



# What is Electroconvulsive therapy (ECT)?

Electroconvulsive therapy (ECT) is a medical treatment most commonly used in patients with severe major depression or bipolar disorder that has not responded to other treatments.

ECT involves a brief electrical stimulation of the brain while the patient is under anesthesia. It is typically administered by a team of trained medical professionals that includes a psychiatrist, an anesthesiologist, and a nurse or physician assistant.

**Does ECT work?**

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**ECT Steps**

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## What are the steps involved when getting ECT?

Before beginning a series of ECT treatments, a patient should receive a thorough psychiatric assessment, including a medical examination and sometimes a basic blood test and an electrocardiogram (ECG) to check heart health.

Informed consent is another important part of the process. A patient must provide written informed consent before ECT is administered. In situations where a person is too ill to make decisions for him or herself, the consent process is governed by state law (for example, a court-appointed guardian).

Patients and their families should discuss all options for treatment with the psychiatrist before making a specific treatment decision. They should be provided with sufficient information to fully understand the procedure and the potential benefits, risks, and side effects of each treatment option before providing written consent.

A patient typically receives ECT two or three times a week for a total of six to 12 treatments, depending on the severity of symptoms and how quickly the symptoms respond to the treatment.

At the time of each treatment a patient is given general anesthesia and a muscle relaxant and electrodes are attached to the scalp at precise locations. The patient's brain is stimulated with a brief controlled series of electrical pulses. This causes a seizure within the brain that lasts for approximately a minute. The patient is asleep for the procedure and awakens after 5-10 minutes, much as from minor surgery.

Most insurance plans offering coverage for psychiatric disorders at least partially reimburse the cost of ECT.

## Risks & Benefits

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## Other Brain Stimulation Treatments

Transcranial Magnetic Stimulation (TMS) is used to treat depression and involves the use of rapidly alternating magnetic fields to stimulate specific areas of the brain. Unlike ECT, TMS does not cause a seizure and the patient remains awake through the noninvasive process. TMS typically only has mild side effects including headaches, muscle twitches and pain at the stimulation site. TMS is usually administered four or five times a week for four-to-six weeks.

Vagus Nerve Stimulation (VNS) is an FDA-approved treatment for treatment-resistant depression. It involves implanting an electrical pulse generator under the skin in the patient's chest that provides intermittent electrical stimulation to the vagus nerve in the neck.

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## Resources

- Agency for Healthcare Research and Quality. 2012. [Therapies for Treatment Resistant Depression: A Review of the Research](#).
- National Institute of Mental Health: [Brain Stimulation Therapies](#)
- Mental Health America: [Electroconvulsive Therapy](#).
- National Alliance on Mental Illness (NAMI): [ECT, TMS And Other Brain Stimulation Therapies](#)
- Food and Drug Administration. 2011. [Executive Summary to the January 27-28, 2011, Neurological Device Panel](#) meeting to discuss ECT classification.

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## Physician Review – January 2016

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