

Anxiety may be contagious, mouse study suggests

October 18 2023



Credit: CC0 Public Domain

Severe instances of stress experienced early in life (ELS) are a risk factor for developing neuropsychiatric diseases, such as anxiety, later in life.

Research has focused on the molecular and circuit-based mechanisms underlying this phenomenon, but little is known about how even just witnessing another individual experiencing ELS, which can occur in homes with siblings or during friendships in youth, impacts individuals at a later timepoint.

Maternal separation (MS) during infancy is frequently used as a research model for ELS and its aftermath, but the effects of witnessing another experience MS are unexplored.

Jiang and colleagues used mice to investigate whether witnessing littermates experience MS alters synaptic strength and behavior at a later timepoint (adolescence). Their study is published in the [*Journal of Neuroscience*](#).

The researchers found significant changes in synaptic strength on a neuron population in the [anterior cingulate cortex](#), which encodes physical and social pain, as well as a transfer of anxiety-like behavior. These data suggest that [emotional contagion](#) can impact the brain in a long-lasting manner. The research has also identified circuitry that may be targeted as a novel treatment strategy for transmitted anxiety.

More information: Jinxiang Jiang et al, Distinct ACC neural mechanisms underlie authentic and transmitted anxiety induced by maternal separation in mice, *The Journal of Neuroscience* (2023). [DOI: 10.1523/JNEUROSCI.0558-23.2023](https://doi.org/10.1523/JNEUROSCI.0558-23.2023)

Provided by Society for Neuroscience

Citation: Anxiety may be contagious, mouse study suggests (2023, October 18) retrieved 27 April 2024 from <https://medicalxpress.com/news/2023-10-anxiety-contagious-mouse.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.