incorporates exercise training. There must be a clear description of the research question if the results of a study are to be properly understood.

George Ntoumenopoulos, PhD
The Royal Melbourne Hospital
Parkville, Australia

REFERENCES

To the Editor:

I am afraid Dr. Ntoumenopoulos did not read our study in great depth. As outlined in the "Materials and Methods," we looked at evidence-based medicine for indications for chest physiotherapy. We excluded patients in whom a panel of experts felt that chest physiotherapy was indicated. The remaining patients were randomized, and physicians were contacted. The focus of the study was the impact of a single telephone consult by a physician/fellow. The reduction in chest physiotherapy was one of the outcomes.

With respect to the use of the term chest physiotherapy, we provided ample references, and I am afraid it would be very obvious for any reader that this therapy includes percussion, postural drainage, and mechanical vibration. However, it does not include exercise training, as Dr. Ntoumenopoulos cited in his references. We are familiar with the paper that Casaburi et al have published. That paper has nothing to do with chest physiotherapy. It studies the impact of high- and low-intensity exercise on the reduction of lactate levels.

Zab Mohsenifar, MD, FCCP
Division of Pulmonary/Critical Care Medicine
Cedars-Sinai Medical Center
Los Angeles

REFERENCE

Pneumothorax ex vacuo

To the Editor:

We read with interest the article by Woodring and colleagues entitled "Pneumothorax ex vacuo" (October 1996). While recognizing that this is a rare phenomenon, the authors report on three patients with pneumothorax ex vacuo occurring at their institution within 1 year, and suggest that it may occur more often than previously thought, but goes unrecognized. The purported mechanism for pneumothorax ex vacuo is a sudden increase in the negative intrapleural pressure due to bronchial obstruction. As a result, gases from the surrounding tissues are drawn into the more negative-pressure environment of the pleural space. This explanation, however, does not incorporate the alterations of the alveolar and intrapleural pressures that result from positive pressure ventilation, a modality used in each of their patients.

The authors need to explain the rapidity of pleural gas resorption observed in their patients. In a supine patient, the area of greatest negative pleural pressure would be in West's zone 1 or anteriorly. Since a small anterior pneumothorax is not easily recognized in supine patients, is it possible that the disappearance of the pneumothorax in these patients was related to the positioning of the patient during subsequent imaging rather than from endotracheal suctioning as proposed by the authors?

In the clinical context of lobar collapse, the authors admonish us to consider pneumothorax ex vacuo and to withhold chest tube insertion in favor of bronchial suctioning. The natural history and dangers of observation of this type of pneumothorax are not addressed, nor is the course of action if suctioning does not resolve the problem.

The authors fail to emphasize the fact that their patients have multiple other reasons for pneumothoraces. Each of these patients were involved in motor vehicle accidents resulting in significant traumatic injury. Indeed, one patient sustained bilateral pulmonary contusions. Each patient was on mechanical ventilation at the time of the pneumothorax. Two of the patients were noted to be on positive end-expiratory pressure. One patient developed his pneumothorax immediately after tracheotomy. Finally, each patient had at least one central venous access in place at the time of the pneumothorax. Obviously, there are multiple well-documented risk factors for pneumothorax in these patients that would need to be excluded before assignment of the diagnosis "pneumothorax ex vacuo." The authors should stress that a failure to recognize and appropriately treat a pneumothorax in this setting may result in a potentially disastrous and life-threatening situation.

Ryland P. Byrd, Jr, MD, FCCP
Thomas M. Roy, MD, FCCP
Department of Pulmonary Medicine
East Tennessee State University
Johnson City, Tennessee

REFERENCES

To the Editor:

Drs. Byrd and Roy are correct that pneumothoraces secondary to positive pressure ventilation or laceration of the visceral pleura from deep-line insertion or rib fractures are often clinically significant and frequently require chest tube drainage. However, it is well-known that intrapleural suction via a chest tube will not re-expand a lobe if the lobar bronchus to that lobe is occluded.

Drs. Byrd and Roy, however, fail to acknowledge the specific