

# Reliable method detects suicidal propensity

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A simple measurement of the sweat gland activity of a depressed person can determine if he or she is suicidal – with 97 per cent accuracy. Now another large clinical study confirms the correlation.

Blood pressure, [blood circulation](#) and activity in the [sweat glands](#) of the fingers can reveal if a person is suicidal.

"The results are so strong that I'm astonished", says Lars-Håkan Thorell, associate professor in experimental psychiatry at Linköping University, one of the researchers behind the study. "We can determine very accurately whether a person risks committing suicide, which can revolutionise [suicide prevention](#)."

In the German-Swedish study, published in the *Journal of Psychiatric Research*, 783 depressed in-patients in Germany were tested for hyporeactivity – reduced ability to react to various stimuli. A suicidal depressed person reacts differently to environmental changes, compared to a healthy person.

The result confirms previous research stating that there is a strong correlation between hyporeactivity and suicide in depressed people.

The test found that hyporeactivity was present in up to 97 per cent of [depressed patients](#) who later committed suicide, compared to just 2 per cent of the depressed patients who were not hyporeactive.

But the study also shows there is no relation between the severity of

depression and hyporeactivity. Associate Professor Thorell: "It indicates a certain per cent, even if the normal population can have this neurophysical disorder. Everyone who has it is not suicidal – but almost all suicidal, depressed patients have it."

Hyporeactivity was most prevalent in the bipolar patients: of 126 patients, 80.2% were affected, compared to 67.3% of the depressed patients and 58.5% of those with other diagnoses. The study also shows that people with [recurrent depression](#) run a risk of becoming hyporeactive at some later point in life.

"It was probably the case that certain [nerve cells](#) in the [hippocampus](#) are damaged by depressions and negative stress." Hyporeactivity can be measured by the test person listening to a pattern of tones, while the body's reactions are measured via sensors on the fingers.

The first time they hear a tone, virtually all people react. This is a general orientation reaction which occurs automatically. But when the tone is heard again, the reaction decreases amongst some people: the hyporeactive.

"A depressed person has a biological inability to care about the surroundings, while a healthy person continues to react." Associate Professor Thorell will now engage the spin-off company Emotra to conduct a study in some 15 countries together with his co-authors, including Professor Manfred Wolfersdorf, professor of psychiatry and director of the Bayreuth city clinic, and Professor Wolfgang Kaschka, University Hospital Ulm.

**More information:** Electrodermal hyporeactivity as a trait marker for suicidal propensity in uni- and bipolar depression. L.H. Thorell, M. Wolfersdorf, R. Straub, J. Steyer, S. Hodgkinson, W.P. Kaschka, M. Jandl. *Journal of Psychiatric Research* 19 September 2013.

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