

[MUSIC PLAYING]

DENNIS CHARNEY: Over the years, we've approached developing new treatments for depression in several ways. One is to use an app.

BRIAN IACOVIELLO: The challenge for us was that there are some treatments for depression, but they're often hard for patients to access. Dr. Charney and I started to become interested in this idea of targeting the brain regions that we know are involved in depression.

DENNIS CHARNEY: We've discovered neuropsychological tasks that theoretically can change brain circuits and relieve depression. I was studying the POWs from the Vietnam era. Many of them were held in solitary confinement. Because all they could do was think, they were exercising their brain to the point that they could do things that they never could do before. It occurred to me, well, maybe we can utilize that concept to treat depression by developing a task that exercises the brain and corrects the abnormal circuits associated with depression.

BRIAN IACOVIELLO: So we wanted to target the activation of two parts of the brain very specifically. The part of the brain that's involved in emotion processing, which tends to be overactive, and the part of the brain that's involved in cognitive control, which tends to be under-active. So we developed this exercise that combines two different cognitive tasks that activate those parts of the brain very specifically.

DENNIS CHARNEY: I wouldn't say it was a simple idea, because I think people would have done it before. We're optimistic that this could be a revolutionary new treatment and literally have no side effects.