

News & Comments

Immune Aging is Accelerated by Stress

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What causes some people at the same age to remain healthy while others develop chronic diseases and even die relatively young? There is some correlation between individual genetic makeup and stress levels, according to researchers at the University of Southern California.

A national sample of 5,700 community-dwelling Americans over 50, with an average age of 68, was examined by the researchers. Participants self-reported five stressors commonly associated with health based on their socioeconomic status and lifestyle. Discrimination based on everyday life, lifetime discrimination, and chronic stress is some of these.

When you are stressed, your immune system becomes inflamed and unable to respond to viruses and other invaders. The researchers suggest that stress of all kinds accelerates the aging of your immune system, including everyday personal and professional stress and traumatic life events. Cancer, heart disease, infectious diseases, organ failure, and premature death are linked to a deteriorating immune system. Vaccines are less effective, and individual organ systems in the body age faster when the immune system is weakened.

In this study, the researchers specifically examined how stress affects individual T cell counts. As part of the immune system, T cells act as "fighter" cells, seeking out, identifying, and destroying infected cells. Every organ and part of the body contains them. Immune system aging is also protected by T cells.

According to the study authors, various types of stress at varying levels can weaken the immune system and cause aging in individuals of the same age by either destroying existing T cells or reducing the production of new ones. Some people develop chronic illnesses and die from infectious diseases as they age, while others live relatively healthy and long lives. These findings might explain why some people develop chronic illnesses and die from infectious diseases as they age.

KEYWORDS

aging, brain research, immune aging, immune system, immunosenescence, inflammation, mental health, neurobiology, neuroscience, psychology, stress, USC

