



## **How Stress Affects Your Health**

Foreword to Michael Lee's book: From Stress to Bliss

**by Timothy McCall, MD**

If you think of “stress-related” health problems, an upset stomach, trouble falling asleep or a tension headache might come to mind. But scientific evidence is increasing indicating that stress can be a factor in life-threatening conditions from heart attacks to depression to hip fractures.

When scientists talk about the stress-response system, they are referring to a complex web of events that ramp the body up to deal with an acute crisis. Responding to a perceived physical threat, the body shunts energy away from restorative functions like digestion and reproduction, mediated by the parasympathetic nervous system. Instead, the sympathetic nervous system kicks in, which among other things increases blood flow to the large muscles that help you defend yourself or run away. This is the so-called “fight or flight” system.

Stress hormones like adrenaline and cortisol are also released. In response, blood pressure and heart rate go up and breathing quickens. Blood sugar and other energy stores are mobilized as fuel for whatever challenge you are about to face. In case you are injured, your blood begins to clot more easily.

This built-in stress-response system is well-adapted to acute crises but can lead to all kinds of problems if it doesn't get switched off. Blood clots increase the risk of a heart attack or a stroke, as does high blood pressure. Elevated levels of cortisol are associated with everything from depression to osteoporosis to overeating and weight gain. And while the immune system initially gets stronger during an acutely stressful event, it starts functioning less well if the situation goes on too long, raising the risk of serious infections and autoimmune diseases.

The ancient human stress-response system isn't so well adapted to mostly non-physical modern world stressors like work deadlines, disagreements with family members and even abstract ideas about whether you are happy or fulfilled. If you repeatedly mull these problems over, the chemical and physical changes that were designed to deal with an acute threat to physical health--and then are supposed to shut off--remain activated. Such mental tape loops can thus turn abstract worries into concrete threats to health and even to life itself.



Beyond the harmful effects on the body, being stuck in a mind-generated tape loop is unpleasant. It can make you feel terrible, preoccupied, full of dread. This is where yoga can prove so helpful.

Yoga offers a series of tools including postures, meditation and breathing exercises which induce deep relaxation and which can, sometimes within minutes, slow down an overactive stress-response system. One of the great insights of the ancient yoga masters is that when you move and breathe with awareness, it calms the nervous system and slows down the tape loops in the mind. When the inner monologue slows, most people experience a sense of peace, relaxation and a feeling of being centered.

At first, this only happens when you are doing yoga and perhaps for a short time afterwards. But if you maintain a steady practice, more and more you become aware of and can tap into the tranquility you find in yoga throughout the rest of your day.

This sense of inner calm can make you feel more grateful for what you have, appreciate the beauty around you (which you might not have noticed) and help you realize that some of the stuff you're getting bent out of shape about may, ultimately, not be very important. And that may be the best stress-reduction method of all.



**Timothy McCall, MD teaches yoga therapy seminars worldwide. He is a board-certified internist, the medical editor of *Yoga Journal* and the best selling author of [Yoga as Medicine](#). This article originally appeared as the foreword Michael Lee's book, *From Stress to Bliss*. You can download a PDF of this article and other articles and view his teaching schedule at [DrMcCall.com](#).**