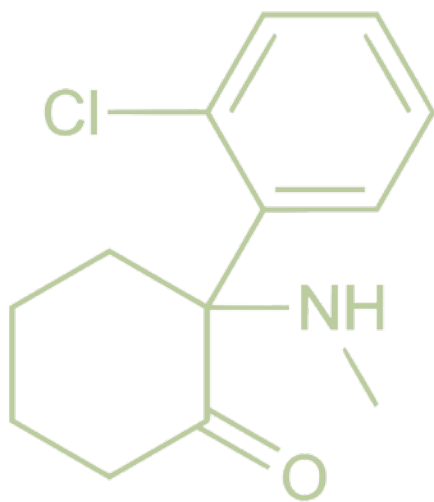


What Can We Learn from Ketamine?

By Ken Duckworth, M.D.



The psychiatric research field is always looking for new and better treatments. One unexpected path that search is taking is the examination of a medicine called ketamine to see if it can help people with serious depression. Ketamine is currently used as an anesthetic and also has a history as a street drug of abuse called “Special K,” yet there is some evidence that ketamine can help with depression through a completely different mechanism of action than traditional antidepressants.

Can this novel approach tell us more about the underlying nature of major depression and new ways to treat it? Research is the best way to learn the answer to this question. With more research, the field may help unlock a new way of approaching depression—and perhaps even the very real problem of suicide, which is often associated with major depression.

Remarkably, psychiatric researchers have found that ketamine can produce instant relief in some individuals; in comparison, more commonly used antidepressants (like fluoxetine and sertraline) take multiple weeks to work. In some individuals, ketamine can produce rapid-onset relief of depressive symptoms within hours. In some cases, it has also helped some research subjects halt their suicidal thinking almost immediately. Unfortunately, the positive effects of ketamine usually wear off in a few days to weeks, so a treatment regimen using this medicine for depression would likely require multiple administrations.

Even though ketamine appears to be safe and effective in the short term, we don’t know the effects of multiple administrations over a longer term—and this is one key area the field needs to better understand. For the most part, though, in small-scale research studies, ketamine has shown some real potential to change how we think about antidepressant treatment.

A Perspective on Current Research

To learn more about ketamine and people’s experiences with this treatment, I interviewed Dawn Ionescu, M.D., an assistant professor at Harvard Medical School and co-founder of the Ketamine


Clinic at Massachusetts General Hospital, which offers research studies and treatment with ketamine.

She reported that many severely depressed people in her studies benefit from ketamine: Many of them show a more than 50% improvement in their depression symptoms. However, she stated that because ketamine also has a street value, they don’t allow research subjects in her studies who have a history of substance-use disorders or psychosis.

When I asked her about the side effects of ketamine, she explained that “people have told me it’s a bit like being in *Alice in Wonderland*: Their hands can change size, a leg can seem to get huge, colors can get brighter, sounds can be louder or quieter.” She also offered insight into people who have stopped having suicidal thoughts with one treatment. “A patient might say to me, ‘I don’t feel suicidal anymore, but I still don’t feel great.’”

Using MRI scans, Dr. Ionescu examines the way people’s brains change after they receive ketamine. These scans could provide us with important information as to how depression and suicidal thinking arises in the brain, and might unlock future targets for new medication developments.

Dr. Ionescu’s findings agree with the literature: People in her studies typically didn’t sustain ketamine’s positive effects for more than a week or two. She did report that there were a few who seemed to be “super responders”—people who have had more intense responses or sustained the drug’s positive effects for a longer period of time. She also emphasized that understanding the long-term side effects of ketamine will be crucial before it, or a medication related to it, can be deemed safe for use over time, as ketamine is not yet FDA-approved.

Research is active in this area. If you want to learn more about clinical studies for this medication, ketamine studies on depression and suicidal thoughts can be found at www.ClinicalTrials.gov. 

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