

# CBT for social anxiety may have a protective effect on cells

December 18 2019

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Cognitive Behavioural Therapy (CBT) for patients with social anxiety not only helps to reduce anxiety levels but also seems to protect against accelerated cellular ageing, a study involving researchers at Karolinska

Institutet published in the journal *Translational Psychiatry* reports.

"This is the first step towards better understanding the link between [cellular ageing](#) and the treatment of psychiatric issues," says lead author Kristoffer Månsson, researcher at the Department of Clinical Neuroscience at Karolinska Institutet in Sweden.

Individuals affected by mental illness are at greater risk of developing somatic conditions, such as [high blood pressure](#) and diabetes, earlier in life than unaffected individuals. While the reasons for this are unclear, one possible contributory factor is that mental health disorders are associated with [shorter telomeres](#) and accelerated cellular ageing.

Telomeres are short sequences of DNA that cap the ends of chromosomes and protect cells, not unlike the hard tips of shoelaces. The length of the telomeres decreases with every [cell division](#), meaning that they grow shorter with age. The telomeres are in turn protected by the enzymes telomerase (the job of which is to rebuild them) and glutathione peroxidase (which protects the cells against oxidative stress).

The researchers behind the present study looked at the effect that CBT has on these cell markers in patients with [social anxiety](#) disorder (social phobia). Forty-six patients received nine weeks' CBT treatment via the Internet, having first provided two blood samples with a nine-week interval. Fresh blood samples were then taken as soon as their treatment programme ended in order that the cell markers could be measured.

The results showed that CBT greatly reduced anxiety levels in the patients while increasing the activity in the two protective enzymes telomerase and glutathione peroxidase, in direct relation to how much the patients improved.

"In our interpretation, it means that effective psychological treatment for

anxiety can protect the cells against oxidative stress and cellular ageing," says Kristoffer Månsson. "This is an exciting result that can eventually allow patients to be given effective treatment based on their biological profile. But more studies are needed before we can draw any real conclusions about causality."

As expected, the length of the telomeres did not change during treatment, since it probably takes a longer time for such changes to take place. There was no change in telomere length, telomerase or glutathione peroxidase over the nine weeks before treatment commenced, which attests to the stability of the measurements. Control analyses also excluded such parameters as smoking, BMI and current medication as explanatory factors.

**More information:** Kristoffer N. T. Månsson et al. Improvement in indices of cellular protection after psychological treatment for social anxiety disorder. *Translational Psychiatry*, online 19 December 2019, [DOI: 10.1038/s41398-019-0668-2](https://doi.org/10.1038/s41398-019-0668-2).

Provided by Karolinska Institutet

Citation: CBT for social anxiety may have a protective effect on cells (2019, December 18) retrieved 26 April 2024 from <https://medicalxpress.com/news/2019-12-cbt-social-anxiety-effect-cells.html>

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