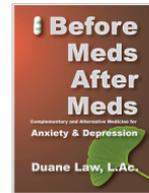


1.1 Understanding Stress

by Duane Law, L.Ac.



No stress? No life.

Stress keeps us awake. It makes us get out of bed in the morning. Stress makes sure we do the less pleasant things we need to do to make life possible.



Whatever attitude we take out the door in the morning tends to be reflected back at us. By the end of the day we'll have plenty of excellent reasons for whatever mood we're in.

But too much stress makes us sick. It makes us old before our time. So balancing just the right amount of stress and handling it well is crucial to life.

How do we know we're overly stressed? We start finding more (and always excellent) reasons to argue. Our friends start avoiding us. We stop doing the things we enjoy doing.

Some of us are constantly thrown into highly stressed and anxious states by small things; others are unperturbed in the midst of disaster. Why does stress affect us all so differently?

It turns out there's two very small parts of the brain that act as our stress "thermostats." Working together, the hypothalamus and amygdala are constantly alert to threats or things that appear to us as threats. They conduct a symphony of endocrine responses that work as a team to orchestrate our attempts to protect ourselves. They turn our "stress thermostat" up and down, monitoring blood levels to ensure the appropriate amounts of stress hormones are in circulation.

Cortisol is a stress hormone that makes us hyper-vigilant to threats. But it also weakens us. Among other things cortisol shuts down the tissue-repair processes the body uses to refresh itself and stay young. When we're on alert we've got more important things to do, or so the body seems to think. More on that later, but that's why folks who go through periods of extreme stress can age so quickly.

It turns out that the parts of the brain that control the cortisol stress response are unusually vulnerable to its age-accelerating effects. They have extraordinarily high densities of cortisol receptors so they can serve as "the canary in the coal mine," an early monitoring and alert system ... the thermostat, in other words.

The upshot is that the more severe and prolonged the stress one experiences the more the cells in these parts of the brain start to die off. As they do things trend in one of two directions.



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Some folks lose the ability to mount a stress response when it's appropriate. One face of this is the action hero sauntering nonchalantly through a hail of bullets and exploding machines, emerging eternally unscathed. Another face is the perpetually depressed person with a flat unexpressive manner.

At the other extreme we have folks who can't turn their stress responses off. These see threats everywhere. Life becomes grey or worse, black and white, us against the world. A growing tendency toward suspicion and fatalism is validated by paranoia and cynicism. This mindset often claims to be realistic. But it's really just anxiety or the more agitated forms of depression, growing more and more adept at fulfilling its own negative prophecies.

The first type (if they're not too depressed) can become bullies and manipulators. The second type can become victims. Across species, extreme levels of stress, especially during the early days, weeks and months of an organism's life, can predispose it toward one extreme or the other by "burning out" the brain's stress thermostat.

Modern imaging studies and neuroendocrine research confirm that anxiety, depression and other mood and personality disorders can be driven in part by out-of-control stress hormones. Our brains become like a room with a broken thermostat. With the neuroendocrine furnace stuck on "on," stress hormone production doesn't shut down when it should. Things start to heat up and our moods deteriorate.

Fortunately there's a wide range of natural ways to fix our inner stress hormone thermostat. Soon we'll be looking at them.