

Pre-surgical drug may ease recovery and reduce pain for kids

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Managing a child's pain and distress after surgery is an essential part of recovery. However, using strong painkilling medications post-surgery can put kids at risk for side effects and other complications.

A new evidence review from The Cochrane Library found that administering a drug called clonidine before surgery may be a good alternative for controlling post-surgical [pain](#) and help reduce a child's anxiety after surgery.

The study's lead author, Allan Cyna, Ph.D., senior consultant anesthesiologist at Women's and Children's Hospital at the University of Adelaide in Australia, said the review confirmed what he and his

colleagues had observed. "This was one of the reasons why we embarked on this study since this was our anecdotal experience in clinical practice," he said.

The review found that clonidine given at 4 micrograms/kg had a low number of side effects compared with other [pain medications](#). Two potential [side effects](#) were noted—bradycardia (lowered heart rate) and hypotension (lowered blood pressure).

The researchers compared the results of 11 studies, conducted in Sweden, China, USA., Greece, Canada, Turkey, Japan, Jordan and Brazil, involving 742 children under age 18 to discern if clonidine was effective in relieving post-surgical pain. In four trials, clonidine was compared to a dummy treatment or no treatment, while six trials compared the drug with the medication midazolam and in one trial, with fentanyl.

"Our review may encourage other physicians, [health care professionals](#), consumers or others to consider clonidine as a premedication where [postoperative pain](#) is likely," observed Cyna. However, he added a caution, "Even though our findings are encouraging, they are not conclusive because the studies to date are small and vary a lot in their methodologies. Rigorous research is still required to confirm these findings."

Lonnie Zeltzer, M.D., director of the Children's Pain and Comfort Care Program at Mattel Children's Hospital at UCLA, agreed that controlling post-operative pain is very important for numerous reasons, including the impact of post-operative pain on future surgeries.

"There are some children, based on their prior experiences and neurobiology, whose post-operative pain may be difficult to treat and require special expertise by pediatric pain specialists. This reduces the

need for help with post-op pain management and the likelihood of post-op pain problems by what is administered up front, like clonidine, which is a good thing rather than waiting for post-op pain problems to develop."

Zeltzer does not know how widely clonidine is used, but she said that the heads of pediatric anesthesiology at UCLA and Stanford do not use clonidine as a pre-op medication and do not know of a medical center that uses it for pre-operative medication in pediatric surgery.

"I think the Cochrane review highlighted the possibilities and benefits of using clonidine for pre-op sedation, [anxiety] and post-op pain, but we still need more well-designed, controlled studies before clonidine can be recommended as the pre-op drug of choice," Zeltzer said.

More information: Lambert P, Cyna AM, Knight N, Middleton P. "Clonidine premedication for postoperative analgesia in children." *Cochrane Database of Systematic Reviews* 2014, Issue 1. Art. No.: CD009633. [DOI: 10.1002/14651858.CD009633.pub2](https://doi.org/10.1002/14651858.CD009633.pub2)

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