median nerves. Simultaneous activation of many palmar muscles with such a placement would generate a complex and virtually uninterpretable evoked EMG response. Similarly, if the intent was to specifically monitor the adductor pollicis, recording electrode placement appears to be almost perpendicular to the vector. Finally, recording from this muscle dictates immobilization of the thumb, preferably with a specified degree of pretension.

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CPAP or CPP?

To the Editor—Slinger et al.¹ have applied continuous positive airway pressure (CPAP) to the non-dependent lung during one-lung ventilation for thoracic surgery, and found an improvement in arterial oxygenation. Their method of application of CPAP was very unique and effective. I believe that the meaning of CPAP used by authors in their article is continuous positive pressure applied to the non-dependent lung in order to maintain a static inflation during thoracic surgery. Since the definition of CPAP, which is a well-established entity, is continuous positive pressure applied to the patient who is breathing spontaneously,² the authors’ choice of word CPAP may be confusing and, perhaps, incorrect. Would continuous positive pressure (CPP) or prolonged positive airway pressure be the more appropriate term? There is a distinct difference in the airway pressure curve between CPAP and CPP (fig. 1). Although there is far from universal agreement on terminology used in respiratory care, it must have sound technical and physiological basis, and be clinically useful without confusion.

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In Reply.—Dr. Lee is correct that using the term CPAP to describe the current well-established practice of improving arterial oxygenation by positive pressure insufflation of oxygen to the non-ventilated lung during thoracic surgery may lead to some confusion, because CPAP was initially described for spontaneously breathing patients.

In a clinical study in 1980, Capan et al.¹ referred to “oxygen insufflation into the upper lung at 10 cm H₂O” during one-lung anesthesia and avoided using an acronym. In 1981, Alfery et al.² referred to this technique as “PEEP to the non-ventilated lung.” In 1982, Benuomf³ stated “a better term for this ventilatory pattern arrangement would be non-ventilated lung contin-

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