

Stress and Your Immune System

The emotional problems caused by stress are often obvious—including excess anxiety, guilt and extreme mood swings. The physical effects may be less visible, but they are potentially life-threatening. Research has shown that stress affects the immune system with serious consequences. You should know how stress can compromise your immune system, and what you can do about it.

Stress triggers

“It’s only in the last half century that we’ve been able to uncover the mechanisms whereby stress contributes to ... everything from the common cold to herpes and AIDS,” says Paul Rosch, president of The American Institute of Stress (AIS) and a clinical professor of medicine and psychiatry at New York Medical College. “There’s been an aggressive increase in stress-related complaints ... it’s quite clear that job stress is far and away the leading cause of stress for American adults.”

Unfortunately, stress has become chronic and insidious, Dr. Rosch notes. Today’s potential stressors include loneliness, frustration, poverty, lack of social support and the increased pace and impersonal nature of business—although different situations stress different people.

“There’s nothing you can say about [stress] that applies to everybody,” Dr. Rosch explains. “It’s a highly personal phenomenon.” However, researchers have found that certain circumstances can make people more susceptible to immune system-impairing stress, including marital strife and serving as a caregiver for a sick loved one.

How stress affects the immune system

No matter what the trigger, stress can have a serious impact on your body. “There are pathways by which all mammals respond to stress. The nervous and endocrine systems release hormones and neurotransmitters (chemical messengers in the brain) that actually affect the functioning of nerves and tissues in the body,” explains John Sheridan, a professor at Ohio State University who has conducted extensive research on the effects of stress. “Prolonged activation of these systems tend to have detrimental effects ... they tend to be what we call immuno-suppressive.” Stress depletes cells that fight illness, Dr. Rosch adds.

Consequences of stress

Several recent studies have demonstrated the effects of stress on the immune system. In one study, Sheridan, along with colleagues Ronald Glaser and Jan Kiecolt-Glaser, compared the immune responses of elderly people caring for someone with dementia to the immune responses of elderly people not serving in a caregiving role. The researchers found that the effectiveness of an annual flu shot can depend on how stressed people are when they receive their shots; the elderly caregivers were half as likely to experience quick protection from flu shots.

You should consider the potential negative impact of stress on your immune system:

- decreased response to vaccination against influenza and other conditions
- accelerated risk of various age-related diseases, such as heart disease, diabetes, osteoporosis, frailty and certain cancers
- increased susceptibility to colds, upper respiratory infections and even AIDS or cancer
- increased risk of obesity
- potential exacerbation of immune system disorders such as AIDS, HIV, herpes, cancer metastasis, viral infections, rheumatoid arthritis and certain allergies

Signs that stress may be affecting your immune system

Dr. Rosch, Sheridan and other experts describe various warning signs that stress may be affecting the functioning of your immune system:

- catching more colds than usual
- decreased resistance to infection
- difficulty sleeping
- headaches
- more frequent heart palpitations
- lethargy or feeling run down
- stress-related gastrointestinal upset

What you can do

If you feel that stress may be affecting your physical health, take appropriate measures to minimize or eliminate the problem. The AIS offers some suggestions for relieving stress:

- practice relaxation techniques such as meditation, muscular relaxation or yoga
- exercise, especially aerobic exercise
- learn better time management skills
- develop a strong social support system through family, friends, colleagues, volunteer work or hobbies
- establish appropriate, realistic goals that can instill pride of accomplishment

Keep in mind, however, that no single stress-relief technique works for everyone. The trick is to experiment and find what works for you.

Resources

The American Institute of Stress
www.stress.org

MEDLINEplus
<http://medlineplus.gov/>

50 Ways to Prevent and Manage Stress by M. Sara Rosenthal. Contemporary Books, 2002.

Stress Management for Dummies by Allen Elkin, PhD. IDG Books, 1999.

Sources: Paul Rosch, MD; John Sheridan, PhD; The American Institute of Stress; MEDLINEplus; Ohio State University; *50 Ways to Prevent and Manage Stress* by M. Sara Rosenthal. Contemporary Books, 2002; *Stress Management for Dummies* by Allen Elkin, PhD. IDG Books, 1999; *The End of Stress as We Know It* by Bruce McEwen and Elizabeth Norton Lasley. Joseph Henry Press, 2002.

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