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**”Vibration Kills” and other lessons from the trenches**

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In many areas of acoustics and vibration design, criteria are based upon parameters such as comfort, privacy, intelligibility, productivity, or machine precision. One can approach these criteria with a somewhat dispassionate attitude. However, when working with the biological research communities, one is periodically reminded by the researchers and medical practitioners that much of their work ultimately deals with life-and-death issues, either for patients for whom a drug or medical device is intended, or for organisms used in test protocols. The authors will share a collection of case studies in which these issues are illustrated. These include:

- o Death of cells due to excessive vibration during electrophysiology
- o Vibration-induced nausea experienced by a surgeon using a surgical microscope for spine surgery
- o A life-saving medical technology resulting from a serendipitous discovery in a low-vibration lab environment

These case studies highlight the need for care in the specification, design, and construction of biological and biomedical research and healthcare facilities.