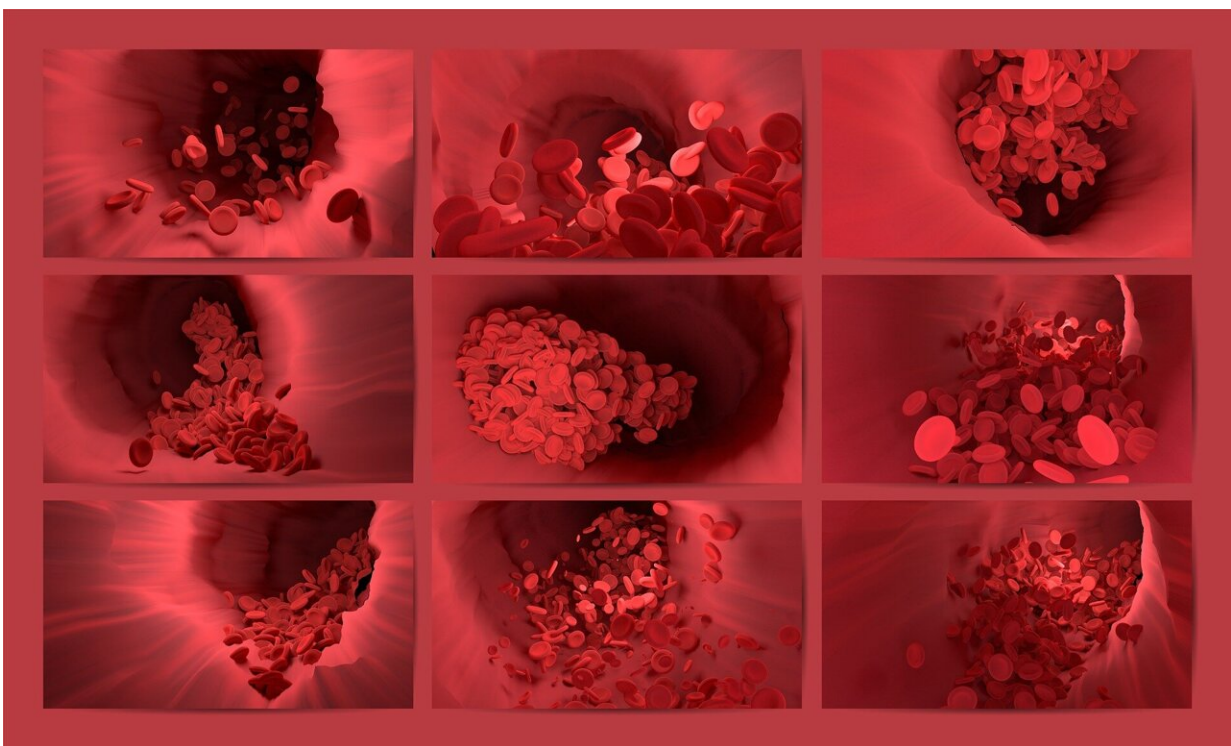


Q&A: Anxiety and depression are important risk factors for dangerous deep vein blood clots

July 18 2024



Credit: Pixabay/CC0 Public Domain

Rachel Rosovsky, MD, MPH, director of Thrombosis Research and co-chair of the Thrombosis Committee at Massachusetts General Hospital and an associate professor of Medicine at Harvard Medical School, is

lead author of a [study](#) in the *American Journal of Hematology* titled "Anxiety and Depression Are Associated With Heightened Risk of Incident Deep Vein Thrombosis: Mediation Through Stress-Related Neural Mechanisms."

Ahmed Tawakol, MD, a physician investigator in the Division of Cardiology at Mass General and an associate professor of Medicine at Harvard Medical School, is senior author of the study.

What question were you investigating with this study?

Deep vein thrombosis (DVT) is a serious condition in which a blood clot forms in a deep vein in your body. We wanted to learn more about the association between anxiety and [depression](#) and DVT and understand the potential mechanisms behind this association.

What were the results?

Using a large clinical biobank of over 100,000 participants, we observed that an existing history of anxiety disorder and/or depression significantly elevated the risk of incident DVT.

We also found that anxiety disorders and/or depression may increase DVT risk through heightened activation of stress-related pathways.

We observed that increased stress [neural activity](#), increased [systemic inflammation](#), and impaired autonomic nervous system function mediated the effect of both anxiety disorders and depression on DVT, even after robust adjustments.

Based on our findings, anxiety disorders and depression should be viewed as important and independent risk factors for DVT, and our

findings invite further investigation into whether behavioral and pharmacological strategies to treat anxiety disorders and depression can attenuate this risk.

What are the clinical implications and next steps?

Given the link between [anxiety disorders](#), depression, stress-related neural activity (SNA), and the subsequent development of DVT, future studies should investigate the impact of reducing SNA on this pathway.

Specifically, future studies could test whether targeting SNA with interventions that may reduce SNA (i.e., exercise and stress reduction techniques) will reduce the risk of incident DVT and even the risk of recurrent DVT.

More information: Rachel P. Rosovsky et al, Anxiety and depression are associated with heightened risk of incident deep vein thrombosis: Mediation through stress-related neural mechanisms, *American Journal of Hematology* (2024). [DOI: 10.1002/ajh.27427](https://doi.org/10.1002/ajh.27427)

Provided by Massachusetts General Hospital

Citation: Q&A: Anxiety and depression are important risk factors for dangerous deep vein blood clots (2024, July 18) retrieved 19 July 2024 from <https://medicalxpress.com/news/2024-07-qa-anxiety-depression-important-factors.html>

<p>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.</p>
--