

# IS STRESS KILLING YOUR GAINS?

Stress seems to be on the minds of most people. From being stressed about work or home or life we are told stress is bad for us and we need to manage it. So let's unpack exactly what stress is and the impact it has on our body. We will also cover some simple strategies to help us when we are feeling stressed.

## OUR NERVOUS SYSTEM

Firstly let's start by learning about our nervous system the Autonomic Nervous System (ANS) and the Peripheral Nervous System (PNS- the nerves that run outside the brain and spinal cord)

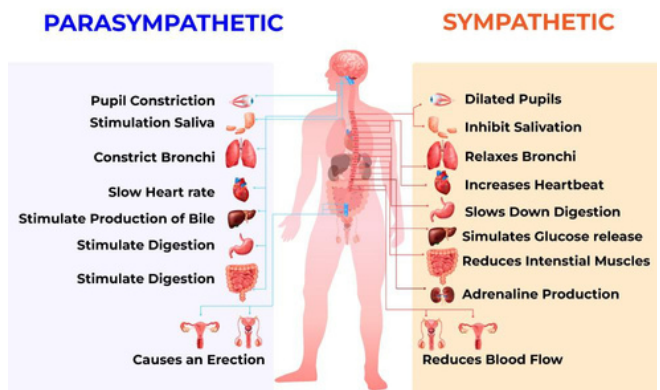
### The Autonomic Nervous System (ANS)

The ANS is the key to your continued survival. Your ANS is a system of networked nerves spread throughout your body that control processes subconsciously. Processes such as heart rate, blood pressure, respiration, digestion, and sexual arousal. Even while you are sleeping your ANS is at work controlling your breathing and your heart rate.

The ANS is a part of your overall nervous system, but it is running autonomously in the background, controlling processes without you thinking. The ANS connects your brain to majority of your internal organs. It has three main parts:

- **Sympathetic nervous system (fight or flight)**  
This system activates processes that help you in times of need, especially in times of stress or danger. It prepares you to fight or flight.
- **Parasympathetic nervous system (rest and digest)**  
This system is the direct opposite of your sympathetic nervous system. This is the side of our ANS we really want to live in. No Stress
- **Enteric nervous system**  
Not often mentioned but extremely important. This system operates independently of our brain or spinal cord. This system manages how our body digests food.

Now you have a general overall of the nervous system, we will focus on the two main parts.



So how does our ANS work? Lets use the example of when you get a sudden fright! Your body immediately senses a threat and your ANS is subconsciously switched into action especially the SYMPATHETIC side:

**Eyes:** You need to be able to see clearly to assess the danger and run and to do this more light is needed. Your ANS dilates your pupils to allow this.

**Heart:** To run away or fight, your heart needs to beat faster and your blood vessels need to dilate to allow blood to pump faster to energise your muscles to react.

**Lungs:** To oxygenate your blood, you need to breathe faster. The lungs expand and contract quicker to enable this.

Those are just a few examples of how we subconsciously react in the sympathetic side of our nervous system.

What does this have to do with stress you ask. Well when we are stressed- any stress- our body reacts by switching on our ANS and we get sympathetic responses that start to happen all over the body.

## HOW DOES CONSTANT HIGH STRESS AFFECT US?

Stress triggers our Sympathetic Nervous system which triggers a release of hormones, including cortisol. Balanced levels of cortisol are essential to human health but too much or too little impacts on us significantly. Our inflammatory response, immune system and metabolism are all impacted by elevated levels of cortisol, these elevated levels impact how our body metabolises sugar by elevating our blood sugar levels. High stress also inhibits the release of insulin to prevent the lowering of blood sugar levels and makes our body more resistant to insulin.

*This all makes sense when you think that the body is preparing for fight or flight and is preparing the energy to undertake that activity.*

## ACTIVITY

Take a second to check if you are breathing through your mouth? If you are, then your body is more than likely in a sympathetic state. Your body is trying to get more oxygen by breathing through your mouth. Our mouth is not designed for us to breathe through. Calm nose breathing indicates you are in a parasympathetic (rest and digest) state.

Check in with yourself during the day and make a concerted effort to remain calm breathing through your nose. This is natural and healthy.

An over activated sympathetic nervous system increases anxiety, panic attacks, nervousness, breathlessness, heart palpitations, high blood pressure and high cholesterol just to name a few.

## HOW CAN STRESS AFFECT OUR FITNESS GOALS?

Being in an overly activated sympathetic state can impact our fitness goals in two main areas:

1. wanting to build muscle or;
2. wanting to lose body fat

How does it do this? Being in this sympathetic state for prolonged periods can have the following impact:

### SLEEP

- Creates Insomnia (poor sleep) and inability to digest our food properly. Stress, or living too long in a sympathetic state, impacts greatly on sleep due to our inability to relax.
- Not being able to go to sleep, waking up mid sleep worrying and not being able to go back to sleep, or not getting sufficient sleep, impacts greatly on our hunger controlling hormones ghrelin and leptin.
- Insufficient sleep increases ghrelin, which increases hunger and makes it really difficult to stick to a calorie deficit if fat loss is your goal. This will also cause problems with excessive fat gain in a muscle building phase.
- Sleep is where the magic happens in so many biological functions. Human growth hormone (HGH) is released, and our body cleanses our brain and repairs itself while we sleep.
- Lack of sleep also impacts our physical and emotional state. You become too tired to train with any intensity or breaking down or losing the plot over very small things. No one copes well when they are tired.

### DIGESTION

- Our digestive system shuts down in readiness for flight or fight.
- Everything is focusing on fighting for survival or running and digestion is not what we need. This creates problems for metabolising the nutrients we have consumed.
- Gas, bloating, pain, constipation, diarrhoea are all symptoms of a digestive tract not operating in a parasympathetic state (rest and digest).

If you are experiencing any of these symptoms, then looking at and managing stress must be your number 1 priority instead of turning to supplements or drugs.

The question then follows is that "Is there such a thing as good stress?"

## YES, STRESS CAN BE GOOD

Eustress is a stress that leads to a positive response. It is the direct opposite to "distress" and can be physical or psychological. This kind of stress is generally short term and often feels "exciting" instead of creating anxiety or fear.

This kind of stress is manageable and can even be motivating if we embrace it.

The physical response to eustress can be quite similar the way it presents to distress. Feeling nervous, increased heart rate, racing thoughts. So, what makes this different? The way we perceive these physical sensations- An example of this would be riding a roller coaster. Scary but exhilarating.

One of the best examples of eustress for us, without doubt, is a solid session resistance training in the gym. It's short-lived stress:

- Increased breathing
- Increased heart rate
- Sweating.

We "go hard" for a short period of time, bringing about adaptations from that training session. It pumps up our feel-good neurotransmitters, known as endorphins. This brings great feelings even though we are technically "stressed." All of this is a very beneficial stress for us.

**KEY TAKEAWAY:** *Little or no stress creates boredom and depression. Too much stress can cause anxiety and poor health. The right amount of acute stress tunes up our brain and improves performance and health.*