

The Stress Response

What is stress?

The state we experience when perceived demands upon you and your belief about your ability to cope are out of balance. Good stress is called eustress. This is when you experience confidence and feel in control. Bad stress is called distress. This occurs when you face a situation which you believe to be too demanding or threatening and you believe you cannot cope. It can also arise from having too few demands made upon you and you become bored and frustrated.

What is the stress response?

It's a series of responses made by the body to any demand made upon it. The stress response is always active to a degree and operates with a 'comfort zone', if you like, to help us accommodate everyday demands.

When we're faced with a situation which is more challenging than normal, the stress response activates in a way which helps us to cope appropriately.

Dealing with life threatening situations

If we're suddenly faced with a life-threatening situation such as a car speeding towards us or someone about to attack us, our response must be immediate. This is known as the *alarm reaction* - our body goes on full alert and prepares for flight or fight.

We decide in a fraction of a second whether running away or standing and fighting will be most effective.

Dealing with long term demands

Flight or fight is not an appropriate way to deal with non-life threatening situations which are nonetheless threatening (or *perceived* to be threatening) because they pose a threat to our personal security or well-being.

This involves the body activating another part of the stress response called resistance reaction. These demands might include keeping a job, finishing a project on time, relationship

difficulties or long-term illness. Dealing with these everyday situations can be very taxing.

The appropriate response - alarm reaction or resistance reaction - is activated according to how we perceive the situation to be.

Any time we feel threatened the stress response is triggered. Usually, it's triggered just enough to enable us to cope with the demand, so we experience a small amount of fear or aggression. But sometimes, we can feel so emotionally endangered by a situation (whether it's reasonable or not) that the alarm response is triggered to such a level that we become quite aggressive - physically and mentally ready to fight.

Or we may become mindful of the situation being beyond our control and feel scared - we mentally 'run away' and our body becomes ready for flight. Our emotions - fear and anger - play a big role in interpreting and assessing the situation and our response to it.

Assessing the situation

Essentially, we make one of three decisions:

"I can cope with this situation"

"I'm not sure I can cope with this situation"

"I cannot cope with this situation"

And note: these decisions are made based on your *perception* of your coping abilities. If you believe you can deal with the situation, the stress response is activated within the normal zone and you experience **eustress** - you will look forward to the challenge.

If you believe you cannot cope, the response goes beyond its normal zone and you will experience **distress** - flight or fight reactions.

So whether you experience eustress or distress depends upon *how you view and feel about the situation*.

Stress is not in the environment: it is in you. The way you respond to your environment determines how much stress you create for yourself.

Why we need to learn to deal with stress

We are regularly bombarded with a stream of emotional challenges in today's world and if we believe we cannot cope, we then become stressed. The stress response causes our blood chemistry to change leading to increased levels of chemicals in the bloodstream. The job of these chemicals is to prepare us for flight or fight. Chronic, long-term over-stimulation of the stress response can lead to a variety of disorders and physical, emotional and behavioural diseases.

What happens when we're stressed?

The body collects information from the senses and the brain assesses the nature of the situation based on previous experience.

The decision is transmitted to a part of the brain which triggers off a cocktail of chemical messengers required to bring about a physical response.

Neurotransmitters (which are chemicals) are released from the nerves onto the cells of the body's organs, causing the organs to prepare the body to deal with the situation. For example, chemicals released from the nerves which supply to heart will alter the rate of the heartbeat. A second way the instructions reach the body is through chemical messengers called **hormones**. These are released through endocrine glands after receiving instructions from the brain. The hormones then travel through the bloodstream to the organs to prepare the body for action.

Very simply, part of the nervous system is activated - the autonomic nervous system. There are two parts to this system - the sympathetic and parasympathetic systems.

Autonomic Nervous System



Parasympathetic Division

saves energy
aids digestion
protects body from foreign particles

Sympathetic Division

improves muscular efficiency
prepares body for action

When the ***sympathetic division activity is increased*** (being triggered by a neurotransmitter called **noradrenalin**) the stress response is **activated**.

The *role of the **parasympathetic division*** (which is activated by a neurotransmitter called **acetylcholine**) is to **slow things down** - to save energy, aid digestion and defend the body from invasion by bacteria.