**“Shock” Therapy for Depression Survives Controversy, Offers Hope**

Popular scare stories have saddled electroconvulsive therapy (ECT) with a bad reputation. Perhaps most famously, the 1975 movie *One Flew Over the Cuckoo's Nest* portrays “shock” treatment as a violent method of psychiatric control.

It is true that, decades ago, ECT practices were crude and injured some patients. But you may be surprised to learn that, today, ECT is far and away the most effective treatment available for severe depression and frequently works when medication does not. It is also safe and relatively painless. That is why each year, an estimated 100,000 patients in the United States turn to ECT for help.

**How it works**

During therapy, doctors use electric currents to provoke a seizure, which appears to rejuvenate the brain. Scientists still aren’t sure why it works, but the process has been likened to rebooting a computer or even hitting a malfunctioning machine to make it work. The seizures affect a variety of nerve cells and hormones and also alter brainwave speed for weeks after treatment; ECT may derive its efficacy from a combination of these changes.

**Who can benefit**

Doctors typically recommend ECT for people with severe depression who have not responded to psychotherapy and several different antidepressants. ECT can also treat bipolar disorder and psychotic depression characterized by paranoia and delusional thoughts.

Moreover, it serves as an emergency measure for people contemplating suicide or who have stopped taking care of themselves, regardless of whether they have tried medication. In these circumstances, time is of the essence, and while finding the right antidepressant and tailoring its dosage can take weeks or even months, ECT usually starts relieving depression within three weeks.

An extensive body of research indicates that roughly 85% of severely depressed patients go into remission after ECT (compared with 40–70% of patients who try antidepressants). This is despite the fact that patients on ECT are typically the most difficult to treat.

Seniors in particular may benefit from ECT, and in fact, the majority of ECT patients at Johns Hopkins are over 60. Many older patients who have other chronic conditions opt for this therapy because they don’t want to pile more medications onto their daily regimen (drug interactions may be a concern). Others try ECT after struggling with side effects from depression drugs.

In a 1999 study from *The American Journal of Psychiatry*,...
**WHAT TO EXPECT**

If you opt for ECT, your psychiatrist will probably recommend a total of six to 12 treatments, at a rate of three each week. The cost (about $800–1,000 per session) is covered by Medicare in most circumstances. According to guidelines from the American Psychiatric Association, ECT must be voluntary, and a doctor, anesthesiologist, and nurse must be present for each session.

Your doctor will pass a carefully controlled electrical current through your brain to induce a 30- to 60-second seizure. Anesthesia keeps you unconscious, and muscle relaxants prevent your body from shaking. Patients usually awaken about five minutes afterward. Many feel confused for up to 45 minutes, and some people experience headaches or muscle stiffness.

If you are treated at an outpatient center, a companion must drive you home and stay until you fall asleep to help prevent confusion-related accidents, like falls.

ECT may provoke dramatic initial improvements but does not permanently cure depression. The disorder can return within months (particularly if ECT sessions are stopped early, before symptoms lift completely).

Thus, an antidepressant is almost always recommended afterward to head off relapse. If a medication has not worked for you in the past or caused side effects, your psychiatrist may prescribe a different one. Keep in mind that even if no antidepressant could help you before, after ECT improves your depression, you may respond to antidepressants. Some people also choose once-a-month maintenance ECT, which can complement or substitute for depression medication.

**Special Considerations for Chronic Conditions**

As with any medical procedure, to get the safest and most effective ECT, find a center that routinely administers the therapy. A physician must make sure you’re healthy enough for anesthesia; if you are, request an experienced anesthesiologist. Certain chronic conditions require extra precautions:

- **Diabetes** may have to adjust their insulin doses.
- ECT is generally safer than depression drugs for people with cardiovascular disease, but because blood pressure rises for up to 20 minutes during treatment sessions, patients with hypertension, other cardiovascular conditions, or glaucoma (which can be caused by elevated pressure in the eye) should consult their doctor before starting ECT to make sure these conditions are well controlled.

- **Before treatment**, suspend use of sleeping medications, which compound delirium. Your doctor may also recommend tapering off depression drugs temporarily.
- **Temporary memory side effects** are a particular risk for people who have dementia, so before treatment, it is essential to make sure that severe emotional symptoms in elderly patients are not due to Alzheimer’s disease, which can mimic depression. People with dementia usually undergo ECT only when their depressive symptoms are life threatening.
Hypothyroidism: Thyroid On Overdrive

Hypothyroidism is much less common than hyperthyroidism but also can lead to osteoporosis and heart problems. The condition may be mistaken for something else, so if you have symptoms, it’s a good idea to get your thyroid hormone levels checked.

**Symptoms**
- Weight loss
- Hand tremors
- Anxiety
- Muscle weakness
- Irregular heartbeat

**Treatments**
- Radioactive iodine, the most common treatment, destroys the thyroid gland.
- Beta-blockers (blood pressure drugs) may serve as a short-term solution to control symptoms; they stop the body from reacting to the overproduction of thyroid hormones.
- Antithyroid drugs, which include methimazole (Tapazole) or propylthiouracil (PTU), slow production of thyroid hormones. They may take a few months to kick in and are typically prescribed for up to two years.
- Partial surgical removal of the thyroid gland is a final option.

**Should You Be Tested?**
Medical opinions vary with regard to how often people should be tested for thyroid disorders, says Dr. Margolis. But as you grow older, it is important to be aware of any changes or emerging symptoms that may signal a problem with your thyroid.

Talk to your doctor about whether to have your thyroid levels checked, especially if you have a family history of thyroid disorders. Some doctors routinely screen their patients for thyroid disease every year.

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**The Impact on Memory**
ECT is safe enough to be used by people who have pacemakers, the very elderly, and even pregnant women. During treatment, the most common side effects are temporary learning problems and short-term memory loss, but these usually resolve within weeks of treatment.

Some patients, particularly seniors, permanently forget events that occurred around and during the period of treatment, but whether ECT is entirely responsible is hotly debated. Memory loss may be due in some part to depression itself, which harms cognition. (Also, patients who are on the lookout for side effects may worry about forgetfulness that is actually just a natural byproduct of aging.)

Rest assured ECT does not damage the brain. And memory loss directly linked to treatment has been curtailed in recent years by applying electrodes unilaterally (to just one side of the head) as opposed to bilaterally and by using brief pulses of electricity instead of a continuous current. In many treatment centers, bilateral ECT is now reserved for people who do not respond to unilateral treatment. (Some doctors still question these innovations, but a growing body of research has converted most.)

For people who experience confusion that persists for more than a day, spreading out sessions to just two a week can help. Once therapy starts, your doctor should regularly monitor your memory and cognitive function.

**The Bottom Line**
ECT has survived tremendous controversy over the years because it works. For people battling severe depression who have run out of other options, this treatment has been proven to help.

A Brief History of ECT

1930s: After doctors notice that seizures caused by injected insulin improve mental illness, Italian psychiatrist Ugo Carletti uses electrodes to induce a seizure in a mechanic whose schizophrenia subsequently resolves.

1940s: Doctors experiment with ECT for a variety of illnesses; it appears most effective for depression, but some seizures are violent enough to break bones.

1950s: Anesthesia and muscle relaxants reduce these effects.

1975: The movie One Flew Over the Cuckoo's Nest depicts actor Jack Nicholson grimacing during involuntary shock therapy. This is one of many books and movies that decry ECT and fuel an anti-psychiatry movement.

1980s: As evidence-based medicine expands, experts reexamine data on ECT and affirm that it is highly effective for several severe psychiatric conditions.