

The Biology of Courage: Physical and Psychological Stress

Montse Rovira^{1,2,3,4*}

¹University of Deusto, Bilbao, Spain

²Associate Fellow and Supervisor, Albert Ellis Institute, NY, USA

³Spanish Official Psychological Association - AN07677, Spain

⁴American Psychological Association - 40774990, USA

***Corresponding Author:** Montse Rovira, University of Deusto, Bilbao, Spain.

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Abstract

Stress is an adaptive response of the body that happens when we perceive a threat to our survival. Then we experience a high arousal state, which frequently turns into anxiety if these symptoms are perceived as a threat themselves. Studies about how stress is perceived evidenced that it affects not only psychologically but also physically. The percentage of people who have suffered typical symptoms of an anxiety crisis at some time in their life is increasingly high. So it is important to understand that we are able to change the way we experience circumstances by changing our beliefs. Rational Emotive Behavioral Therapy helps us to use rational thinking in order to change the emotional response. By changing the perspective of what stress really is we can affect not only our physical sensations but also our psychological well-being.

Keywords: *Stress; Anxiety*

Stress, anguish, anxiety, fear, panic... when they take hold of us we feel that our life has become a tightrope for which we dare not move forward at the risk of falling into the void. Fear is one of our most ancestral emotions, thanks to it we have managed to survive and keep alerting us to everything that threatens our survival, provoking a state of great physiological arousal that prepares us to face the danger by fighting or fleeing, it is that response which we call stress.

We have always heard about the "evils" of stress, so much so that we are afraid of it. If we are not tightrope walkers, it is logical to be afraid to walk on a tightrope ten meters above the ground without a lifeline and a net that protects us from an eventual fall, and if we would be forced to do it, we would most likely have a panic crisis that will immobilize us. What is not logical is that, invaded by anxiety, we are afraid to leave the house, to go to the movies, to walk along the beach or any other place that we perceive danger because we feel unprotected and vulnerable to a possible attack of panic.

The percentage of people who have suffered typical symptoms of an anxiety crisis at some time in their life is increasingly high. Generally we understand that it is natural to feel tense as a result of being in overwhelming situations, and we even accept psychosomatic reactions or psychological disorders such as having headaches or feeling nervous. Until then "everything is fine". We tell ourselves that part of life is sometimes found in circumstances that can overwhelm us. What makes us jump all the alarms is that those same symptoms appear without previous warning, that is to say, in moments in which no external factor provokes them. When that happens, stress has turned into anxiety. From that moment we do not understand what happens to us, what is the reason for that intense discomfort, what is happening so that our body reacts so alarmingly that we do believe we are at risk of imminent death.

Why even when supposedly calm, suddenly our body is startled in such a thunderous way? It is common for our nervous system to catch us off guard by giving the body the rest it needs, and it reacts with an excessive physiological activation to which we do not find any apparent cause. We do not usually be aware of the degree of tension and stress we live with. Minimal actions such as keeping a queue at the store cashier or distracting ourselves with any television program cause the nervous system to experience a sudden drop in tension in an instant, going from a permanent state of extreme activation to total calm. Then, instead of relaxing we experience physical distress. It seems like there is no reason to be distressed but the body experience abrupt changes. The anxiety manifests itself in the most diverse forms: sweating, dizziness, a sensation of suffocation, numbness of the extremities, acceleration of the cardiac rate, vertigo, punctures in different parts of the body, mental dullness, etc. The state of activation is so alarming that we do not understand what is happening to us because nothing happens outside that could have unleashed it. Again, stress has turned into anxiety.

The symptoms are so energetic that we believe that we are going to die of cardiac arrest or stroke. Terrified, we go to the emergency room where they inform us that we are suffering from a panic attack or anxiety crisis. They explain that there is no risk to our life, administer an anxiolytic to alleviate the symptoms and advise us psychotherapy. Stunned and bewildered, while we think about what to do about it, we decided that a cause-and-effect relationship might exist. We tell ourselves: "If this happened to me in a shopping center, I better stop going to the mall and stay at home, and I also make sure do not give a show in public if it happens again". And that's how, with the intention of safeguarding our integrity and our stage fright, we begin to develop avoidance behaviors.

Avoid doing everyday actions and go to the usual places is the worst we can do, since with the persistence of avoidance the cause of anxiety is no longer what it was at the beginning, and becomes our fear that again generates a crisis. We become neurotic while being aware of any slightest bodily condition that is strange to us and we pay persistent attention to any physical symptomatology that seems abnormal. Our attention is so focused on the fear of going through a crisis again that the mere fact of thinking about it causes us to somatize that fear in the form of discomfort. The discomfort gets worse, the symptoms intensify, the fear increases. We enter a spiral that we do not know how to get out of. We are in a state of permanent anxiety and stress. We hardly dare to leave the house and much less alone. It is fear of fear. Any action, however daily, seems to us like walking a tightrope.

Thanks to technological innovations and research, Psychology is advancing in giant steps. During the last decades an open war on stress has been declared, and a vast majority of psychotherapeutic interventions have been aimed at annihilating stress under the slogan "stress is bad." However, new perspectives are shaking the belief that stress is an enemy that not only makes us sick but also increases the risk of death from a cardiovascular accident.

Monat and Lazarus [1] defined stress as a situation "in which environmental demands, internal demands, or both, tax or exceed the adaptive resources of an individual, social system, or tissue system"; and Rational Emotive Behavioral Therapy [2-5] teach people the huge importance of beliefs. The way we perceive both external and internal stimulus, matters.

A study conducted at the University of Wisconsin [6] yielded surprising results. The study was started by asking the subjects two questions: How much stress have you suffered during the last year? And do you think stress is harmful to your health? Subsequently they used statistics on the group's mortality rate. Among subjects who had suffered high percentages of stress, the risk of premature death increased by 43%, however this only happened in those people who thought that stress was harmful to their health.

In contrast, people who had also experienced high stress but did not consider it harmful to their health not only did not increase their risk of death but had the lowest risk. During the eight years of the study, the researchers accounted for 182 000 premature deaths in the US, and against all odds, these people did not die from suffered stress, but because they believed that stress was harmful to their health. As a result of this study the belief that stress is harmful became the fifteenth cause of death, with a rate higher than 20,000 deaths per year, above diseases such as HIV/AIDS. Faced with such results it is inevitable that we ask ourselves: "May we improve our health by changing our perspective on stress?".

The answer, based on the evidence, is yes. Changing our beliefs about stress changes our bodily response to stress. It is about understanding that stress is a response from the organism that prepares us to face a challenge. The heart beats faster to pump more blood and supply more energy to the tissues, our breathing rate increases so that the brain is better oxygenated. What we experience as symptoms of stress is not a problem but it is the way in which the body prepares for action, to face the challenge.

Conclusion

It seems that we can withstand stress levels that prepare us physically for the action without increasing the risk of cardiovascular accident (due to constriction of the blood vessels), with the simple belief that the physiological response to stress is useful. The relaxation of the blood vessels simultaneously with the intensification of the heart rhythm is typical of the states of joy and courage. These studies conclude that our vision about stress matters, it matters so much that our body obeys us and reacts differently if we perceive it as a threat or as a help. Accepting the symptoms that we have always associated with stress as something natural, such as a biological response, makes stress what it is, a passing state. And most importantly it cuts short any possibility of transforming it into anxiety turning it into a psychological disorder that annihilates our courage, that courage that allows us to walk the tightrope without staggering.

Bibliography

1. Monat A and Lazarus RS. "Stress and coping: An anthology". 3. New York: Columbia University (1991).
2. Ellis A. "Rational psychotherapy". *Journal of General Psychology* 59.1 (1958): 35-49.
3. Ellis A. "Humanistic psychotherapy: The RET approach". New York: McGraw Hill (1973).
4. Ellis A. "Expanding the ABC of RET". In A Freeman and M Mahoney (Dirs.), *Cognition and psychotherapy*. New York: Plenum (1984).
5. Ellis A. "Reason and emotion in psychotherapy: Revised and updated". New York: Birch Lane (1994).
6. Keller A., *et al.* "Does the perception that stress affects health matter? The association with health and mortality". *Health Psychology* 31.5 (2012): 677-684.

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