



A man's ability to walk using direct brain control of his legs was restored after years of being paralyzed, researchers reported in a proof-of-concept study.

The system uses electrical signals from the man's brain, sending them to electrodes placed on his knees, allowing him to voluntarily move his legs.

Previous research has shown paralysis patients can be made to move their legs with noninvasive treatments, however this study used virtual reality training and a harness system, rather than an exoskeleton to help the man support his weight.

"Even after years of paralysis the brain can still generate robust brain waves that can be harnessed to enable basic walking," said Dr. An Do, a researcher at the University of California Irvine, in a press release. "We showed that you can restore intuitive, brain-controlled walking after a complete spinal cord injury. This noninvasive system for leg muscle stimulation is a promising method and is an advance of our current brain-controlled systems that use virtual reality or a robotic exoskeleton."

Previous research at the University of California Los Angeles showed a method of placing electrodes along five patients' legs allowed them to make walking motions using their brains.

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