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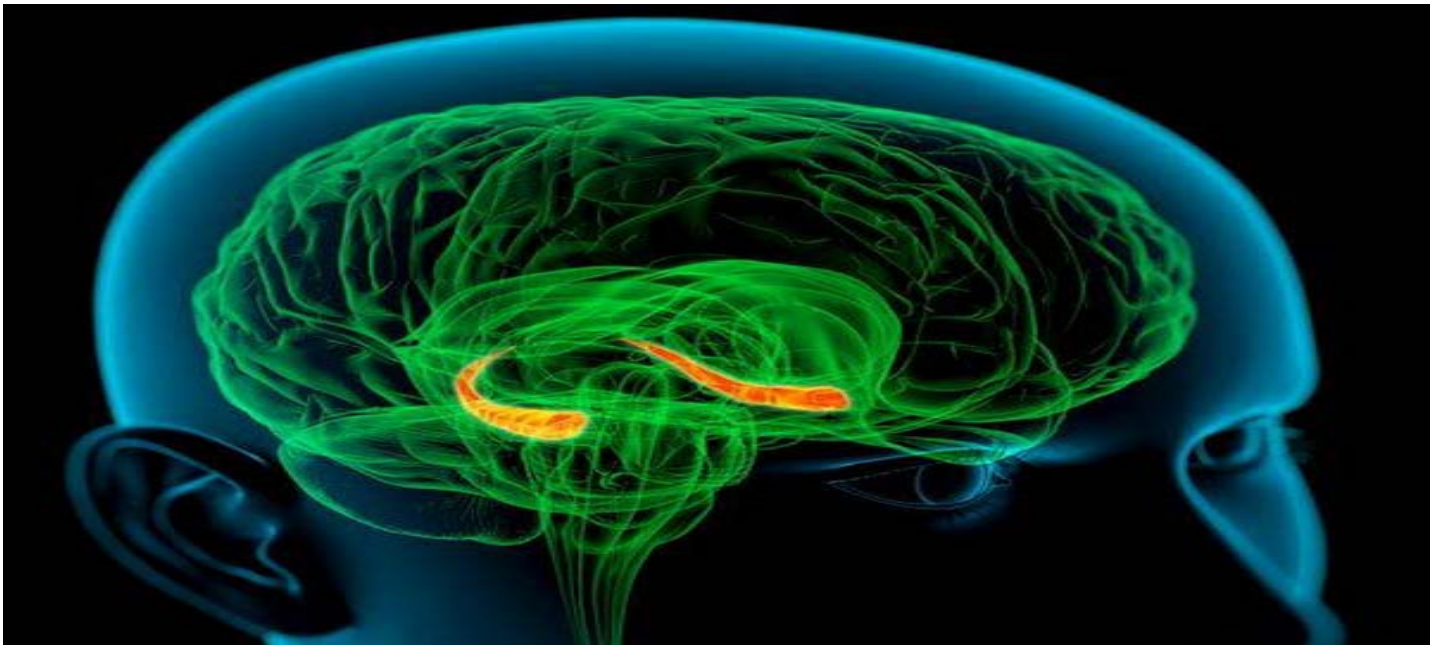
Electropulse therapy



ELECTROPULSE THERAPY

Electropulseeffects on the brain: the treatment of memory disordersin stroke, Alzheimer's disease, traumatic brain injuries

Transcranial magnetic stimulation (TMS) - a noninvasive technique, the impact on brain of magnetic pulses. The technique opens up a new field of possibilities for the treatment of memory disorders caused by stroke, early-stage Alzheimer's disease, traumatic brain injury, cardiac arrest, natural aging.

This is the first study to show that for remembering and signaling systemrequires comprehensive work of many areas of the brain to the main structure - the hippocampus. As in the analog Symphony Orchestra, electrical stimulation, originate in the hippocampus - a talented conductor - and synchronizes the desired areas of the cortex.

Comparison with the orchestra in the study is not accidental - the subjects were musicians of the Chicago Symphony Orchestra, managed by Riccardo Muti .

Such an approach is also applicable to the treatment of mental disorders such as schizophrenia.

Participated 16 healthy adults aged 21 to 40 years. Each had previously taken MRA and MRI scans of the brain. Memory circuit structures are slightly different in different people.

Each participant was tested on mnemonic abilities, signaling systemconsisting of a set of arbitrary associations between actions and words, that they had to recognize and remember. Subsequently, the participants were exposed to brain stimulation for 20 minutes a day for five consecutive days.

During the week they also receive additional MRI tests and the ability to memorize.

A week later, the same experiment was repeated but with placebo stimulation in half of participants.

Both groups performed cope with the task better than before brainstimulation, but in the placebo group the results were a bit worse.

Current research coverage to people with normal memory, from which no one expected much progress, because their brains are already working effectively.

Years of research are needed to determine the safety and effectiveness of the method for patients with Alzheimer's disease or a related memory disorders.

WestMedGroup cover the whole range of products for hospitals: signaling system, chemical and biological protection systems, ventilators, surgical kits.

J. X. Wang, L. M. Rogers, E. Z. Gross, A. J. Ryals, M. E. Dokucu, K. L. Brandstatt, M. S. Hermiller, J. L. Voss. Targeted enhancement of cortical-hippocampal brain networks and associative memory. Science, 2014; 345 (6200): 1054 DOI: 10.1126/science.1252900