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Drug 'treats depression in hours'

An anaesthetic can treat depression within hours, US research suggests.

The study involving 17 patients found ketamine - used as an anaesthetic but also taken as a recreational drug - relieved symptoms of depression.



Most existing treatments for depression take weeks or even months to relieve people's symptoms.

But the team, writing in *Archives of General Psychiatry*, said ketamine would need to be altered so it lost its existing hallucinatory side-effects.

Scientists from the National Institute of Mental Health (NIMH) injected 17 patients with either a very low dose of ketamine or a placebo of saline solution.

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Dr Thomas Insel, NIMH

The participants were all depression sufferers who had tried an average of six treatments that had failed.

The researchers then measured their levels of depression minutes, hours and days after the dose was given.

Lead researcher Dr Carlos Zarate Junior, head of the mood and anxiety disorders programme at NIMH, said: "Within 110 minutes, half of the patients given ketamine showed a 50% decrease in symptoms."

By the end of day one, he added, 71% had responded to the drug. And at this point the team found 29% of these patients were nearly symptom free.

The researchers also discovered one dose lasted for at least a week in more than one-third of the participants.

Brain pathways

Dr Thomas Insel, director of NIMH, commented: "To my knowledge, this is the first report of any medication or other treatment that results in such a pronounced, rapid, prolonged response with a single dose.

"These were very treatment-resistant patients."

Many antidepressants target levels of brain chemicals, such as serotonin and dopamine, and, over time, the accumulation of these chemicals can affect a patient's mood. But this can take several weeks.

But the team believes ketamine is having a faster effect because it is targeting a different brain-protein, called the NMDA receptor, which is thought to play a critical role in learning and memory.

The team says ketamine, in its current form, would not be appropriate for medication because of side-effects at higher doses, which include hallucinations and euphoria.

Dr Zarate said: "This study is a tool to help us understand what part of ketamine is causing this effect so we can refine and develop better drugs.

"We are also looking at ways that we could use ketamine maybe in lower doses or with drugs that block its perceptual effects so we could perhaps use it clinically."

Professor John Henry, a clinical toxicologist at St Mary's Hospital in London, said: "This is a very interesting piece of work, very neatly done, with promising results.

"More studies need to be done to see if ketamine would work over a longer period given in repeated doses.

"The benefit of having a fast-working drug would mean people could return to work quickly, and it could reduce risk of self-harm or suicide that could happen during the time-lag that occurs with other drugs."