

SENS - A normal life after neurological disorders

Everybody's brain can be affected by several internal or external factors. Any disorder that occurs in the brain dramatically decreases the quality of life and can even cause death.

In the event of such an incident, immediate and continuous recovery and rehabilitation actions are required to avoid permanent brain damage. The lack of continuity of the recovery process is a major cause of the failure of recovery and rehabilitation programs.

Neural disorders affect people in all countries, regardless of gender, education or income.

After an unfortunate event, I decided to use mathematics to find the answer to the question: "How can I recover and rehabilitate a patient who has suffered a stroke?"

It took more than 10 years of information, research and self-tests to find the answer to the question above.

The answer is called SENS - Smart External Neuro Stimulation and is based on the work "EXTERNAL STIMULATION IN NEURAL MATRIX RECOVERY", which will be published in the IAȘI POLITICAL INSTITUTE BULLETIN, Theoretical and Physics Mechanics Section, number 1 of 2017.

The paper shows the changes that occur in the motor cortex when a certain type of external stimuli are applied, according to a specific algorithm, to a patient who has undergone a neuronal disorder. Dr. Lara Boyd, of the Brain Behavior Laboratory, remembers brain neuroplasticity in a video.

One of the findings of this research is that the human body is capable of sustaining a process of cellular regeneration and thus re-establishing the functionality of organs that have undergone degeneration. And the brain is part of this category, and so we can say that a process of neural remodeling is a process through which brain function can be reset and modeled.

SENS is a device that encompasses these findings and works by sending a set of stimuli to the patient, collecting data from stimulation, processing and modeling these data, and generating a new set of stimuli, depending on the modeling result that is sent to the patient. This cycle is repeated constantly, establishing in this way a communication based on artificial intelligence, with the patient's brain.

One of the problems of medical recovery of patients who have suffered an ischemic or hemorrhagic stroke is that medical recovery requires patients to be taken to specialized clinics to undertake specific recovery and rehabilitation treatments.

SENS does not require this! The use of the SENS device is extremely simple, whether we're talking about specialized personnel or not.

Thus, we connect SENS to the Internet (WiFi), then connect ES1, ES2 and EEG external stimulation devices to the patient and then start the device.

SENS is very useful for patients who suffer from neural degeneration and who, in most cases, can not communicate vital information essential to the process of recovery and rehabilitation. SENS does not require communication from the patient, the device knows what to do and adjusts to the profile of each patient.

Thus, the device can be used to recover people with deficiencies in understanding, expression, communication or understanding and perception of the environment, motor deficiencies.

SENS also allows patients to be monitored so that the current status and progress of each patient can be tracked online.

At the same time SENS knows how to analyze the collected data and can give alarm signals to authorized staff when they detect or appreciate that the patient is or will be in the vicinity of a danger.

One of the major advantages of SENS is that this device can work on recovering and rehabilitating a patient, 24/7/365, without creating any discomfort to the patient.

People who suffer from brain dysfunctions can benefit from SENS, regardless of the stage they are in.

It is important for the recovery and rehabilitation process to begin as soon as possible, but SENS can begin this process even if it is installed on the patient at a time when disorder or neural regeneration occurs.

According to statistics, over one billion people today, one in six people suffering from a neural disorder, 50 million suffer from epilepsy, 24 million suffer from Alzheimer's or other forms of dementia, 6.8 million people die annually because of a neural disorder.

Concerning costs, in Europe in 2004, the cost of patients with neuronal disease was estimated at € 138 billion.

At this moment SENS is in the concept phase, studies have been conducted on a so-called prototype built with great efforts and with the help of friends.

For building SENS we started a fundraising project and start clinical testing. With the results of our clinical tests, we will produce SENS devices focusing on clinic clients, hospitals, because the cost of a device is currently appreciating, depending on the quotations from different manufacturers, around € 7500.

We also consider a lower-cost option for SENS therapy to be available in home use for as many patients as possible, but this requires a rethink of the whole project, so we will come back with solutions once the SENS prototype is in production.

SENS is part of the NSR (Neural System Reply) project, which aims to decode neural flows, determine anatomo-pathological maps and methods for recovering and rehabilitating patients.

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