What Stress Does to You

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Faced with pressure, challenge or danger, we need to react quickly, and our bodies release the "fight or flight" hormones such as Cortisol and Adrenaline. These hormones affect the metabolic rate, heart rate, and blood pressure, resulting in a heightened - or stressed - a state that prepares the body for optimum performance in dealing with a stressful situation.

With a concrete defensive action (fight response), the stress hormones in the blood get used up, entailing reduced stress effects and symptoms of anxiety. When we fail to counter a stress situation (flight response), the hormones and chemicals remain unreleased in the bloodstream for an extended period. It results in stress-related physical symptoms such as tense muscles, unfocused anxiety, dizziness, and rapid heartbeats. We all encounter various stressors (causes of stress) in everyday life, which can accumulate if not released. Subsequently, it compels the mind and body to be in an almost constant alarm state in preparation to fight or flee. This state of accumulated stress can increase the risk of both acute and chronic psychosomatic illnesses and weaken the human body's immune system.

Very often, modern stresses do not call for either fight or flight. Nevertheless, the same stressing hormones are released as part of the reaction. This natural reaction to challenge or danger, instead of helping, can damage health and reduce the ability to cope.

Stress can cause headaches, irritable bowel syndrome, eating disorders, allergies, insomnia, backaches, frequent cold, and fatigue to diseases such as hypertension, asthma, diabetes, heart ailments, and even cancer. Sanjay Chugh, a leading Indian psychologist, says that 70% to 90% of adults visit primary care physicians for stress-related problems.
It is established that chronic symptoms of anxiety and stress can reduce our body's immune system. It changes the body's biochemical state with extra epinephrine and other adrenal steroids, such as hydrocortisone, in the bloodstream. It also induces increased palpitation and blood pressure in the body with mental manifestations such as anger, fear, worry, or aggression. In short, stress creates anomalies in our body's homeostasis. When the extra

chemicals in our bloodstream don't get used up or the stressful situation persists, our body is prone to mental and physical.

Aging is a natural and gradual process, except under extreme circumstances such as stress or grief. The constant stressors or stress conditions result in a loss of neural and hormonal balance. This loss of balance will cause increased oxidative damage accelerating aging in our body. That's because chronic disturbances in body homeostasis ultimately affect our hormonesecreting glands, cell repair, and collagen in our skin and connecting tissues. Immune and neural degenerative diseases prevent this otherwise inevitable process from following the normal and healthy course of events.

Recent research results suggest that long-term exposure to adrenal stress hormones may boost brain aging in later life.

Scientists at the University of Lexington looked at the results of memory tests taken by elderly patients with high levels of the stress hormone cortisol, released by adrenal glands when the body is stressed. Researchers say that the high-level group scored lower than others with reduced hormone levels.

The level of hormone released affects the total volume of the brain's hippocampus—a significant source of recall and memory function, in later life. Researchers found that those with high hormone release levels had a higher hippocampus volume, 14 percent less than those with lower levels.
The study results suggest that "chronic stress may accelerate hippocampal deterioration," leading to accelerated physical and brain aging.

Stress has long been suspected as a possible cause of miscarriage, with several studies indicating an increased risk among women reporting high levels of emotional or physical turmoil in their early months or just before conception. But while a relationship has been noted, researchers didn't know precisely how a woman's stress could cause a miscarriage.

In what may prove to be a breakthrough finding, a team of scientists from Tufts University and Greece has identified a suspected chain reaction detailing exactly how stress hormones and other chemicals wreak havoc on the uterus and fetus. In the June issue of Endocrinology, their report may help explain why women miscarry for no apparent medical reasons and why some women have repeated miscarriages. And it could lead to measures to prevent miscarriage -- medically known as "spontaneous abortion." Stress can be horrible both physically and mentally. But not all focus is bad.