

Noise-cancelling headphones prevent vomiting after surgery

Nausea and vomiting are common after surgery, which may be partly related to the noises patients are exposed to, even under general anaesthetic. Wearing noise-cancelling headphones while on the operating table reduces the risk

By [Chris Stokel-Walker](#) on October 17, 2026



Headphones could be a simple way to ease vomiting after surgery. Anchiy/Getty Images

Nausea and vomiting are common after [surgery](#), but wearing noise-cancelling headphones during the procedure helps prevent these unpleasant side effects. This simple intervention also supports the idea that our brain processes sounds even when we're not consciously aware of our surroundings.

"That data is really encouraging and is actually in line with decades of research showing that anaesthesia is not simply an off switch," says [Vigi Katlowitz](#) at the Baylor College of Medicine in Houston.

Nausea and vomiting are common side effects of anaesthetics. Patients are routinely given drugs to prevent them, but [Huayue Liu](#) at the First Affiliated Hospital of Soochow University in Suzhou, China, and his colleagues wanted to investigate a non-pharmacological approach and presented their results at the Anesthesiology conference in San Diego.

The team recruited 192 patients who had keyhole gynaecological surgery under general anaesthetic. Half were randomly assigned noise-blocking ear defenders, which they wore from the start of anaesthesia until the end of surgery. All the patients received standard anaesthesia and anti-nausea medication.

Within 48 hours of the surgery, 35 per cent of those wearing ear defenders experienced nausea or vomiting, compared with 52 per cent of those without them. The researchers also found that symptoms were less severe among those whose hearing had been protected, defined as the patients vomiting less and it having less of an impact on their daily life.

Operating theatres aren't generally quiet places, with Liu recording average noise levels of 66 decibels – around the level of a normal conversation – during the study.

The relationship between [sound](#), nausea and vomiting, and anaesthesia is unclear. However, the latter affects the nervous system, and noise is thought to trigger a stress response that activates the autonomic nervous system. This helps regulate involuntary bodily functions, such as heart rate, and interacts with the brainstem pathways involved in nausea and vomiting.

However, Liu stresses that the researchers didn't look into the mechanism behind how ear defenders prevent nausea and vomiting, so the idea of them dampening this response "remains a hypothesis".

Nevertheless, the results tell us more about [brain](#) activity under anaesthesia. "The biological plausibility is that general anaesthesia produces unconsciousness without necessarily eliminating all neural processing of sound," says Liu.

Liu hopes to one day conduct a larger trial at multiple locations that measures noise exposure relative to nervous system activity among patients under general anaesthetic.