

thesiologists from staying in the magnet room during MRI scans. We have not found any studies of MRI-induced injury to healthcare personnel from long-term exposure to EMFs or any studies correlating exposure levels to disease. Anesthesia personnel who provide limited or occasional care in the MRI environment run a risk of exposure to EMFs.^{3,4} Anesthesia providers should carefully consider their anesthetic technique to minimize the time spent in the MRI magnet room. In the future, exposure limits to EMFs should be recorded by anesthesia personnel to facilitate future epidemiologic studies to determine EMF exposure rates. More research is required in developing anesthetic techniques to minimize the EMF exposure limits.

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In Reply:

We appreciate the comments from Bryan *et al.* regarding our article¹ that is related to electromagnetic fields (EMFs) in operating rooms, but magnetic resonance imaging (MRI) magnetic rooms. The anesthesiologists have been exposed to a large amount of EMFs in MRI magnetic rooms because of the recent lack of EMF-safe monitors and machines in an MRI environment. However, there is no specific study about the amount of EMFs in MRI magnetic rooms related to the anesthesiologist and long-term effects of EMFs to the anesthesiologist in an MRI environment. We agree with your opinion that anesthesiologists should consider minimizing the time spent in the MRI magnetic room and should start an epidemiological study for the anesthesiologists working in an MRI environment.

European directive 2004/40/EC on occupational exposure to EMFs was to be implemented in the Member States of the European Union by 2008. Because of some unexpected problems, the deadline was postponed until 2012.² Now is the time, we think, for all anesthesiologists to be interested in their working environment, especially EMFs in operating rooms, MRI magnetic rooms, and intensive care units.

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Implicit Memory Phenomena under Anesthesia Are Not Spurious

To the Editor:

I read with great interest the article by Hadzidiakos *et al.*¹ in the August issue of *ANESTHESIOLOGY*. These investigators conducted a study of memory function under anesthesia using the process dissociation procedure (PDP), a method that my colleagues and I have used in the same context in the past.^{2–4} In contrast to our studies, Hadzidiakos *et al.* report no evidence of memory function in terms of word stem completion test performance, a discrepancy for which the authors provide plausible explanations such as the depth of anesthesia and midazolam premedication. However, notwithstanding their null finding, one of the PDP models—the original—produced parameters suggesting the presence of controlled (explicit) and automatic (implicit) memory processes. By extending the model to include guessing parameters, the authors go on to show that the original model produces faulty estimates and that other published results using the original model are faulty. That is, Hadzidiakos *et al.* find no evidence of any memory processes in three of the four inspected studies when the extended measurement model is applied. They conclude that in these studies there was no contribution (*i.e.*, evidence) of memory at all and that past findings are spurious.

I take issue with this conclusion for several reasons. Foremost, a model that generates discrepant parameters depending on its assumptions or underlying structure should not invalidate the behavioral findings it attempts to model. When significant differences are found in patients' postoperative behavioral responses to old material presented under anesthesia *versus* new material not presented before, this difference is real and evidences memory for old material regardless of how the underlying process is labeled. Dismissing these behavioral observations ignores an overwhelming body of evidence in favor of implicit memory ("priming") phenomena in the cognitive psychology and neurology literature and surely cannot have been the intent of Hadzidiakos *et al.*