

THE

PHYSICAL

IMPACT OF

STRESS

ON THE IMMUNE SYSTEM

The immune system is a complex group of cells and organs that defend the body against disease and infection. A healthy immune system remains in balance much like the autonomic nervous system described previously. Because of this similarity, the immune system has sometimes been called our “liquid nervous system”.

Stress causes these cells and organs that compose the nervous system, to release hormones that trigger the production of white blood cells, which fight infection and other disease-fighting elements.

This stress-triggered hormone release is essential for priming the immune system to respond quickly to injuries and acute (short-term) illnesses. However, this activity is not beneficial to your health if it continues for more than a short period of time. Chronic stimulation of the immune system causes the system to become suppressed and thus become less effective at warding off diseases and infections.

Researchers have learned that cells in the immune system release chemicals called cytokines that act as messengers. These messengers allow cells to “talk” to one another and instruct each other to develop additional cells to fight infection. Hormones released during chronic stress may inhibit the production of cytokines, thus thwarting the ability to effectively coordinate the fight against infection. Because of this reduction in cytokines, the immune system's ability to successfully fight off disease decreases by 15% or more during chronically stressful situations. It is not surprising then, that individuals who are highly stressed are more likely to succumb to colds, infections, and herpes breakouts.

The breakdown in communication between the various aspects of the immune system that occurs during times of chronic stress may also be responsible for triggering flare-ups or sometimes even new cases of various autoimmune diseases such as Crohn's disease, Psoriasis, Rheumatoid arthritis, Lupus, Multiple Sclerosis and other conditions.

An autoimmune disease is one where the immune system gets confused and starts attacking the body's own healthy cells instead of what it should be doing, which is attacking foreign disease-causing bodies. After injury or illness has been dealt with, the immune system normally secretes additional hormones that trigger a decrease in the production of white blood cells, enabling the system to rest and rejuvenate itself.

This normal decrease and rejuvenation response becomes delayed during times of chronic stress. Stress worsens many skin conditions - Eczema, Hives, Acne and Psoriasis. Psoriasis is an autoimmune condition characterized by raised, red patches on various parts of the body, which may be covered with silvery white build up of dead skin cells.

Because of stress's effect on the immune system, as described above, stress hormones impact the development and severity of many different diseases and bodily systems. In some instances, stress causes existing conditions to worsen. In other cases, stress seems to be a major factor creating vulnerability to developing new conditions in the first place.

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