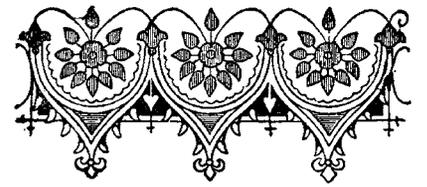


# Health & Wellness



## Stress—The Elephant in the Room



Dr. Kate Thomsen and Silky

Why are we so sure that stress is not the cause of our physical symptoms or conditions? In functional medicine, we are looking for the root cause of symptoms and yet whenever I bring up stress as a possible root cause, patients usually want to brush it off, saying, "yeah, I know I'm stressed, but that's not the cause of this..." It's true that symptoms and health conditions have multiple causative factors (the perfect storm) but stress is usually among them. I think we deny the importance of stress for 3 reasons: 1) we've grown so accustomed to it that it just feels like part of our life, 2) we don't perceive that there is a way to reduce it or control it, and 3) we don't want to take on the responsibility of changing ourselves/our ways.

A recent American Psychological Association poll found that 64% of Americans report concerns over money as causing significant stress for them. Other major sources of stress cited were: work (by 60% of those polled), family responsibilities (47%) and health concerns (46%). While these may be the areas in life where we perceive stress – the underlying cause of the stress is usually multiple demands. These include: demands on our time (short deadlines, high expectations, multitasking, interruptions, traffic, "to do" lists), demands on our resources (bills, children, home repair, taxes...), demands on our skills (technology, bureaucracy, too much information...). The APA poll results showed that, on average, Americans' stress levels are trending down-

ward. Where the average reported stress level in 2007 was 6.2 on a 10 point scale, in 2014 the average reported stress level was 4.9. Some have interpreted that as related to the improved economy while others see it as "under-reporting" due to the acceptance of increased stressors as the "new normal". It seems that we all feel it and we are all affected.

In people who thrive under pressure, stress acts as a stimulant and can be addictive. Pushing against a deadline can activate the dopamine reward center in the brain. The endorphin release which follows creates a feeling of exhilaration as one crosses an item off the To Do list. People are addicted to productivity for the "rush" of it as well as for the external rewards. This has some people adding items to their To Do list AFTER they have already accomplished them - just so they can cross them off!!!! But the brain develops a tolerance for stress and more stress is needed to get the same rush of cortisol and adrenaline (the stress hormones). Taking on more work, more projects, and more deadlines is not sustainable in the long run and the chronic, persistent stress leads to inflammation, fatigue, and loss of resilience to illness.

Recent studies have shown that under conditions of significant stress:

- Mice given chemotherapy were less effective at destroying cancer cells
- Mice were more likely to develop depression-like behaviors
- Children were more likely to develop a mental illness if one runs in their families.
- Children age faster
- Gray matter in the brain shrinks in the areas associated with emotion and long term memory
- There is an increased risk for developing chronic health conditions, especially stroke

- There is an increased risk of heart attack equivalent to smoking 5 cigarettes per day and a 42 percent higher risk of dying in the two years after being hospitalized for a heart attack
- Men's body weight, testosterone levels and sexual desire can be affected
- There is increased risk of teeth grinding, jaw and tooth damage, and gum disease
- There is a tendency to eat more comfort foods and consume 40% more food than normal
- There is an increased likelihood of experiencing Headaches, Chest pain, Elevated blood pressure, Neck/shoulders and Low back pain, Irritable Bowel Syndrome, Acne flare-ups, Insomnia, Low libido, Erectile dysfunction, Skipping periods, Menstrual cramps, and Infertility

Quite a list!!! And still there's plenty more associations I have not listed.

At a health visit, I frequently mention that stress could be related to the health concern at hand and will often recommend testing to help me prove my point. The 24 hour Heart Rate Variability test is excellent at determining Autonomic Nervous System imbalance and stress. Chronic stress may create low heart rate variability which is associated with all cause morbidity and mortality. It is truly a window into the extent that stress is affecting the body. For example, the stress hormone cortisol is lowest at midnight and should slowly rise over night to replenish one's store to use during the day. Overnight cortisol rhythms will show the capability of cortisol repletion seen in resiliency. In fact there are many markers of sleep in the 24 hour Heart Rate Variability test which provide information on stress and resiliency.

The Adrenal Stress Index tests 4 saliva samples for cortisol over a 16 hour period.

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Peak Cortisol occurs with rising, Adaptive cortisol occurs as one moves into the tasks (and stresses) of the day. Mid afternoon cortisol shows the effects of food/blood sugar, and the Evening baseline cortisol is one's reserve. Many patterns of cortisol dysfunction can be seen with acute and chronic stress and it can be an "eye-opener" to patients – illustrating that stress is related to their symptoms and often implicating a specific lifestyle cause.

Recognition that stress is playing a role in one's symptoms/conditions is the first step toward relief. Since "control" over most things is an illusion, stress must be managed by changing perceptions, and healthy supportive behaviors. Changing perceptions to clarify what is actually "life threatening" vs.

what is an "inconvenience or disruption" is not as easy as it seems. It may take some re-programming through therapy, energy medicine and effective coaching. A healthy diet and good quality and quantity of sleep will go a long way to reduce stressful responses. Regular exercise is a diversion and an endorphin releaser and is one of the best stress busters. Other behavioral changes such as planning, taking breaks from long tasks, deep breathing techniques, laughing and socialization can be learned and practiced. Tools including biofeedback, meditation, yoga, and Tai Chi or Qi-gong practice are more visible in our communities as we look for ways to preserve our health and sanity in what often seems like insane times.