

Resource

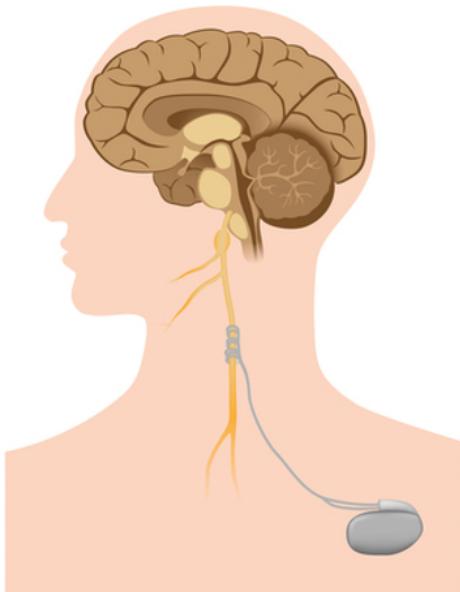
Nerve stimulation study shows potential

Vagus nerve stimulation device offers hope for relief from rheumatoid arthritis symptoms.

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A new study from the Academic Medical Centre at the University of Amsterdam, the Feinstein Institute for Medical Research and SetPoint Medical have shown that an implantable bioelectric device that electrically stimulates the vagus nerve could be used to help in controlling some of the symptoms of rheumatoid arthritis.



The vagus nerve connects the brain to the major organs of the body. The coin-sized device works by sending bursts of electrical current to stimulate the vagus nerve for three minutes a day. This has been shown to reduce the activity of the spleen so that it produces fewer chemicals and immune cells that cause harmful and painful inflammation in the joints of people with rheumatoid arthritis.

A total of 17 patients with rheumatoid arthritis were involved, several of whom had tried multiple therapies, including biologicals, with no success. Stimulation of the vagus nerve in many of the patients inhibited the production of TNF thus reducing disease severity as a result. No serious side effects were reported.

Professor Peter-Paul Tak, principal investigator and lead author of the paper at the Academic Medical Centre said “Even in patients who have not responded to the most modern pharmaceuticals, we have seen a clear trend of improvement. We may be able to achieve remission in 20 to 30 percent of patients, which would be a huge step forward in the treatment of rheumatoid arthritis.”

Using bioelectronics implants such as this show the potential to target conditions normally treated with drugs and may help people who do not respond to pharmaceutical treatments as well as reducing side effects associated with drugs, thus being safer and potentially cheaper as well.

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