benzodiazepines accounts for the high incidence of explicit memory in our study."

Apparently, then, the investigators found some explicit memory for list words (9 patients) and frequent explicit memory for intraoperative events (9 patients). But they conclude that no significant explicit memory occurred; in their own words, "The findings of the present sufentanil/nitrous oxide study support those studies that have found neither explicit nor implicit memory after surgical anesthesia."

In fact, their study simply finds no implicit memory for word lists, given the absence of explicit recall of those lists. The data seem to support the possibility of explicit memory itself, both for words and events. Furthermore, the data may suggest that patients remember what is important to them, since explicit memory for events seems to have occurred much more often than memory for words.

Details about the word and event recollections might clarify these possibilities. This information would be an important addition to an intriguing research report.

ELANA B. DOERING, PH.D., M.D.
Resident in Anesthesia
Hospital of the University of Pennsylvania
34th and Spruce Streets
Philadelphia, Pennsylvania 19104

REFERENCE
(Accepted for publication August 3, 1992.)

Anesthesiology 77:1053–1054, 1992

In Reply—In our previous research, we showed a dissociation between explicit and implicit memory in surgical patients who experienced adequate anesthesia with isoflurane.* The purpose of our most recent study was to determine whether a similar dissociation could be observed with other anesthetic regimes. For this purpose, we restricted our analysis to those patients who, like the vast majority of surgical patients, showed no explicit memory whatsoever for any aspect of their surgical experience, including the words presented on the audiotape, as measured by a test of free recall. We were somewhat surprised to find that some of our patients anesthetized with sufentanil/nitrous oxide displayed hints of explicit memory for surgical events; but our protocol, which was designed to provide a replication of our isoflurane study (in which no such hints were apparent), required that these patients be eliminated from statistical analysis. To repeat our findings: with isoflurane, implicit memory was spared to some degree in patients for whom explicit memory was abolished entirely; however, when sufentanil abolished explicit memory, it also abolished implicit memory. This direct comparison, removed from our paper at the request of the Editor to avoid publication repetition, is documented elsewhere.²

Unfortunately, we have no way of gauging the accuracy of these particular patients' "vague, dreamlike" reports. For the most part, they were generic thoughts and images that could pertain to any surgical procedure; perhaps it was inaccurate to refer to them as "recollections," but they were made in response to a question about memory, so to be conservative, we characterized them as such. (We hasten to add that all of these patients were adequately anesthetized according to standard

---


Anesthesiology 77:1053–1054, 1992

Partially Paralyzed: A Personal Experience

To the Editor—I was one of the volunteers partially paralyzed to a T₄–T₅ ratio of 0.2 with atracurium in the study reported by Sharpe et al.¹ During the first phase of this study, I was lying supine. While in that position, I found it difficult to lift my limbs off the bed. All attempts to do so failed in midcourse. Although my tongue was lying limp in my throat, I was not choking. Difficult phonation was due to inability to breathe but to not being able to lift my lips off my teeth, so that I could only lip. I could not focus my eyes, but I did not have diplopia.

At the end of the study, I was turned on to my right side. In that position, I could move my arms freely and kick my legs with ease, as long as I confined all movements to the plane of the bed. I could purse my lips again, and my speech cleared. My vision improved also, particularly

---

(Accepted for publication August 3, 1992.)