

# Soothing words and music during surgery might reduce postoperative pain

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Listening to soothing words and music during surgery appears to reduce pain levels and the need for pain relieving drugs after surgery, finds a trial published in the Christmas issue of *The BMJ*.

Around the globe, more than 200 million people have surgery each year, mostly under general anaesthesia.

General anaesthesia is thought of as a state of no sensations, but while awareness is rare, there is some evidence for a state of 'connected consciousness' (an ability to perceive the [external environment](#)) while under general anaesthesia.

If true, could using this perception in a positive way during surgery help to reduce the need for opioids 24 hours after surgery?

To find out, researchers carried out a trial involving 385 [patients](#) (aged 18-70 years) undergoing planned (elective) surgery of 1-3 hours duration under general anaesthesia at five hospitals in Germany.

Patients were randomly split into two groups (191 in the [intervention group](#) and 194 in the [control group](#)). Factors such as type and duration of surgery, pain before surgery, and use of drugs during surgery were similar in both groups.

The intervention consisted of an audiotape of background music and positive suggestions based on hypnotherapeutic principles, which was played repeatedly for 20 minutes followed by 10 minutes of silence to patients through earphones during general anaesthesia.

Patients in the control group were assigned to a blank tape.

Before surgery, patients in both groups reported similar pain levels, but during the first 24 hours after surgery, pain scores were consistently and significantly lower in the intervention group, with an average reduction of 25%.

Compared with the control group, the intervention led to a small but significant reduction in opioid consumption during the first 24 hours after surgery.

The number of patients requiring any opioid after surgery was also reduced in the intervention group: 121 of 191 (63%) patients in the intervention group versus 155 of 194 (80%) in the control group—a 16% absolute reduction.

No adverse events were reported and the researchers estimate that, for every six patients receiving the [intervention](#), one would avoid the need for postoperative opioids.

These results suggest that therapeutic suggestions played through earphones during [general anaesthesia](#) "could provide a safe, feasible, inexpensive, and non-drug technique to reduce postoperative [pain](#) and opioid use, with the potential for more general use," say the researchers.

They call for further evaluation of the technique, particularly in more invasive and painful surgical procedures, and suggest that surgeons and anaesthetists "should be careful about background noise and conversations during [surgery](#)."

These findings, along with those of other recent randomised [trials](#), have begun to shine a spotlight on the possibility that the subconscious might be an important target for improving patient experience and outcomes, write Canadian researchers in a linked editorial.

However, before such findings are widely implemented, some limitations should be addressed, and future trials should involve a wider population of patients with a focus on important, patient reported measures of recovery, they say.

"Although multicentre trials often bring a definitive answer to a research question, this trial is very much the beginning of an important line of inquiry that may change future practice," they conclude.

**More information:** Effect of therapeutic suggestions during general anaesthesia on postoperative pain and opioid use: multicentre randomised controlled trial, *BMJ* (2020). [DOI: 10.1136/bmj.m4284](https://doi.org/10.1136/bmj.m4284)

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