This is especially true if one is not familiar with the purging method or when little help is available, e.g., weekends or nights. Purging the machine during an MH crisis diverts one's attention away from managing the patient.

The circle system with a CO₂ absorber is the circuit of choice in MHS patients, be it a purged machine or a dedicated clean machine. The purge should take less than 10 min to perform. In facilities that do not have a dedicated clean machine, I suggest that the purging instructions and replacement tubing be kept on the MH treatment cart. Whether the system described by Donahue and Schulz is adequate to give an uneventful anesthetic is not the issue. It is just not the best that we have to offer.

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In Reply—We appreciate the comments offered by Dr. Allen. Our system was designed for use in infants and children with indications of malignant hyperthermia susceptibility (MHS) (i.e., an unexplained fever after a previous anesthetic, a questionable diagnosis of myotonia). These patients were coming to surgery for minor procedures (i.e., inguinal herniorrhaphy, muscle biopsy, pressure equalization tubes). The system has worked well in these cases; however, as pointed out by Dr. Allen, none of these patients developed a malignant hyperthermia (MH) crisis.

The Bird Products Corp., Palm Springs, California, manufactures two nitrous oxide/oxygen (N₂O/O₂) blenders. A low flow model (No. 2903) that allows fresh gas flows (FGF) of 2–18 liters per minute (LPM) and a high flow model (No. 2902) with FGF of 15–100 LPM. The low flow blender was chosen because of the size of the involved patient population. In children less than 25 kg, our system would provide the increased minute ventilation recommended during an MH crisis without rebreathing. Use of their high flow blender in larger patients would eliminate the possibility of rebreathing in this group also.

We agree with Dr. Allen that, during an MH crisis, the breathing system must be able to deliver high flow oxygen. Many systems can do this. A high flow non rebreathing system may be advantageous because it would eliminate the rebreathing of exhaled volatile agents as well as the heating of inspired gases by the exothermic reaction in the CO₂ absorber.

The avoidance of triggering agents, close monitoring, and a high index of suspicion are crucial when dealing with MHS patients. Our system is simple, portable, and clearly uncontaminated and we believe it has merit in this patient population.

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Electrocardiographic Lead Systems

To the Editor—In their excellent study, London et al.¹ found that for the intraoperative detection of ST segment deviation, among the 12 standard electrocardiographic (ECG) leads, lead V₄ and then V₅ are the most sensitive. We would like to add that Kubota et al.² and others made similar observations in supine patients after treadmill exercise, suggesting that other findings from exercise testing may also be applicable to the perioperative setting.

Kubota et al.² studied ST changes in 87 body surface leads in 61 patients. After exercise, ST depression was evident in V₄ lead in 87% of the patients. ST depression occurred only in leads other than V₄, V₅, and V₆ in 10% of the patients. The most sensitive leads were V₄, V₅, V₆, V₇, V₈, and V₉, respectively. Leads V₄, V₅, and V₆ are one interpace below V₄, V₅, and V₆, respectively.

Concomitant ST elevation was present in right upper chest leads in 74% of the patients. Of these, 87% had ST elevation at a location just below the right clavicle on the midclavicular line (R₉). Thus the most