

# HEALTHY STRESS RESPONSES AND THEIR DANGEROUS LONG-TERM EFFECTS

## Healthy short-term stress response

Raised blood pressure in the short term helps transport more blood to the brain

Increased blood clotting will help save your life if you have a bleeding wound, as the bleeding will stop more quickly

Increased insulin resistance in the short term means that your body won't store any sugar in your liver and muscle cells. It will result in more sugar staying in your bloodstream, which means that more will be available for the brain

The body's resources are directed at making the stress hormone cortisol to help deal with the immediate threat, at the expense of the production of sex steroid hormones, such as oestrogen and testosterone

The body's resources are directed away from digestion, as this is a non-essential function for survival at that moment

Small amounts of cortisol improve our brain function, which allows it to function better in a short, stressful situation, e.g. being attacked by an animal, or even to perform well in an exam

The emotional brain being on high alert to look out for threats is a very good thing if you are in danger

Short-term inflammation is the result of your immune system firing up to help you deal with the threat and prepares you to recover quickly in case you have a wound that becomes infected

## Long-term harmful effect

Chronic high blood pressure increases the risk of many diseases, such as heart disease and stroke

Long-term tendency for the blood to clot will increase the risk of having a stroke, heart attack or DVT (deep vein thrombosis)

Long-term insulin resistance contributes to the development of type 2 diabetes, obesity, high blood pressure and the production of harmful types of cholesterol, like VLDL

Long-term diversion of resources to make cortisol will lead to hormonal imbalances and contribute to a wide variety of hormonal issues such as lack of libido and menopausal symptoms

If attention is diverted away from digestion for too long, digestive complaints will result, such as constipation, bloating, indigestion and IBS

Prolonged release of cortisol starts to kill nerve cells in the hippocampus (the brain's memory centre) and may increase the likelihood of developing Alzheimer's

If this becomes long term, it will make you more prone to anxiety, as you start to worry about everything and see danger when no danger is present

Inflammation that becomes chronic and unresolved increases your risk of most modern chronic diseases, including type 2 diabetes, heart disease, obesity and many cases of depression