Electroconvulsive Therapy (ECT) was introduced in 1938 as a therapy to produce “anti-depressant effects.” ECT is the passage of electric current through the temporal lobes of the brain to induce therapeutic grand mal seizure convulsions in the brain. Temporal lobes have lowest seizure threshold, and therefore require the least amount of electricity before evoking a seizure. Characteristic EEG changes can be seen during and immediately after an ECT treatment. High amplitude, rhythmical discharge patterns and a sharp voltage drop are seen on the EEG reading after a successful treatment. The antidepressant effect is noticeable after a course of 6-12 treatments over a 2 – 4 week period.

The indications for ECT are to help people who suffer from mental and emotional symptoms requiring urgent relief. Patients with melancholia, or severe depression, are the most frequent patients. This is implemented when alternatives – medication and psychotherapy talk- have failed. It has also shown improvements in patients suffering from other psychiatric illness, such as mania and schizophrenia. The rights of psychiatric patients are often overlooked; strict regulations have been implemented in most states requiring informed written consent before treatment.

An ECT is performed in a hospital setting by a team of doctors, nurses, anesthesiologists, and a psychiatrist. Through oxygen, muscle relaxants and anesthesia the patient is prepared for the treatment; protocol and an EEG will monitor them. Electrodes are placed on both temporal lobes. An AC current is passed for up to 6 seconds. The current ranges from 800 mA – 1000 mA, carrying a voltage between 300- 500 volts. The frequency is a sinusoidal wave of about 180 Hz. The electricity stimulates normal electric activity between neurons, often ill affected by depression and other psychiatric illnesses. Supporters of ECT reference a cardioversion, which restores normal functioning of the heart through passing electric current; this is to get a general understanding, the physiology is much different. Inducing electricity is a scary thought for most people, but some qualms may be eased when this is put into perspective. The electric chair usually carries a voltage of 2000 V and a current between 5- 12 Amps; not only are these levels much higher, the duration is for a series of whole minutes.

Side affects accompany this treatment, as with any other medical procedure. Some professionals compare the effects to that of any other minor surgery, with anesthesia risks being a factor. Also, the patient experiences documented memory loss. It is controversial to whether the loss is permanent, and how deeply the memory is affected. Supporters, including medical professionals and the American Psychiatric Association, claim there is no prevalence on long-term amnesia. Upon awakening, the patient should recover identity and personal memories within 20 minutes. However, it may take up to several weeks to regain full memory function. Advocates against this treatment claim severe brain damage and destructive memory loss. It is important to note that there is a 50% relapse rate, even with the use of medications. Knowing this, patients must be aware the continual treatment may be necessary to sustain the results.

This procedure has proven anti depressant benefits, yet after three quarters of a century, the debate continues over the harmful side affects.