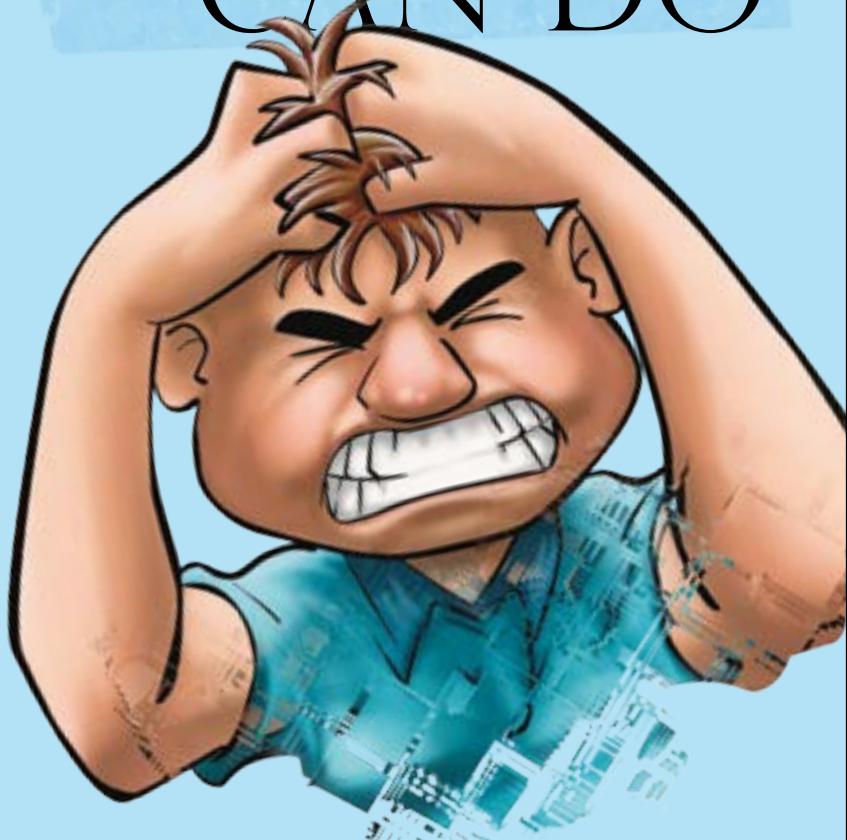


**BOOK SAMPLE**

# WHAT **STRESS** CAN DO



**Harry L. Campbell**

Why you must recognize all of the damage stress  
is causing in your life and do something about it

by Harry L. Campbell, BPS, BCB

# What Stress Can Do



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is causing in your life and *do something about it*

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## About the Author

## Introduction

*What Stress Can Do* is intended to bring to the attention of as many people as possible the various powerful negative effects that stress can have. It is also intended to make people aware of the fact that we can learn how to control our reactions to stress so that we minimize the negative effects. This is a simple principle, but it can mean the difference between a good or bad quality of life, good health or sickness, happiness or sadness, or even life or death.

The results of a 2013 online survey conducted by *The Huffington Post* show that 91 percent of people felt stressed by something during the month of March, while 77 percent of people reported feeling stressed “regularly,” defined as at least weekly. Men and women reported being stressed equally, although the stress can be triggered by different things. More than one thousand Americans of at least eighteen years of age were surveyed.

A survey conducted by *Prevention* magazine in 1996 concluded that about 75 percent of the respondents report a level of “great stress” one day per week. Thirty-three percent said they felt great stress at least two times per week. When this survey was done in 1983, only 55 percent said they had great stress every week.

Adults report their jobs as the leading source of their stress. Stress levels have also risen for children, teenagers, college students, and the elderly. Some of the sources of stress for them include increased crime, violence,

and other threats to personal safety; harmful peer pressure that leads to drug and alcohol abuse and other bad habits; social isolation and loneliness; the disintegration of family and religious life; and the loss of other sources of social support that could help reduce the negative effects of stress.

Stress in today's world is more of a problem because it is more inescapable, almost constant, and subtle because it comes mostly from threats that are more mental than physical. The stress triggers inbuilt and immediate reactions that we normally have very little control over. These reactions were originally meant to be useful in responding to physical threats.

Here is a list of some of the stress reactions and the benefits:

- Heart rate and blood pressure rise to increase the flow of blood to the brain to improve decision making
- Blood sugar rises to provide more fuel for energy as the result of the breakdown of glycogen, fat, and protein stores
- Blood is redistributed away from the stomach area, where it is not needed for digestion, to the bigger muscles of the arms and legs to allow for more strength in fighting or greater speed in running away from danger
- Clotting occurs more quickly to prevent blood loss from cuts or internal bleeding that might happen during a fight, accident, or other physical threat

Although these body reactions to danger would be helpful, even lifesaving in the presence of physical danger, they can be harmful if the perceived danger is simply emotional or mental. The problem is that the body's stress reaction is the same whether the source of the stress is a person physically assaulting you, disagreements at work with a customer or supervisor, or being caught in rush hour traffic.

When this type of fight-or-flight stress reaction happens over and

over, it can lead to muscle tension, neck and back pain, heart disease including attacks, high blood pressure, strokes, diabetes, ulcers, and other stress-related sicknesses that seem to have come with modern civilization and lifestyles.

Unmanaged long-term stress can make you feel tired even after an average night of sleep, can make things that used to be enjoyable no longer enjoyable, can cause you to become unorganized, and can cause you to put off doing important things. It can make you irritable so that even small things can make you overly upset. It can make you no fun to be around. If this describes you, then pay careful attention. Your awareness of the consequences of stress should motivate you to do something about it.

## **Why aren't we doing more about stress?**

I don't believe that the average person appreciates how serious the stress problem is. Many people who do know how serious the stress problem is don't believe there is anything they can do about it.

## **Why don't doctors tell us more about stress?**

As surprising as it may sound, most doctors don't really know as much about stress as you would expect. Many doctors are suffering from stress-related disorders themselves. Many work too many hours, don't sleep enough, don't eat properly, smoke, and drink more alcohol than they should, abuse prescription and/or nonprescription drugs, and/or are overweight. There is very little on stress in the curriculum of most medical schools. It is not considered necessary for those aspiring to become doctors to learn much about stress management, stress as a cause of illness, biofeedback, or the importance of relaxation training. This doesn't make much sense to me since it has been reported that as much as 90 percent of all illnesses/doctor visits have some relation to stress, according to the Centers for Disease Control and Prevention.

I don't like to get into conspiracy theories, but there may also be a financial reason. Drug companies influence medical education, and doctors are taught to prescribe drugs. If doctors used stress management with their patients, it could greatly affect the amount of doctor visits, medication, and other medical interventions patients need. This could have an undesired financial effect on the medical field as it now exists. The long-term effect should be positive for society as a whole and for individual citizens.

## What happens in your body when you experience stress?

Now let's talk about some of the effects stress can have on you.

You tense your muscles unnecessarily, hold your breath or breathe too fast and shallow, your heart beats faster, you start to sweat more, and your hands get cold. Muscles: You wrinkle your forehead, grit your teeth, raise your shoulders, clench your fists, curl your toes, tighten your leg or buttock muscles, and tap your fingers.

Chemical changes occur in the body as a result of stress. The sympathetic part of the autonomic nervous system causes some negative chemical reactions.

The stress hormone cortisol is one of the most harmful substances produced in reaction to prolonged stress. Here are some of the effects:

- Triggers buildup of fat, especially in the midsection
- Inability to relax, even when in a relaxing situation
- Difficulty sleeping
- Decrease in bone mass
- Decrease in immune system function
- Impairment of memory and learning
- Damage to brain cells

Stress also can cause a reduction in dehydroepiandrosterone (DHEA), the antiaging hormone.

Have you ever seen a person who looked older than they really were? What about a person who looks much younger than they are? Much of this can be due to differences in the amount of DHEA due to how the person manages his or her stress reactions.

Continued stress reaction can decrease production of DHEA. The production of DHEA can increase if the relaxation response is induced regularly.

The body's reaction to physical and mental stressors can cause stress-related symptoms like muscle tension, headaches, stomach upset, and anxiety.

The brain interprets changes in your surroundings and body and decides when to turn on the “emergency response.” How you interpret and label experiences can serve to relax or stress you.

Richard Lazarus said that stress begins with your appraisal of a situation—how dangerous or difficult you believe the situation is and what resources you have to help you cope with it. Anxious, stressed people usually appraise a situation as dangerous, difficult, or painful, and they don't tend to have the resources to cope with the situation.

The first person to describe the fight-or-flight response was Walter B. Cannon, a Harvard physiologist. During the fight-or-flight response, a series of biochemical changes occur that are intended to prepare you to deal with threats or danger. Ancient man needed this type of response more often to react to things like wild animals. We hardly need this quick burst of energy to fight or flee in our modern society.

Hans Selye, the first major researcher on stress, found that during the fight-or-flight response, a real or imagined problem can cause the cerebral cortex, the thinking part of the brain, to send an alarm signal to the hypothalamus (the main switch for the stress response, located in the midbrain). The hypothalamus causes the sympathetic nervous system to make a series of changes in your body. Heart rate, breathing rate, muscle tension, metabolism, and blood pressure all increase. Hands and feet get cold as blood is directed away from

them and your digestive system into larger muscles that could help you fight or run. You may feel the sensation of butterflies in your stomach. The diaphragm and anus tighten. The pupils dilate to improve vision, and hearing becomes clearer. If these reactions continue too long and nothing is done to stop them, long-term problems can result. Adrenal glands secrete corticoids (adrenaline, epinephrine, and norepinephrine), which slow digestion, reproduction, growth, and tissue repair and the effectiveness of your immune and inflammatory systems. When these effects are continued, the result can lead to illness.

It is not my intent to be exhaustive on the science of stress in this book. I strongly suggest that you refer to the work of Robert Sapolsky for much more detail. His book *Why Zebras Don't Get Ulcers* is a must read. I also suggest his National Geographic Special film, *Stress, Portrait of a Killer DVD*, and *Stress and Your Body* of The Great Courses DVD series. These go into much more scientific detail than I can do here.

## Chapter 3

# Stress and Anger

Anger, or rage, has a large effect on the crime rate. Anger is one of the most important causes of physical crimes against people. This includes crimes like assault, murder, and rape. It is very much underrated as a cause of crime. I say that because more is not being done about it.

Many studies have shown that the majority of criminal offenders come from broken or high-stress families or are the children of violent, angry parents.

The world could be a much nicer place to live if people were able to control anger before or while it is happening.

When some people add to their normal levels of stress and anger abuse of alcohol or lack of sleep, the anger becomes even worse.

Alcohol reduces much needed deep sleep and has a clear effect on people. Some of the aftereffects include irritability and impatience, which often lead to anger. When you don't sleep properly, you tend to have a grumpy, negative attitude. You tend to be less willing to be considerate of others. Alcohol may give temporary relief from problems, but it usually brings more problems. It steals from people the time they need to work on improving themselves. It also can awaken in some people dangerously explosive and even fatal anger

and rage. A great number of violent crimes are committed by people who are under the influence of drugs or alcohol.

If you allow yourself to be ruled by anger, you defeat yourself because anger blocks you from reaching your goals.

The level of anger depends on how a person reacts to a stressor. Not everyone will become angry because of the same event. It is how each individual reacts that is important in determining the outcome.

People who are experiencing chronic stress are likely to lose their temper often. The Walker Survey of stress symptoms in farmers shows this. More than 78 percent of the farmers surveyed said that they had become more irritable. Dr. Walter Menninger, a famous psychiatrist, described the highly stressed person as like a volcano about to erupt. Stress can change the easygoing person into one with a short fuse who can suddenly blow up in anger in an even normally mildly upsetting situation. In one example a farmer from Manitoba drove his car through the front door of the local credit union in frustration.

Hardly a week passes that we don't hear a story similar to this.

## Chapter 4

# Stress in the Workplace

Studies show that people under stress are more likely to have accidents caused by mistakes in judgment, poor perception, and lack of attention.

High levels of chronic stress can cause you to become less efficient and less able to adjust to changing situations. They can also cause you to miss out on many of the little pleasures that other people enjoy every day.

Research by Töres Theorell and Robert Karasek has shown a clear relationship between increased job stress and cardiovascular disease. For more on the subject, you can read *Healthy Work: Stress, Productivity, and the Reconstruction of Working Life* by Robert Karasek and Töres Theorell.

Stress can be a big problem in the workplace in many ways. It can cause problems for the workers as well as the company owners.

Let's look at an example of a business that sells products or services. Many things can affect the sales totals of a company—the product, the marketing and advertising, and the performance of the salespeople themselves. I want to consider just the performance of the sales force. The sales force is made up of people, not machines.

Many things, including stress, can affect humans. Each person on the sales force has a certain performance and production potential. Every one of them has the capability to perform at 100 percent.

Let us say that when one of the salespeople performs at 100 percent, he or she produces \$50,000 per month gross, and his/her commission of 10 percent is \$5,000. Now let us say that under moderate stress he or she only performs at 75 percent due to lack of focus, time spent thinking about problems, and inefficient breathing, which causes less oxygen to the brain, affecting thinking. Increased muscle tension causes pain in the neck, shoulders, and back, as well as headaches.

Now the salesperson is paying attention to pain some of the time instead of work. He or she may also have stomach and digestive problems. This can lead to more time in the bathroom and more time lost because of attention to stomach pain. The salesperson with these problems may start to take longer coffee breaks and longer lunch breaks. He or she may make more personal phone calls. He or she may feel less motivated to make the next sales call. He or she tends to be less effective on the calls that are made. He or she may end up missing more days at work due to real or faked sickness.

In this example, if the salesperson is only performing at 75 percent, the sales gross falls from \$50,000 to \$37,500. The commission falls from \$5,000 to \$3,750. The loss to the company gross is \$12,500. The personal loss to the salesperson in commission is \$1,250.

Businesspeople understand dollars and cents. Multiply this by the number of people in a company's entire sales force. Is it important for a business to help its employees deal with stress? What if the performance dropped to even lower than 75 percent? The losses would be even greater. We all have had times that we were at work while we were dealing with some kind of stress. At times we tend to just go through the motions, knowing that we are not performing at 100 percent. The quality of our work suffers. Sometimes we might not even go to work if we believe that the effects of the stress are too much for us to deal with.



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# WHAT **STRESS** CAN DO

*“What happens in the mind of man is always reflected in the disease of his body.”* - René Dubos

Is your daily life causing you undue mental anguish? To borrow a famous saying, you may very well have nothing to stress out about, except the stress itself. In fact, recent studies have revealed that up to 90 percent of all doctor's office visits are related to the psychological strain that may stem from workplace pressure, unsafe communities, and less-than-perfect family dynamics.

Now, a biofeedback professional guides you through the hot buttons of this all-too-common state of mind, and the effects that it has on our overall health. With keen insight and a clear course of action, *What Stress Can Do* will help you manage the stress in your life, so that every day can be healthier, happier, and remarkably stress-free.



Harry L. Campbell, BPS, BCB, has trained hundreds of professionals in biofeedback through his company Biofeedback Resources International Corp.

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