



PARKINSON'S DISEASE NEWS

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NONINVASIVE BRAIN STIMULATOR FOR PARKINSON'S DISEASE

John Hopkins University is developing a non-invasive brain stimulator, called Stimband, for the treatment of Parkinson's Disease. STIMband is a headband shaped device that is placed on the head. It does not require any surgery. For more information go to the STIMband brain stimulator : <http://hub.jhu.edu/2015/06/10/stimband-brain-stimulator>

For people in advanced stages of Parkinson's Disease, one treatment option is deep brain stimulation. In this procedure, a surgeon implants thin electrical leads into the region of the brain that controls movement. The leads are connected to a pulse generator, similar to a pacemaker for the heart, that is placed under the skin below the collarbone. This implant sends electrical signals to the brain to help curb symptoms caused by Parkinson's Disease. However, this procedure is really invasive and can take 10 to 15 hours to complete.



STIMband is based on transcranial direct current stimulation in which low-level current is passed through two electrodes placed over the head to tweak the electrical activity in specific areas of the brain. The STIMband prototype, which involves no surgery, enables a patient to activate the battery powered treatment by touching a large easy-to-press button. With patient safety in mind, the prototype delivers current for only 20 minutes daily at a doctor prescribed level. It is inexpensive, safe and relatively easy to administer without any side effects. It is easy to put on, comfortable to wear and is positioned so that the electrodes remain stable and properly target the motor cortices areas of the brain.

The inventors obtained provisional patents covering the design of the device, dubbed the STIMband. Another Johns Hopkins team is taking over the project in September to further enhance the design and move it closer to patient availability. One addition may be a wireless connection to allow a doctor to adjust a patient's treatment level from a remote location.

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