

# The Truth About Stress

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The word "stress" is used frequently as an explanation for many of today's ills. In some ways, this is true, but in others, it is a false notion, because it places the responsibility and potential for healing outside of ourselves. My medical yogic approach to stress considers it a process starting from the inside. While responsibility is at first scary and burdensome, the truth of this personal power can be the solution to chronic anxiety, pain, illness, and the dis-eases that we call "stress-related".

### Definitions of Stress

A stressor can be defined as a challenge to a system. A mechanical example is the weight of a truck going over a bridge, or a human body lifting a heavy object. The bridge and body are designed to handle these stressors. The difference between living beings and inanimate objects is that with the proper stressors, living beings become stronger; whereas inanimate objects do not change. We can think of the living organism as a system for handling stressors so that it can survive and procreate (and achieve spiritual goals). In fact, with insufficient stress, or challenge, the mind and body become feeble and never obtain optimal fitness. Too much, or too little stress, are both unhealthy. Therapeutic stressors such as math homework or yoga practice are designed to make us better. The state of fitness (which requires a chapter in itself) involves several layers, such as the mental, biochemical, physical and spiritual.

From a yoga point-of-view, stress can be simply defined as an incompatibility between the inside (perceptions/expectations) and outside. Two people with the same external circumstances can have very different levels of stress, depending upon what they are doing on the inside.

I also define Stress medically as a "deficiency disease" of mind-body-spirit experience. Where, as adults, or even as children, do we get to systematically explore our minds and bodies; how they work; how our emotions and muscles interact, etc? What is the effect of breath on mood? Without such knowledge and experience, it is like driving a car without driving lessons: you might be able to get around, but the risk of a crash is high. A yoga class is one such place where we can learn about the connections between mind, body and spirit.

### Phases of Stress

We are designed to handle periods of "acute" stress-such as 20,000 years ago when we were chased by a lion or fought for our lives. At times of such stress, the nervous and hormonal systems of the body mobilize to keep us strong (adrenaline) and unencumbered by pain (endorphins). However, back then, after such an acute stress reaction, we would have a period of rest and recovery (or we'd be dead and it wouldn't matter!)

Modern "chronic" stress goes on for month after month. In such a state, these mechanisms become exhausted and dysfunctional, and have deleterious effects on our body. While many routine tests cannot measure "adrenal exhaustion" and "autonomic dysfunction", there are recent tests that can be helpful to quantify these conditions.

### Relationship of Stress to Pain and Suffering

Pain is a negative sensory experience, while Suffering is the emotional reaction to that pain. The amount of suffering for the same pain depends upon many internal factors. One major factor is the context of the pain. Childbirth, a painful experience, often does not involve suffering since the context, the joy of a new child, and the temporary nature of the pain, enables a positive emotional outlook. On the other hand, a minor pain, such as that inflicted by a sibling or spouse, can cause significant suffering if the context is injustice or disrespect.

Chronic pain and suffering can cause a chronic stress reaction. In such a chronic situation, not only are there changes in our hormonal system, our pain control system also changes. There are shifts in specific nerve cells and neurotransmitters that represent the system getting "stuck in a rut". Recent research has shown that "alternative" modalities such as acupuncture, yoga, and nutrition can break these systems out of their rut by facilitating a healing process and bringing the systems back to their original balance.

### Effects of Stress on the Body

There are multiple effects that occur with stress. These include imbalance of the Autonomic Nervous System (ANS, see below), hormonal systems, immune systems, circadian systems (sleep-wake cycle and associated cycles), and biochemical systems (various stress chemicals). Changes in body chemistry can affect virtually every tissue of the body, from skin, to muscle, to bone, to blood vessels, to brain.

### Autonomic Nervous System

There are two main parts of the nervous system-the "voluntary" nervous system, which is under conscious control, and the "autonomic" nervous system ("ANS") which is "automatic". The ANS regulates blood pressure, heart rate, blood flow to alternating regions of the body, activity of the gastrointestinal system, sweating, and influences the endocrine system.

The ANS has two main subdivisions. The "sympathetic" division speeds up the body in a "fight or flight" reaction. It raises heart rate, blood pressure, causes sweating, increases blood flow to muscles and decreases blood flow to the gut in preparation for running or fighting. The "parasympathetic" division slow the body down, and is associated with rest and sleep.

Certain autonomic functions, such as breathing rate, can be brought under conscious control. With a yoga practice, working with the breath and consciousness, one can train and influence the ANS to a certain degree. For example, blood pressure and heart rate can be reduced with breathing and relaxation work. A modern technique, biofeedback, can also be used to train the ANS.

### Endocrine and Immune Systems

The endocrine system is a complex system of glands that release chemical messengers into your bloodstream. They are the communication system of the organism that evolved before the nervous system and are common to

animals and plants. Glands include the pituitary, thyroid, adrenals, parathyroid, pancreas, sexual glands and adipose (fat) system. Other tissues of the body, such as the liver, blood vessels, and gastrointestinal system alter these hormones, or put out their own chemical messengers, some called neurotransmitters, which affect other tissues, and interact with other biochemicals.

The concept of "psycho-neuro-immunology" is the process by which the mind influences the nervous system which influences the immune system. This occurs in part through the endocrine system.

### **Sleep-Wake Cycles**

Proper quantity and quality of sleep is necessary for handling stress. Sleep effects virtually every function of the body; and in turn is influenced by every function of the body. During sleep in a dark room, we cycle through a series of stages of sleep, some with dreaming, some without. In addition, there is a cascade of hormonal peaks that occur throughout the night and require 7-9 hours for the entire cycle. Stress disrupts the normal sleep process; and in turn disruption of normal sleep can cause an acute or chronic stress reaction.

### **Gastro-Intestinal System**

Many features of the stress response system can disrupt the gastrointestinal system. Stress hormones such as cortisol weaken the lining of the stomach, making it prone to ulcer and bacterial invasion. Imbalance of the autonomic system, discussed above, cause a shift toward sympathetic activity, causing less blood flow and peristalsis, among other effects, interfering with proper digestion and absorption.

These changes can then cause a change in ecology in the small and large intestines, where we carry normally carry three pounds of bacteria and yeast, and as much as 20 pounds of processed food. When good bacteria and yeast are replaced by bad species, this condition, called dysbiosis, causes a "leaky gut", where toxins from the gut then get into the bloodstream and wreak havoc on our immune and inflammatory systems.

### **Components of a Stress-Reduction Program**

- 1) Education- provides empowerment, hope, validation;
- 2) Right partners- partners and friends, family, practitioners, employer, and self--provide support on multiple levels;
- 3) Good sleep - allows for regeneration of the mind and body and proper hormonal sequences.
- 4) Mind-Body Work- helps release tension and facilitates new patterns;
- 5) Medications- to help re-establish balance with sleep, hormonal systems, pain, etc.;
- 6) Nutrition/Metabolic Work- remove toxins, add critical supplements to allow for detoxification and regeneration;
- 7) Yoga and Meditation- works on body, mind and spirit; builds strength, awareness, flexibility;
- 8) Gentle Aerobic Exercise- helps with fatigue, sleep, mood;
- 9) Spiritual work- clarifies core values and priorities, helps find meaning and purpose.

### **Other Guidelines for Stress Reduction**

- 1) Pay more attention to your body, mind and spirit--listen

for subtle messages from your inner wisdom.

2) Use a planner and begin each day with a review of your goals, priorities and affirmations. As they say, "to fail to plan is to plan to fail". Make sure there is time for eating and for exercise. Also plan for time off and vacations. (A copy of a "Daily Morning Dashboard" is available on the Publication page of my website).

3) Do one thing at a time, and focus your mind on the task at hand. Using a meditative state for your projects will bring concentration and clarity, and will keep away negative inner-talk.

4) It's OK to say NO-to commitments, to toxic foods, situations and people, to material values, to pressures to do what others are doing.

5) If you add a stressor, get rid of another. Think of your life as a closet where each stressor is a piece of clothing. If you add something, you must get rid of something.

6) Ask for help--from family, friends, employers, co-workers, professionals. As long as your requests are honest and reasonable, they will often be responded to with compassion.

7) Be realistic about what you can expect of yourself and others. Simplify your lifestyle!

8) Do something special for yourself each day, including a walk or yoga, even if it's just 15 minutes.

9) Take regular breaks, even if for 5 minutes. Sit or lie quietly, focus on your breath.

10) Journal regularly as a means of getting out emotional toxins such as anger, frustration, sadness. Keep a password-protected journal on your computer desktop and write your thoughts when you get stuck in a negative thought. (Journal meditation).

**IMPORTANT NOTE: This general information should not be used to make decisions about medical care without the involvement of a knowledgeable practitioner.**

#### **For More Information**

- O See Dr. Cheikin's related articles on: Detoxification, Elimination and Simplification and What We Really Need
- O Dr. Cheikin's website, [www.cheikin.com](http://www.cheikin.com), has helpful articles on related topics
- O Call to be placed on Dr. Cheikin's contact list for future lectures, classes, workshops and other services.
- O Bland, Jeffrey: [The 20-Day Rejuvenation Diet Program](#). Los Angeles: Keats, 1999. ISBN 0879-839-805.
- O Cameron, Julia: [The Artist's Way: A Spiritual Path to Higher Creativity](#). Penguin, 1992. 0874-776-945.

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