



General Adaptation Syndrome

In 1936 Hans Selye created the stress model "*General Adaptation Syndrome*", which thoroughly explains the stress response and how aging and disease are caused by chronic exposure to stress.

"Every stress leaves an indelible scar, and the organism pays for its survival after a stressful situation by becoming a little older."

Hans Selye (1907-1982)

This quotation clearly summarizes his belief on how stress affects the human body through aging and other natural body processes that occur as we encounter various stressors in our daily lives.

The banner features the Explorable logo at the top center. Below it, three quiz cards are displayed in a row. The first card shows a pair of red roller skates on a wooden deck, with the text 'Quiz: Psychology 101 Part 2'. The second card shows a fan of colorful pencils, also with the text 'Quiz: Psychology 101 Part 2'. The third card shows a Ferris wheel at sunset, with the text 'Quiz: Flags in Europe'. To the right of the cards is a link that says 'See all quizzes =>'.

The Observations by Selye

In his studies, Selye noticed that the body has been adapting to external stressors in terms of a biological pattern that is actually predictable, so that the internal balance, or homeostasis, would be restored and maintained.

In its attempt to retain homeostasis, the body makes use of its hormonal system, also known as the fight or flight response. With this response, you would notice how the body wants things to be resolved fast and easy, that's why it already resorts to releasing hormones that would enable you to combat stress in the most immediate way possible. This struggle of the

body against stress is the main theme of the General Adaptation Syndrome.

Another observation that Selye discovered was that even if one's body wants to control or reduce the stress, it still has its limits. The limited supply of body's energy to adapt to the stressful environment is even more compromised when the body is exposed to the stressor continuously.

Three Phases of Stress Response

The General Adaptation Syndrome [1] is a model that is comprised of three elements or phases which describe the body's response to stress:

1. Alarm Stage

In this phase, the initial reaction of the body to stress is that it labels the stressor as a threat or danger to balance, that is why it immediately activates its fight or flight response system, and releases the "stress" hormones such as adrenaline, noradrenaline and cortisol. These hormones enable you to perform activities that you don't usually do.

For instance, when one's house is on fire, his body shifts to the alarm stage, his stress hormones released (particularly adrenaline) and then he lifts a very heavy appliance outside the burning house. But there's a catch – your blood pressure starts to rise after a minute or less, which can predispose you to damage of the brain and heart's blood vessels, putting you at risk to stroke or heart attack. The muscles you've utilized might also become painful due to tissue damage.

2. Resistance Stage

After the body has responded to the stressor, it is more likely that the stress level has been eradicated, or simply reduced. What happens next to the fight or flight response is that your body's defences become weaker, as it needs to allocate energy to the repair of damaged muscle tissues and lower the production of the stress hormones.

Although the body has shifted to this second phase of stress response, it remains on-guard, particularly when the stressors persist and the body is required to fight them continuously, although not as strong as it could during the initial response.

3. Exhaustion Stage

During this phase, the stress has been persistent for a longer period. The body starts to lose its ability to combat the stressors and reduce their harmful impact because the adaptive energy is all drained out. The exhaustion stage can be referred to as the gate towards burnout or stress overload, which can lead to health problems if not resolved immediately.

All in all, the General Adaptation Syndrome model by Hans Selye presents a clear biological explanation of how the body responds and adapts to stress.

Source URL: <https://explorable.com/general-adaptation-syndrome>

Links:

[1] <http://changingminds.org/explanations/brain/dysfunction/gas.htm>, [2]

<https://explorable.com/users/sarah>, [3] <https://explorable.com/general-adaptation-syndrome>