Electrical Stimulation of Deep Brain Structures Eases Chronic Pain

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A University of Texas at Arlington research team has developed an alternative treatment for opioid addiction. Electrical stimulation of a deep, inside brain structure blocks pain signals at the spinal cord level without drug intervention.

The process also triggers the release of beneficial dopamine, which may reduce the emotional distress associated with long-term pain.

"This is the first study to use a wireless electrical device to alleviate pain by directly stimulating the ventral tegmental area of the brain," said Naiu Fu Meng, Ph.D., psychology professor. "While still under laboratory testing, this new method does provide hope that in the future we will be able to alleviate chronic pain without the side effects of medications."

Naiu Fu Meng, Ph.D., psychology professor, and J.-C. Chiou, an electrical engineering professor, used a patented implant designed wireless device to demonstrate that stimulation of the ventral tegmental area reduced the sensation of pain. The team also confirmed that the stimulation reduced pain signals in the spinal cord, effectively blocking the perception of pain.

"Until this study, the ventral tegmental area of the brain was studied more for its key role in pain relief, reward and drug addiction," said Meng. "We have now confirmed that stimulation of this area of the brain can also be an analgesic tool."

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Larry Niven wrote several short stories in the 1970's about "ninichuads", people who were addicted to electrical stimulation of their pleasure centers to the extent of1 slavering themselves. (reply | show)

reply a day ago

This is excellent news. I fortunately have never had to endure chronic pain that requires this type of drugs, but I know those who do and this device would be a life-saver.

Consider those whose pain so severe they want to end their life. It might also be useful for childbirth. Question: Has there been any study on if the body adapts to the stimulation and more or stronger signals become required, or if the body can become dependent upon the stimulation? (reply | show)

reply 20 minutes ago

Prank.

Next, the Organisam (patient pending)!! (reply | show)