



## Stress victim or stress hacker

by Cédric Ullrich, April 26th, 2019

According to the WHO, almost one in ten people worldwide suffer from depression or severe anxiety. Approximately 13% of all sick days can be attributed to mental illness, their share almost doubled between 2000 and 2013 ([www.deutsche-depressionshilfe.de](http://www.deutsche-depressionshilfe.de)). But can't we see stress and anxiety as a stimulus for personal (self-)development? If we learn to hack the stress on a physical level? If we learn to break the negative feedback loop which results into negative physical and psychological effects? Through yoga / breathing / meditation practice we can learn to accept challenges and be more mindful with ourselves and our environment, as well as to learn to understand the signals sent by our body. In order to get a first understanding, I would like to address the term stress and briefly explain how breathing and meditation methods can help us to master stress situations in everyday life.

### 1. What is stress?

The term *stress* is on everyone's lips but mostly not understood. Through the history of evolution, the changes in our society, the stress response in our body and the wonderful potential of stress, we can gain a new understanding of what is *stress*.

#### Stress as a fight or flight response

According to Walter Bradford Cannon, stress is the fight or flight response. On a physiological level, two processes happen in a threatening situation. First adrenaline is released. The heart rate increases. The oxygen supply and the circulation of the brain and muscles get better. Secondly when the stress keeps on, the HPA axis becomes active. Cortisol is released. This provides further energy for the fight or flight response. Many processes in the body, including digestion, immune system, reproduction, ... are inhibited. Over millions of years this processes in our brain developed and improved themselves, and helped us surviving in a fearful natural environment.

#### Stress as a permanent load

For Hans Selye, seen as the father of stress research, one of the stress components is the development of a pathological state from ongoing, unrelieved stress. In our current society, we rarely face a lion into the wild! But we are confronted with many small and big stressors, both on a physical level (chronic noise, air pollution, ...) and on a mental level (24 hours availability, competitive dogma, individuality), away from our biological rhythm, which leads to constant stress. This stress can have a very negative effect ("distress"). Chronic stress leads to illness, fatigue, and in the worst-case depression and burnout.

### Stress as a driver for our (self-)development

Hüther sees anxiety and stress as the driving motivation in human life for personal development. Let me point out three issues why we do need stress:

- Through stress, whether positive or negative, new interconnections are formed in our brain (neuroplasticity), likely to strengthen, destroy or create both harmful and positive links.
- Not only adrenaline and cortisol are released via stress but also oxytocin (cuddle hormone), which increases social skills.
- And last but not least, the reaction to a stressor depends on our self-assessment whether we can deal with it or not. If you see the stressor as a challenge and you are confident that you can deal with the situation, stress is the best driver for personal development.

## 2. Stress-Hacking

### With mindfulness we can change the stress response

*"There is a space between stimulus and reaction. In this room lies our power to choose our reaction. Our reaction is our development and our freedom." (Viktor Frankl)* Approx. 98% of what we do is unconscious. We get a stimulus and react. Through mindfulness we can enter this space. Mindfulness is a change of perspective. The ability to perceive the surrounding or ourselves, without prejudice, without judging, with acceptance. Mindfulness can be trained like a muscle. During stress or anxiety, various body reactions can emerge: sweat, fast breathing, flat breathing, ... By consciously perceiving these reactions, we can reduce or even stop them, and consciously change the stress response accordingly.

### With breathing patterns, we can break the negative feedback loop

As already mentioned, our brain structure and our response to stress are not optimized to our environment and society. Every strain phase should be followed by a relaxation phase, in order to recover. If stressors appear at short intervals, the level of "excitement" continues to grow. Through meditation and the (re-) learning of breathing, we can give the body the necessary relaxation phases, to find balance. In my experience, the most effective methods are the easiest ones, which nevertheless need time as we have lost the connection to our body: exploring the breathing spaces in our body, inhaling and exhaling with the same intensity and length, learning to hold the breath in a relaxed state, alternative nostril breathing, ... The breathing does influence our vegetative nervous system and these methods activate the parasympathetic part, which leads to relaxation.

### Active breathing exercises for self-control of internal processes

What happens when we learn to influence our hormone levels with a breathing exercise (studies show that high doses of adrenaline are released during specific breathing exercises) without any stressor from the

environment. If we learn to hack our stress response mentally through breathing exercises? Hyperventilation methods coupled with breathing pauses (holding the air) show very positive results: from the Wim Hof technique to further yogic respiration exercises (Kapalabhati, Bhastrika, Kumbhaka). This should be practiced under the guidance of an experienced teacher. The yogis refer to breathing exercises as "pranayama," which literally means control and/or expansion of the life energy. Breathing methods can have a huge impact mentally and physically in us.

### 3. What you should remember

We do need stress as a driver for self-development. But we do also need relaxation phases, in order to break the negative feedback loop, which leads to chronic stress with its terrible consequences.

In the current environment, society and business system it is increasingly important to find alternative practices in our day-to-day life in order to bring our body and mind into balance.



A martial artist and yogi, Cédric teaches how physical practice thrives on an inner attitude and philosophy of life. Through mindfulness, he accompanies people on their journey into finer layers of their body and mind, and supports them in the exploration and discovery of their hidden resources.

As an engineer and MSc in Renewable Energy he worked for many years as a leader of interdisciplinary teams in international projects. In this exciting and also challenging job, his yoga and martial arts practice gave him the necessary balance to turn stress into positive energy to accomplish his goals.