

Sedation before nerve block increases risk, not pain relief

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New research suggests that sedating patients before a nerve block needed to diagnose or treat chronic pain increases costs, risks and unnecessary surgeries, and sedation does nothing to increase patient satisfaction or long-term pain control.

"Sedation doesn't help, but it does add expense and risk," says study leader Steven P. Cohen, M.D., a professor of anesthesiology and critical care medicine at the Johns Hopkins University School of Medicine. "In some places, every patient is being sedated. Our research shows it should be used very sparingly."

Nerve blocks, performed by injecting anesthetics and/or steroids into any number of areas of the body, from the spinal column to the hip joint, are often performed ahead of surgery and in addition to other invasive procedures, such as the ablation of nerves to treat arthritis in the back, to more accurately pin down the source of [pain](#). If the nerve block fails to numb pain, surgery or the nerve ablation may not help. Increasingly, physicians have used light or even deep [sedation](#) in a bid to ease anxiety and pain while the injection is given.

However, results of the new study, reported online Feb. 13 in the journal *Pain Medicine*, show that sedation before a nerve block significantly increases false-positive results, which means patients are more likely to be sent in for surgeries and other procedures that won't cure the underlying pain. Another worry, Cohen says, is the health risk when someone is sedated.

Cohen and researchers from several other medical centers in the United States recruited 73 patients with back or limb pain who were scheduled to receive multiple [nerve blocks](#). Roughly half of the group received the first injection with sedation and the second without. The remaining patients received their injections in the opposite order. Patients were given six-hour pain diaries, a routine step that helps patients determine whether the injections bring relief, and were asked to rate their satisfaction with the treatment. They were also seen a month later and asked to rate their pain and function after the treatment.

Although the sedated patients reported less pain immediately after the nerve block injection, on every other measure—from 30-day pain assessments to overall [patient satisfaction](#)—the results were the same whether or not they were sedated.

"A lot of cost for very little benefit," Cohen says.

The increase in false-positive results—the belief that the pain has been relieved when it has not been—can result from many factors, Cohen says. The medication used for the sedation itself can have pain-relieving properties. The sedative can relax muscles. Patients may need to take extra time away from daily activities after being under anesthesia, and that rest alone could make the patient feel better.

But if patients believe that the nerve block eased their underlying pain, the physician will often conclude he or she has found the source and will move ahead with the appropriate treatment, which may include spinal fusion or radiofrequency ablation of nerves for arthritis, Cohen says. In the end, he says, many patients end up back at square one—still in pain, but having suffered through a potentially unnecessary operation.

Cohen says that while many physicians may use sedation in a sincere effort to make the procedure less traumatic for patients, there is also a

perverse financial incentive to use it.

"Unfortunately, medicine in many places has become a business. The fact is, you get paid more money to do the procedure with sedation," he says. "The costs of anesthesia can be more than the fee for the procedure itself. And [patients](#) are getting harmed."

Provided by Johns Hopkins University School of Medicine

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