

# Stress hormone cortisol to help overcome phobias

March 29 2011, by Deborah Braconnier

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(PhysOrg.com) -- In a recent study published in the *Proceedings of the National Academy of Sciences*, researchers are showing the potential benefit of using the stress hormone Cortisol in addition to exposure therapy to help patients overcome phobias.

Current [phobia](#) treatment utilizes what is known as exposure therapy. Patients are exposed to their fear in safe environments in the hopes to replace fearful memories.

Cortisol, a hormone which is released during [stress](#), has also been shown to affect the learning process. The hope of the study is that, when used with current exposure therapy treatment, the Cortisol will help to generate new memories of the experience and block the memories of being frightened.

Led by cognitive neuroscientist Dr. Dominique de Quervain from the University of Basel in Switzerland, researchers worked with participants suffering from acrophobia, or the fear of heights.

The researchers tested 40 patients with a fear of heights. The patients were put through three sessions of [exposure therapy](#) in a virtual-reality based format. The particular situation used was that of an outdoor elevator ride. Half of the participants were given a Cortisol tablet one hour before their session while the other half received a placebo.

Participants were questioned and measurements of the electrical

conductance of their skin were taken at four days and once month after the final session. Researchers found that those participants who had been administered the Cortisol saw a much greater decrease in fear and anxiety when exposed to heights.

The level of fear showed an average drop of 60 percent in those administered the [Cortisol](#), compared to only a 40 percent drop with those receiving the placebo.

Further studies are going to be required and this is just the beginning. De Quervain hopes that eventually this combination of psychotherapy and pharmacotherapy can be used to treat more phobias such as post-traumatic stress disorder (PTSD), social phobias, and obsessive-compulsive disorder.

**More information:** by Dominique J.-F. de Quervain, Glucocorticoids enhance extinction-based psychotherapy, *Proceedings of the National Academy of Sciences*, Published online before print March 28, 2011, [doi: 10.1073/pnas.1018214108](https://doi.org/10.1073/pnas.1018214108)

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