

# The Truth About Electroconvulsive Therapy (ECT)



In 1982, a young nurse was suffering from severe, unrelenting depression. She couldn't work, socialize, or even concentrate well enough to read the newspaper. One treatment changed everything. After two courses of electroconvulsive therapy, or ECT, her symptoms lifted. She went back to work, then on to graduate school, where she earned high grades. At first, she talked openly about her life changing treatment. But as she realized many people had an extremely negative impression of ECT, she stopped sharing her experience.

ECT carried a deep stigma, leftover from a history that bears little resemblance to the modern procedure. The therapy was first used in medicine in 1938. In its early years, doctors administered a strong electrical current to the brain, causing a whole-body seizure during which patients might bite their tongues or even break bones. Modern ECT is very different. While a patient is under general

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anesthesia, electrodes deliver a series of mild electrical pulses to the brain. This causes huge numbers of neurons to fire in unison: a brief, controlled seizure. A muscle relaxant keeps spasms from spreading to the rest of his body. The only physical indication of the electricity flooding the brain is a twitching foot. The treatment lasts for about a minute, and most patients are able to resume normal activities about an hour after each session. ECT is commonly used to treat severe cases of major depression or bipolar disorder in patients who haven't responded to other therapies, or who have had adverse reactions to medication. Half or more of those who undergo treatment experience an improvement in their symptoms. Most patients treated with ECT have two or three sessions per week for several weeks. Some begin to notice an improvement in their symptoms after just one session, while others take longer to respond. Patients often continue less frequent treatments for several months to a year, and some need occasional maintenance sessions for the rest of their lives. Modern ECT is much safer than it used to be, but patients can still experience side effects. They may feel achy, fatigued, or nauseated right after treatment. Some have trouble remembering what happened right before a session — for example, what they had for dinner the previous evening. Rarely, they might have trouble remembering up to weeks and months before. For most patients, this memory loss does improve over time.

What's fascinating is that despite its proven track record, we still don't know exactly why ECT works. Neurons in the brain communicate via electrical signals, which influence our brain chemistry, contributing to mood and behavior. The flood of electrical activity sparked by ECT alters that chemistry. For example, ECT triggers the release of certain neurotransmitters, molecules that help carry signals between neurons and influence mental health. ECT also stimulates the flow of hormones that may help reduce symptoms of depression. Interestingly, ECT maintenance works better when paired with medication, even in patients who were resistant to medication before. As we come to a better understanding of the brain, we'll likely be able to make ECT even more effective.

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In 1995, more than a decade after her first course of ECT, the nurse decided to publish an account of her experience. Because of the stigma surrounding the treatment, she worried that doing so might negatively impact her personal and professional life, but she knew ECT could make a difference for patients when all else failed. Though misperceptions about ECT persist, accounts like hers have helped make doctors and patients alike aware of the treatment's life changing potential.