

Starve a fever, feed a cold, don't be stressed

July 20 2009

Whether it's getting a cold during exam time or feeling run-down after a big meeting, we've all experienced feeling sick following a particularly stressful time at work or school. Is this merely coincidence, or is it possible that stress can actually make us sick? In a new report in *Perspectives on Psychological Science*, a journal of the Association for Psychological Science, psychologist Janice K. Kiecolt-Glaser from the Ohio State University College of Medicine reviews research investigating how stress can wreak havoc on our bodies and provides some suggestions to further our understanding of this connection.

The field of psychoneuroimmunology (PNI) investigates how stress and negative emotions (such as depression and anxiety) affect our health. Over the past 30 years, researchers in this field have uncovered a number of ways that stress adversely affects our health, and specifically, how stress can damage our immune system. Numerous studies have shown that stressed individuals show weaker immune responses to vaccines, and as Kiecolt-Glaser observes, "The evidence that stress and distress impair vaccine responses has obvious public health relevance because infectious diseases can be so deadly." Stress and depression have been shown to increase the risk of getting infections and also result in delayed wound healing.

Inflammation is the body's way of removing harmful stimuli and also starts the process of healing, via release of a variety of chemicals known as proinflammatory cytokines (e.g., interleukin-6). However, too much inflammation can be damaging and has been implicated in the development of many age-related diseases, including Alzheimer's

Disease, Parkinson's disease, arthritis, and [Type II diabetes](#). [Negative emotions](#) and psychological stressors increase the production of proinflammatory cytokines. A recent study revealed that men and women who serve as caregivers to spouses with dementia (and thus are under constant stress) have a four times larger annual rate of increase in serum interleukin-6 levels compared to individuals without caregiving responsibilities.

What's more, the changes in interleukin-6 levels among former caregivers did not differ from current caregivers, even following the death of the impaired spouse, indicating that chronic stress may cause the immune system to age quickly. Kiecolt-Glaser notes, "These stress-related changes in inflammation provide evidence of one mechanism through which stressors may accelerate risk of a host of age-related diseases."

Kiecolt-Glaser argues that our environment should be taken into account when studying the link between [stress](#) and our health. For instance, diet may modify interactions between psychological and immunological responses: Omega-3 fatty acids (found in fish and walnuts) can reduce production of some proinflammatory chemicals and increasing levels of omega-3 fatty acids may result in positive effects on mood and the immune system. Environmental toxins (such as pesticides and air pollutants) can have extremely negative effects on the [immune system](#) and these effects may be intensified in stressed individuals, increasing their risk for developing allergies, asthma, and viral infections.

Kiecolt-Glaser suggests that to most effectively tackle the questions raised by recent PNI research, cross-discipline training needs to be emphasized for students. Psychology students who gain a strong foundation in areas such as biology and physiology will be able to enter into powerful collaborations with scientists conducting immunology research. Kiecolt-Glaser concludes that the questions answered by these

collaborations will advance PNI as well as psychology in general.

"By providing key data on how stressful events and the emotions they evoke get translated into health," she suggested, "psychology will assume a more dominant role in the health sciences, in health promotion, and in public health policy."

Source: Association for [Psychological Science](#) (news : [web](#))

Citation: Starve a fever, feed a cold, don't be stressed (2009, July 20) retrieved 25 April 2024 from <https://medicalxpress.com/news/2009-07-starve-fever-cold-dont-stressed.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.