

# Music may offer alternative to preoperative drug routinely used to calm nerves

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Music may offer an alternative to the use of a drug routinely used to calm the nerves before the use of regional anaesthesia (peripheral nerve block), suggest the results of a clinical trial, published online in the

journal *Regional Anesthesia & Pain Medicine*.

It seems to have similar effects as the sedative midazolam in reducing anxiety before a peripheral [nerve](#) block—a type of anaesthetic procedure done under ultrasound guidance, and designed to numb a specific region of the body.

Preoperative anxiety is common, and it can raise levels of stress hormones in the body, which in turn can affect recovery after surgery.

It is usually treated with benzodiazepines, such as midazolam. But these drugs have side effects, including affecting breathing, disturbing blood flow, and paradoxically increasing levels of agitation and hostility. Use of these drugs also requires continuous monitoring by a skilled clinician.

Music medicine has been used to lower preoperative anxiety before, but it has not been directly compared with intravenous midazolam.

The researchers wanted to find out if it might offer a suitable alternative to midazolam to calm the nerves before carrying out a peripheral (regional) nerve block.

They randomly assigned 157 adults to receive either 1-2 mg of midazolam (80), injected 3 minutes before the use of a peripheral nerve block, or to listen to Marconi Union's Weightless series of music via noise cancelling headphones (77) for the same period.

Levels of anxiety were scored using a validated measure (State Trait Anxiety Inventory-6, or STAI-6 for short) before and after the use of each anxiety calming method. Satisfaction among patients and doctors were scored on a 10-point scale, with 0 reflecting the lowest level of satisfaction.

Changes in the levels of preoperative [anxiety](#) were similar in both groups, although patients in the music group were less satisfied than those given midazolam, possibly because patients were not allowed to choose the music they listened to, suggest the researchers.

But there was no difference in satisfaction levels among doctors.

Both patients and doctors thought it was harder to communicate when music was used to calm nerves, possibly because of the use of [noise cancelling headphones](#), and not standardising the volume of the music, suggest the researchers.

They accept that a comparison lasting just 3 minutes may have been too short, but this period was chosen because that is how long it takes for midazolam to reach peak effectiveness. And they acknowledge that the measure used to assess satisfaction wasn't a validated scale.

Nevertheless, their findings prompt them to conclude that music may be offered as an alternative to midazolam before carrying out a regional nerve block.

"However," they caution, "further studies are warranted to evaluate whether or not the type of [music](#), as well as how it is delivered, offers advantages over [midazolam](#) that outweigh the increase in communication barriers."

**More information:** Music versus midazolam during preoperative nerve block placements: a prospective randomized controlled study, *Regional Anesthesia & Pain Medicine*. (2019). [DOI: 10.1136/rapm-2018-100251](#)  
[rapm.bmj.com/lookup/doi/10.1136/rapm-2018-100251](http://rapm.bmj.com/lookup/doi/10.1136/rapm-2018-100251)

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