



What Is Stress?

In today's fast-paced world, stress seems to have become a way of life. If you find that your shoulders are tense, or you feel irritable, angry, or unable to concentrate, then you may be overly stressed.

A certain amount of daily stress is normal and necessary. Positive stress adds anticipation and excitement to life. Stress can help move you to action. You may even thrive under a certain amount of stress. Deadlines, competitions, and challenges add a level of stress that keeps us active. However, according to the American Institute of Stress, stress causes adverse health effects in 43% of adults, and 75-80% of visits to the doctor are related to stress.

When left unchecked, stress can lead to serious health problems.

How Do You Handle Stress?

Everyone handles stress differently. Some people seek out situations that may seem stressful to others. A major life decision, such as changing careers or buying a house, might be overwhelming for some, while others may welcome the change. The key to achieving balance is to determine your tolerance level for stressful situations and learn how to effectively manage the stress in your life.

In an article in *American Psychology*, the author recommends learning a few coping skills that will make the demands of stress more manageable.

- Decide whether stress is the concern.
- Appraise how much control you have of the situation.
- Take actions that are deemed appropriate for the situation.

You could determine ahead of time your daily stressors and what type of situations cause you the most stress. Remember, it is your perception of the

stressor that makes it stressful for you. If you can take a thoughtful approach to evaluating your stressors, then you have a chance of managing your reactions to them.

Symptoms of Stress

The effects of stress can be both physical and emotional. Below are signs to look for, if experiencing undue stress:

- Difficulty sleeping
- Digestions problems
- Constant feeling of urgency
- Tension headaches, backaches
- Low energy
- Rise or lowering of blood pressure
- Anxiety
- Irritability
- Addictions and sugar cravings
- Under or overeating

When Does Stress Become a Problem?

Here are some guidelines to help you identify a potential problem:

- When stress becomes a way of life.
- When stress or its effects interfere with work or relationships.
- When stress causes you to lose self-confidence or self-esteem.
- When you constantly feel tired or overwhelmed.
- When you develop chronic insomnia.
- Weight gain, weight loss resistance, and blood sugar issues.

Sympathetic Nervous System

The ability to handle stress, physical or emotional, is a cornerstone to our survival. The stress response begins in the brain, in the hippocampus and the hypothalamus, and activates the sympathetic nervous system, which then activates the stress hormones produced by the adrenal glands. The adrenal glands are two small glands, each about the size of a large grape. They are situated on top of the kidneys. Each adrenal gland has two compartments—the inner or *medulla*—which modulates the sympathetic nervous system through the secretion of epinephrine and norepinephrine. This is the “fight or flight” system. The outer part of the adrenal gland is called the *cortex* and comprises 80% of the gland and produces primarily cortisol, aldosterone, and DHEA.

The most important hormone is cortisol. *Cortisol is essential for life.* It is necessary for normal brain, immune, reproductive hormone, and muscle function. Cortisone, another adrenal hormone, naturally lowers inflammation.

Cortisol is the hormone that regulates your sleep-wake cycle, your reserves of blood sugar, and thus your energy rhythm throughout the day and night.

It increases during a stress response and is also produced along with epinephrine and norepinephrine to handle stress.

When you are faced with a stressor, such as driving in heavy traffic, or even an imagined stressor, such as anxiety over an upcoming event, the sympathetic nervous system is called into action.

Greater amounts of energy are demanded. High amounts of cortisol and epinephrine are secreted. Your blood pressure increases, your heart beats faster, your breathing shifts and digestion slows down. As soon as the stress lessens, the body shifts back into its usual patterns and cortisol levels go back to normal, digestion resumes, heart rate slows down, and your breathing normalizes.

The sympathetic nervous system is one of the two main branches of the autonomic nervous system. The other being the parasympathetic nervous system. The autonomic nervous system regulates your unconscious responses, such as breathing, heart rate, and digestion. You might take these processes for granted because you are unaware that they are changing in response to external and internal changes.

When Stress Becomes a Way of Life

But what if the days, weeks, months are full of stressors? You may be in a constant state of stress. Eventually your body begins to adapt to the stress by secreting higher levels of cortisol that don't return to normal. Over time, even though you may think you are not stressed, your body has already made the adaptive changes and even at rest, your body may still be putting out higher levels of the stress hormones. Now, there may be a “chronic stress pattern” that becomes imbedded in your physiology.

Too much cortisol activation, over time, can lead to increased fatigue and decreased energy, high blood sugar, weight gain, muscle wasting, bone loss, impaired memory, “road rage,” anxiety, and insomnia, to name just a few issues. It can also lead to high levels of systemic and brain inflammation, as the immune system is constantly activated during the stress response. You may have noticed that you experience more allergies or your allergies have gotten worse. You may even develop sensitivities to foods and to environmental chemicals, such as perfumes, gasoline, and indoor pollution. You may have trouble falling or staying asleep. You may experience more mood issues, such as constant anxiety or depression.

If this continues over time, the brain's response to the demands of the adrenal glands declines and you can become overwhelmed by the least bit of stress.

Since the adrenal glands are responsible for supporting the production of the sex hormones, it is common to see people experience more hormonal issues. PMS and infertility are some of the effects of this hormone imbalance.

You also use up your reserves of vitamins, mineral and antioxidants. The adrenal glands thrive on vitamins, such as Vitamin B and C, and minerals, such as calcium, zinc, magnesium, sodium, and potassium. The more stressed you are, the more the reserves of these valuable nutrients are depleted.

You may start to crave sugar and grab fast food and refined carbohydrates because you are so overwhelmed. This will keep you in a constant state of nutrient depletion and sugar cravings.

Constant stress sets up a low level of systemic inflammation—a “fire within.” The inflammatory process may become “stuck” and a vicious cycle of constant inflammation and constant depletion of hormone reserves ensues.

Breaking the Cycle of Stress and Inflammation

Once your body gets into this “wind-up” of stress and inflammation, it takes some dramatic corrective measures to alleviate this chronic maladaptive pattern. It requires not only dietary intervention, but also emotional, physical and lifestyle measures as well.

Dietary Interventions

Managing blood sugar is a powerful way to break this pattern. This entails eating protein at every meal and eating every few hours. It is also necessary to eat a whole foods diet while eliminating trans fats, refined carbohydrate foods, stimulants, and alcohol. Increase antioxidant foods, such as vegetables, fruits, nuts, and seeds, gluten-free grains, and legumes.

Another approach that helps to mitigate the inflammation is to undertake a whole foods detoxification program. This will take the “antigenic” load off of the body and calm down the overactive stress response. The diet consists of vegetables, fruits, and lean protein. All foods that are most allergenic and inflammatory are eliminated, such as grains, legumes, and dairy.

Physical Interventions

Physical activity is needed to increase the oxygenation of tissues and to mobilize the lymph system to increase immune system viability. If someone is experiencing low adrenal reserves and low energy, undertaking a more rigorous exercise regimen should wait. Yoga and walking will be best during this time to allow the adrenal glands to restore healthy functioning. As soon as energy increases, a more active exercise program will be appropriate.

Emotional Interventions

Emotional stress goes hand in hand with a loss of adrenal reserves and with dysregulation of the hippocampus in the brain to the needs of the adrenal glands. During times of extreme emotional stress, extract yourself from the situation, take time away from the stress to conserve your energy, give your heart and brain a rest. Plan a strategy to take control of your reactions, and you will develop more stress resilience.

Any significant emotional stress can lead to adrenal dysregulation, and it can happen overnight. It may not need to build up over time.

Lifestyle Interventions

Lifestyle strategies, such as time management, sleep, and self-care should also be instituted. Go to bed early enough to sleep for at least 7-8 hours.

Do a full evaluation of how you use your time throughout the day. Most of us are caught up in the “busyness” of life and do not know what it is like to take time out to relax, cook meals, get appropriate physical activity, and truly enjoy life.

Plan to find at least 15 minutes twice a day to fully relax.

- Take an herbal tea break.
- Deep breathe for 10 minutes.
- Take a walk in nature.
- Find an app that contains restorative and restful music.

Find an app that takes you through some relaxation exercises to improve your heart rate variability and thus calms your nervous system.

If the stressors in life are effectively managed and we take adequate time for rest, movement, relaxation and sleep, along with eating a healthy diet to restore equilibrium, then occasional increases in cortisol release will not be a problem.