

Electroshock therapy is more successful for treating depression than ketamine, says study

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An analysis of six studies has found that electroconvulsive therapy (ECT) is better at quickly relieving major depression than ketamine, a team of researchers reports in *JAMA Psychiatry* on October 19.

Depression is a common illness affecting about 5% of adults worldwide, according to the World Health Organization (WHO). Feeling sad, irritable, losing pleasure in activities that used to be enjoyable, and sometimes experiencing unexplained pain or fatigue for weeks at a time are all symptoms of depression. Most people diagnosed with depression are offered an oral antidepressant (in combination with psychotherapy) as a first-line treatment option. But if oral antidepressants don't help, or if the person is at imminent risk of hurting themselves, there are other, more rapid treatment options: ECT, and more recently [ketamine](#) or esketamine.

Esketamine, a nasal spray approved by the Food and Drug Administration to treat depression, is more commonly used in the US than ketamine. But there are no studies comparing esketamine's effectiveness with ECT. There are studies done with ketamine, a sister drug to [esketamine](#). Ketamine is commonly used in medicine as an injected anesthetic but has recently been tested as a fast-acting intervention to help people with major depression.

UConn School of Medicine Psychiatric Epidemiologist T. Greg Rhee and colleagues from Harvard University, Kyungnam University in Korea, McLean Hospital in Belmont, Massachusetts and Massachusetts General Hospital in Boston, University of Toronto, VA New England Medical Center in West Haven, and Yale University analyzed six clinical trial studies from around the world comparing ketamine with ECT for major depression. The studies looked at 340 patients in total, and were conducted in hospitals in Sweden, Germany, Iran and India.

All five of the studies independently found that ECT was more effective than ketamine at relieving severe depression symptoms.

"ECT is consistently more successful than ketamine [at helping patients with serious depression]," says Rhee. "We found no differences by age,

sex, or geographic location. So we could say anyone who is ECT-eligible will benefit."

Although ketamine did generally help patients, ECT had better results overall. Ketamine could be a viable treatment for people who cannot undergo ECT. The side effect profiles of the two treatments differed, with ECT more likely to cause headaches, muscle pain and memory loss, while ketamine was more likely to cause dissociative symptoms, vertigo and double vision.

There are two additional ongoing studies comparing ECT and ketamine, and Rhee hopes to add their data to the analysis when they are available.

"Every single study directly reports ECT works better than ketamine. But people are still skeptical of ECT, perhaps because of stigma," Rhee says, or negative depictions in films such as "One Flew Over the Cuckoo's Nest" and shows such as "Stranger Things," adding, "We need to improve public awareness of ECT for treatment-resistant [depression](#)."

More information: Taeho Greg Rhee et al, Efficacy and Safety of Ketamine vs Electroconvulsive Therapy Among Patients With Major Depressive Episode, *JAMA Psychiatry* (2022). [DOI: 10.1001/jamapsychiatry.2022.3352](https://doi.org/10.1001/jamapsychiatry.2022.3352)

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