

Today's Issue: Stressed Out? Who Me??

Inside this Issue:

Learn why you *want* your body to be able to react to stress!



Walking with Darwin

The story of *The Caveman and the Bear* –
or how stress evolved to save your life.

“Stress is bad”. You will receive this opinion about “stress” (or some variation of it) from almost anyone you ask. It is drummed into us from childhood onwards, with those-who-know pointing to almost any illness or unfortunate outcome and making the link to the unchecked presence of “stress” (among other things) in the unfortunate victim’s history. “If only they had managed their stress better” they solemnly intone, shaking their heads in dismay and warning, “this could have been prevented”. As a child I inwardly swore to never let stress into MY life as an adult, placing it along side stern messages to avoid heroin addiction, unprotected sex with multiple partners, and failure to tithe on Sundays.

So how did such a foul beast as stress creep into our collective experience? What purpose could there ever have been in the creation of stress, or does it simply belong to the same category as the Seven Deadly Sins (they’re not your fault – just avoid them)?

The stress reaction, it turns out, is one of evolution's best tricks to ensure that human beings survive long enough to pass along their genes to the next generation. Let's take the example of a semi-mythical ancestor, the caveman. Imagine the caveman walking down a prehistoric trail in search of dinner, when from around a corner a hungry and ill-tempered prehistoric cave bear appears on the path. The caveman had two choices to pick from for a chance at survival. He could fight the bear and hope to kill it with a skillful blow, or he could run like crazy in the opposite direction. (Cavemen who opted for the third choice - holding still while the bear made a meal of them - had their genes quickly removed from the caveman gene pool.)

Whether the caveman chose to fight or run, his body's response to the stressful situation was identical. The perception of danger by his mind was converted to electrical signals that traveled along his nervous system to various organs in his body, which released hormones that prepared him to survive the short-term episode of danger. The sequence of events is still the same for people today. Biologists refer to it as the “fight-or-flight” reaction.

Epinephrine (also known as adrenaline) is released from the adrenal glands into the bloodstream. Within seconds, the pupils dilate to admit the maximum amount of light, the bronchioles dilate to admit the maximum amount of air, the heart rate increases, the blood pressure rises, blood vessels to deep muscles dilate at the same time as blood vessels to the skin constrict (to promote muscle movement and prevent blood loss in case of wounds), and alertness and sensitivity to the environment are at their maximum. Cortisol, the body's natural steroid, is also released by the adrenal glands as an aide to helping the body survive the short-term bout of extreme stress. In addition, the liver converts stored glycogen into a burst of glucose that floods the bloodstream and feeds the cells that are most active during the stress reaction. Blood flow is shunted away from areas of the body that are not required for short-term survival (such as the digestive tract) in order to ensure adequate pressure for those muscles and organs that will promote survival. This cascade of events has been so successful at keeping organisms alive through periods of danger that biologists find it in some form in almost every animal above the single-cell level of organization.

Let's assume that the caveman lived to tell the tale. He either killed the bear, or out-ran it (or at least ran faster than the cave man next to him, thus selecting for speed in the gene pool). He returns to the family cave, where his perception was that he was safe once more. The electrical signals from his brain that were triggering his endocrine organs to release stress hormones into his bloodstream slowed or stopped. His pupils, bronchioles, heart rate, blood pressure, blood flow distribution, and level of awareness all returned to their normal levels. He was able to eat a meal and digest it properly, and then fall into a well deserved slumber at the back of the cave.

Seen in this context, stress is recognized as an adaptive mechanism that is important for the survival of the human body during periods of short-term crisis. Where stress becomes a maladaptive response is when the mind perceives the environment as *always* stressful. We never get to the point where we are “back to the cave”. The body - unaware of whether our perceptions of the environment as stressful are appropriate or not, simply reacts with the same mechanisms that have been keeping people alive for countless generations. That doesn't always work well for us in today's world. And that's where will pick up the story in the next issue.

Acute stress has signs and symptoms which might include:

1. Racing heartbeat
2. Rapid breathing
3. Palpitations
4. Hyper-vigilance
5. Muscular tension
6. Pale skin (like a “ghost”)
7. Wide-eyed stare
8. Inability to concentrate on abstract thoughts

A little bit about *us* can be found below. But the most important part of all of it is *communication*. Please write, call or otherwise let us know about the things that are important to *you!* We want to know how we can improve your quality of life.

Timothy Dey, M.D. is a gifted speaker and educator who delights in the sharing of ideas. Dr. Dey makes a unique combination of educational assets and life experiences available to people through his writing, consulting, coaching and workshops. A graduate of Wayne State University School of Medicine, he joins the ranks of those healers who focus on transformation of mind and spirit as the most direct path to real and lasting health. He is an adjunct professor of pharmacology, a workshop and teleclass leader, a certified comprehensive coach, and creates and conducts health-related courses that address fundamental issues in society today. Dr. Dey is also a consultant to professionals seeking expert guidance in helping clients who are experiencing significant stress in their lives. As co-founder of The Dey Group, Inc., (Michigan) he is devoted to providing resources and support for those seeking intelligent change in their lives.

Sharron McDougall-Dey is a creator and organizer of uniquely designed workshops for health-care professionals, women in transition and many types of small businesses. She has two years experience as project manager for a national telecommunications corporation and has been instrumental in the creation and management of a number of dental and veterinary practices throughout her career. She has developed strong listening and observational skills, and uses them to bring to awareness those elements in the office environment that are contributing to a successful practice, and those which are acting as roadblocks. Her organizational skills combined with sensitivity to individual strengths of staff help her to forge teams that excel in reaching common goals within a rewarding workplace. An Associates degree in Business adds to her abilities to co-create success for the companies with whom she works. She is affiliated with Thomas Leonard's CoachVille, Inscape Publishing, Inc., and is also co-founder of The Dey Group, Inc. (Michigan)