Electrical Brain Stimulation Could Help Stroke Patients Swallow

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Electrically stimulating the brain could help stroke patients improve their ability to swallow food and saliva, according to a new study.

Impaired swallowing abilities are a common effect of stroke.

Electrical stimulation improved patients’ ability to swallow by more than 2.5 points on a 7-point scale, compared with slightly more than 1 point for people who didn’t receive the electrical stimulation, the study said.

The 2.5-point improvement could mean that the stroke patient still has delayed movement of food in the mouth but he or she is at least able to swallow, unlike before the stimulation, said study researcher Dr. Gottfried Schlaug, associate professor of neurology at Beth Israel Deaconess Medical Center and Harvard Medical School in Boston.

Difficulty swallowing, or dysphagia, is very common in stroke patients and occurs in about half of people who suffer a stroke, Schlaug said. It can lead to dangerous complications, like pneumonia, and decreases patients’ independence because they must be artificially fed.

“If you can’t actively swallow food or even saliva, then food or saliva may get into the lungs by accident or passively,” which can cause pneumonia, Schlaug told MyHealthNewsDaily.

Stroke often affects swallowing abilities because the cortical centers of the brain, which control swallowing, are destroyed on the side of the brain affected by the stroke. However, the study shows that the cortical centers on the healthy side of the brain can be stimulated electrically to improve the function of swallowing.

The brain stimulation in this study, called transcranial direct current stimulation, is done by attaching electrodes to the scalp of a stroke patient. Weak electrical currents pass through the electrodes and target certain areas of the brain, such as the cortical centers, Schlaug said.

In this study, scientists gave either electrical stimulation or “sham stimulation” (patients were prepped for stimulation but didn’t receive any currents) to 14 patients from Beth Israel Deaconess Medical Center who had suffered an ischemic stroke one to seven days prior.