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Mindfulness meditation slows progression of HIV, study shows

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CD4+ T lymphocytes, or simply CD4 T cells, are the "brains" of the immune system, coordinating its activity when the body comes under attack. They are also the cells that are attacked by HIV, the devastating virus that causes AIDS and has infected roughly 40 million people worldwide. The virus slowly eats away at CD4 T cells, weakening the immune system.

But the immune systems of HIV/AIDS patients face another enemy as well — stress, which can accelerate CD4 T cell declines. Now, researchers at UCLA report that the practice of mindfulness meditation stopped the decline of CD4 T cells in HIV-positive patients suffering from stress, slowing the progression of the disease. The study was just released in the online edition of the journal *Brain, Behavior, and Immunity*.

Mindfulness meditation is the practice of bringing an open and receptive awareness of the present moment to experiences, avoiding thinking of the past or worrying about the future. It is thought to reduce stress and improve health outcomes in a variety of patient populations.

"This study provides the first indication that mindfulness meditation stress-management training can have a direct impact on slowing HIV disease progression," said lead study author David Creswell, a research scientist at the Cousins Center for Psychoneuroimmunology at UCLA. "The mindfulness program is a group-based and low-cost treatment, and if this initial finding is replicated in larger samples, it's possible that such

training can be used as a powerful complementary treatment for HIV disease, alongside medications."

Creswell and his colleagues ran an eight-week mindfulness-based stress-reduction (MBSR) meditation program and compared it to a one-day MBSR control seminar, using a stressed and ethnically diverse sample of 48 HIV-positive adults in Los Angeles. Participants in the eight-week group showed no loss of CD4 T cells, indicating that mindfulness meditation training can buffer declines. In contrast, the control group showed significant declines in CD4 T cells from pre-study to post-study. Such declines are a characteristic hallmark of HIV progression.

Creswell also noted that researchers found a "dose-response" relationship between MBSR class attendance and CD4 T cells, meaning, said Creswell, "the more mindfulness meditation classes people attended, the higher the CD4 T cells at the study's conclusion."

The researchers were also encouraged because the overall CD4 T cell effects remained even after controlling for a number of factors that could have skewed the study results. Most notably, they found equivalent protective effects for participants whether or not they were on antiretroviral medications for HIV. Even participants taking HIV medications showed the CD4 T cell buffering effect after the mindfulness meditation class, Creswell said.

There is emerging evidence from other studies that shows that behavioral stress-management programs can buffer HIV declines in HIV-positive people, Creswell noted. And while there has been an exponential increase of interest in and practice of mindfulness meditation in the West over the past 10 years, this study, he said, is the first to show an HIV disease protective effect with mindfulness meditation training.

In order to understand the health benefits of mindfulness meditation,

Creswell and his colleagues at UCLA are now examining the underlying pathways through which mindfulness meditation reduces stress, using brain imaging, genetics and immune system measurements.

"Given the stress-reduction benefits of mindfulness meditation training, these findings indicate there can be health protective effects not just in people with HIV but in folks who suffer from daily stress," Creswell said.

Source: University of California - Los Angeles

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