



Physiological and Physical Reactions During Extreme Stress Situations

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Stress – Lets define its variables

- ▶ A stressful situation – whether it is something environmental, such as a looming work deadline, or psychological such as persistent worry about losing a job – this can trigger a cascade of stress hormones that produce well-orchestrated physiological changes in a person.
- ▶ A stressful incident can make the heart pound and breathing quicken thus raising one's blood pressure. Muscles tense and sweating occurs
- ▶ This combination of reactions is also known as the preparatory response phase or “fight or flight” response because it evolves as a survival mechanism, enabling people and other mammals to react quickly to life-threatening situations.

Stress (cont.)

- ▶ What this means is this instantaneous sequence of hormonal changes and psychological responses helps someone to prepare to fight the threat off or flee to safety.
- ▶ Unfortunately, the body can also over react to stressors that are not life threatening such as traffic jams, work pressure and family pressures.
- ▶ The body's response to stress is a natural and automatic response to a perceived threat or to an upsetting situation.
- ▶ It activates a chain reaction of events as it rises to the occasion to meet the stressful situation.

Lets talk about FIGHT OR FLIGHT responses

- ▶ Again, fight or flight responses refers to the psychological response in a person due to stress.
- ▶ It is the body's automatic response that occurs when we perceive a situation as dangerous or stressful.
- ▶ Which in turn sets off the chain of chemical and hormonal changes that prepare your body to respond.

Perceived Stress – Lets define it

- ▶ Stress begins with our perception of a situation.
- ▶ The body's response to stress, whether it is a real, life threatening situation or a perceived threat, produce psychological responses.
- ▶ This brief explanation to perceived stress should give one a closer insight into how this occurs:
 - ▶ When we see or hear a stressful event, the information is transferred to the brain
 - ▶ There the brain processes it and passes it along to the hypothalamus, the center that regulates the nervous system
 - ▶ Once there, it is sent to the adrenal gland which is the charge of the fight and flight response
 - ▶ The adrenal gland sends out epinephrine to keep the body on high alert

Situational awareness

- ▶ Situational awareness can be defined simply as “knowing what is going on around us”, or – more technically – as “the perception of the elements in the environment within a volume of time and space, the comprehension of their meaning and the projection of their status in the near future”.
- ▶ Physical signs of stress – When the stress response initiates, you are probably not going to be aware that the hypothalamus is secreting stress hormones.
- ▶ However you will notice the following things that occur physically within your body.

Physical response to stress

Your thoughts are sharper:

- ▶ Your blood pressure rises as your heart beats faster
- ▶ Your sight is sharper because the pupils open wider to allow more light
- ▶ You might feel like you need a shower because you sweat more profusely
- ▶ You may not feel injuries as much because the pain receptors are shut down
- ▶ Your mouth gets dry and your throat tightens
- ▶ Your hair may stand on end

Lt. Col David Grossman US Army (Ret.)

- ▶ Lt. Col. David Grossman is the director of the “Killology Research Group”
- ▶ He specializes in teaching LE, Military and Security Forces around the world in both the physiological and psychological trauma to the human body when a person encounters and reacts to an attack.
- ▶ I have personally been to Grossman’s 8 hour LE seminar on this issue and found it to be life changing.
- ▶ Since his retirement in 1998, he has been on the road nearly 300 days per year and specializes in dealing with PTSD and use of force trauma including in our school safety organizations.

What is Killology?

- ▶ **Killology** is the study of "the reactions of healthy people in killing circumstances," such as police and military in combat "and the factors that enable and restrain killing in these situations."
- ▶ Grossman goes on to explain why it is so important to understand what perceived threats are and how we respond to them.
- ▶ It also teaches what course of action(s) work best under differing circumstances.
- ▶ It teaches what fears are, self doubt and worry during confrontations.
- ▶ He is a big advocate of training with the tools you carry.

Stress response

- ▶ Whenever the body is exposed to a stressor, which may be a real or just imagined, a response is elicited to overcome it.
- ▶ The response is not uniform in all individuals
- ▶ Hans Selye developed the General Adaptation Syndrome (GAS) which is a profile of how an organism (humans included) respond to stress.
- ▶ There are three stages as follows:
 - ▶ Alarm
 - ▶ Adaptation
 - ▶ Exhaustion or recovery

Mechanisms of stress after the event

- ▶ Following a stressful event the body acts at different levels to cope with the stressor. This is achieved through two major changes in the body;
- ▶ 1. Change in pattern/amount of the release of energy and
- ▶ 2. Change in the distribution of energy (how you respond)
- ▶ All such events are collectively called stress or the stress response.
- ▶ Remember, stress is a multidimensional phenomenon which involves both nervous and endocrine systems.

Defensive shooting incident

- ▶ If you are ever involved in a self defense shooting incident it is NEVER recommended that you speak to the police without the presence of an attorney.
- ▶ It is OK to declare your 5th amendment constitutional right against self-incrimination. Tell the police you want an attorney before you agree to answer any questions.
- ▶ The job of the police are to be the finder of facts in a case. **Anything you say can and will be used against you in a court of law.** Anyone recognize this phrase??
- ▶ You should, it is a part of the Miranda Warnings that police are required to read to you if they are questioning you about your potential involvement in a potential criminal act.

Impact of extreme stress situations

- ▶ Effect on the digestive system
- ▶ Effect on the circulatory system
- ▶ Can suppress the immune situation
- ▶ It also can interfere with the overall health of the individual and the reproductive system of the individual
- ▶ Plus it is just damn scary!!!

How do we manage these types of situations?

- ▶ Professional counseling
- ▶ Medications to ease the burden
- ▶ Keeping your diet in check
- ▶ Regular exercising
- ▶ Stay away from alcohol and illicit drugs
- ▶ Meditate
- ▶ Go to self help groups who have similar issues and concerns
- ▶ Get involved with a good social network to the level that you feel comfortable
- ▶ Try to stay as positive as you can

In Closing

- ▶ I hope and pray you are all well and stay that way! I want to thank Dr. Gallo and Kim for the ability to share this information with everyone. Be safe and may god keep this great nation free and the constitution strong from those evil forces within our country who want to see it fall. Thank You Be Safe! ED