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**Realistic Floor Vibration Criteria for MRI Operation: A**  
**Compilation of Case Studies**

Basel Jurdy and Michael Yantis  
Sparling, 720 Olive Way Suite 1400, Seattle, WA 98101-1853, USA

Vibration criteria published by various Magnetic Resonance Imaging (MRI) manufacturers have been found to be too conservative with respect to allowable floor vibration resulting from MRI operation. The floor vibration produced by the MRI operation is greater than the published criteria. Previous experience by the authors has shown that there is an allowable threshold for MRI operation induced vibration, above which the MRI will not operate properly. This paper reports results of a survey of structural floor systems for 1.5T and 3.0T MRIs that are working satisfactorily. The most common floor systems have been analyzed structurally using finite element analysis to determine the forced response to a standardized input. Measurement results for some of the floors during MRI operation is also included.