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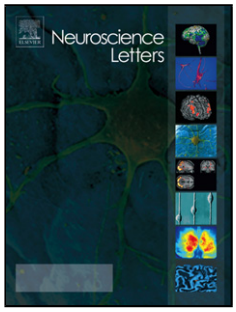

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Little evidence for a chronotolerance effect for impulse noise exposure in the C57BL/6J mouse

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Highlights:

- Time of exposure on the light/dark cycle can affect injury.
- A chronotolerance effect has been shown for noise-induced hearing loss.
- Mice were exposed to high-level impulse noise at four different time points.
- No chronotolerance effect was observed for impulse noise-induced threshold shift.

Abstract

Noise-induced hearing loss affects a large number of adults and children worldwide, and continues to be a major public health problem. The cochlea is an organ that maintains delicate metabolic homeostasis and precise mechanical architecture. Disruption of either can cause temporary or permanent injury. Impulse noises, which are short-duration, high-level bursts of sound caused by explosions, such as gunfire, can injure the cochlea through combinations of