

Emotional response may predict how the body responds to stress

February 17 2011

Your emotional response to challenging situations could predict how your body responds to stress, according to research published this month in the journal *Brain, Behavior, and Immunity*.

"People who reported high levels of anger and anxiety after performing a laboratory-based stress task showed greater increases in a marker of [inflammation](#), than those who remained relatively calm," said Dr Judith Carroll, who conducted the study at the University of Pittsburgh. "This could help explain why some people with high levels of stress experience [chronic health problems](#)," she added.

The investigators asked healthy middle-aged individuals to complete a speech in the laboratory in front of video camera and a panel of judges. During the speech, they monitored the physical responses to the task and then afterwards asked them about the emotions that they had experienced.

"Most people show increases in [heart rate](#) and blood pressure when they complete a [stressful task](#)," explained Dr Carroll, "but some also show increases in a circulating marker of inflammation known as interleukin-6. Our study shows that the people who have the biggest increases in this marker are the ones who show the greatest emotional responses to the task."

"Our results raise the possibility that individuals who become angry or anxious when confronting relatively minor challenges in their lives are

prone to increases in inflammation," explained lead author Dr Anna Marsland, an Associate Professor of Psychology and Nursing at the University of Pittsburgh. "Over time, this may render these emotionally-reactive individuals more vulnerable to [inflammatory diseases](#), such as [cardiovascular disease](#)," she said.

The research, funded by the National Institute of Nursing Research, is part of a burgeoning field, known as Psychoneuroimmunology, which investigates the interactions between psychological processes and health. "This paper addresses a key question in psychoneuroimmunology – what explains individual differences in the inflammatory response to stress," said Dr Margaret Kemeny, a Professor at the University of California, San Francisco. "These findings suggest that the specific nature of the [emotional response](#) to the task may be a key predictive factor and set the stage for future work defining these pathways and addressing their clinical implications," she added.

More information: The article is "Negative affective responses to a speech task predict changes in interleukin (IL)-6" by Judith E. Carroll, Carissa A. Low, Aric A. Prather, Sheldon Cohen, Jacqueline M. Fury, Diana C. Ross and Anna L. Marsland. Please see the article for the authors' affiliations and disclosures of financial and conflicts of interest. The article appears in *Brain, Behavior, and Immunity*, Volume 25, Number 2 (February 2011), published by Elsevier.

Provided by Elsevier

Citation: Emotional response may predict how the body responds to stress (2011, February 17) retrieved 23 April 2024 from <https://medicalxpress.com/news/2011-02-emotional-response-body-stress.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.