NEW YORK (Reuters Health) - Children who listened to music while an IV needle was inserted into their arms were less stressed than kids who didn't listen to music, in a new study from Canada.

"We were really looking to see if music could reduce the distress in children," said Lisa Hartling, the study's lead author from University of Alberta in Edmonton.

Aside from pain medication, other ways to help control pain in the emergency department (ED) include distractions such as audio, video, stories, imagery and concentrated breathing exercises, Hartling and her colleagues say.

"One of the features of music is that it's a very powerful distracter," said Linda Chlan, who has studied music therapy but was not involved in the new study.

Past research has shown that music significantly reduces pain and anxiety during medical procedures.

For the new study, conducted at Stollery Children's Hospital in Edmonton between January 2009 and March 2010, Hartling and her colleagues randomly assigned 42 children to either listen to
Music playing out loud in the room, or not, while intravenous (IV) needles were inserted into their arm in the ED. The same music recordings were played for each child.

The children also received the usual treatments to help make the procedures less painful, including pain relievers applied to the skin, and comforting, supportive words from the medical staff.

Reviewers watched a video recording of each IV insertion to measure the children's stress before and immediately after the procedure on a scale from 0 to 23.5 - with higher scores representing more distress. The reviewers did not know which children were listening to music, according to a report of the study published in the medical journal JAMA Pediatrics.

The children, who were all between three and 11 years old, were also asked about the amount of pain they experienced during the procedure.

Overall, the researchers didn't find a difference between the music and non-music groups in the amount of distress experienced by children immediately before and after the procedures.

However, after they excluded the 10 kids who didn't stress at all during the IV insertion, the researchers found the distress level in children who listened to music rose less than it did in kids who didn't have music playing during the procedure.

They found the distress level of the children in the non-music group increased 2.2 points on the scale, compared to a 1.1 point increase in music-group kids.

That difference would be noticeable, according to the researchers.

What's more, children in the non-music group said their pain increased by about two points on a scale from 0 to 10 - with higher numbers indicating more pain. Children in the music group, in contrast, reported no increase in pain.

Healthcare providers were also more likely to say the IV insertion procedure was "very easy" in the music group than in the non-music group.

"Based on the research I've seen, the review of the literature we've done and our study, music has the potential to benefit and - at worst - won't do any harm," Hartling told Reuters Health.

Chlan, Distinguished Professor of Symptom Management Research at The Ohio State University College of Nursing in Columbus, said the study shows that the practice holds potential, but she'd like to see a study that includes a group of kids wearing headphones to eliminate distractions in the non-music group.
"I think this opens the door that this is a safe intervention, and kids and parents like it. Those are two of the main concerns for healthcare providers," she said.

The method is also appealing because it's cheap and easy to employ, said Joke Bradt, an associate professor in the Creative Arts Therapies Department at Drexel University College of Nursing and Health Professions in Philadelphia.

"I hope as more studies like this get published it becomes more mainstream," said Bradt, who wasn't involved in the new study.
