

Session 2 Summary Notes



What happens when you're under pressure?

Whenever we're angry, scared, anxious, or tense, the brain tells the body to produce cortisol and adrenaline, two hormones specifically designed to trigger our 'fight-or-flight' response that was once crucial to our survival. These two 'stress-response' hormones basically 'super-charge' the body for action – telling it to get ready to fight, flee or freeze. They also tell the body to rapid-release fat and sugar stored in our bodies to energise system.

Adrenaline's main role is to make you alert and focused, with exceptional concentration and memory. Cortisol helps increase heart and respiratory rates and gets your muscles tensed and ready to fight, flee or freeze.

These physiological processes worked well for our prehistoric ancestors – they evolved over millions of years when daily life was a series of physical challenges for survival and there was lots of time to rest and recover afterwards. These days, however, the stress response is not as useful in a world where physical dangers are few and much of our fear and anxiety is psychological and emotional – and unremitting.

What happens in our bodies?

Your muscles tense - to get ready for action – the fight, flee or freeze action – and the hairs on the back of your neck stand up (a sign your muscles have tightened for action)

Your heart beats faster – and blood pressure increases

The heart pumps more oxygen into the blood to carry the blood to where it's needed the most - to the brain and the muscles

Consistency of the blood changes – it gets thicker and stickier so that it will clot faster if you get injured – another throwback to a time before bandages and hospitals. Most importantly – blood is thickened by cholesterol being pumped into it by stress hormones. Helpful for short burst of time – dangerous over longer term!

You breathe becomes faster and more shallow to get more oxygen into the lungs





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Your digestion shuts down – your body stops digesting food and absorbing nutrients – it's in 'emergency' mode so all non-essential functions are put on hold

You sweat more – the body's way of keeping you cool while all the 'flight or fight' action is going on – overheating drains you of energy

Your senses become heightened – your sense of smell is on high alert, your hearing gets more acute, your pupils enlarge to let in more light and keep you wide awake

You look pale - your blood has gone to your muscles and brain; often your hands and feet feel cold as blood rushes to key organs.

It doesn't happen by magic... or does it?

Our 'stress response' happens via body's **Sympathetic Nervous System (SNS)** – and it's all **AUTOMATIC** - you can't stop it from happening - and your brain can't tell the difference between real and imagined threats so the sound of a voice, a familiar smell, or scary thought can all trigger the stress response

Mild to moderate stress stimulates dopamine levels in the brain and can be pleasurable. We all need stress to perform at our best – and periodic high stress creates peak performance – just think of top athletes.

Our main problems occur because of chronic stress - when we don't have time to recover between pressures. Chronic stress decreases serotonin levels and curbs dopamine production – which in turn, has an impact on creativity, innovative thinking, co-operative behaviour – and the long-term impact can result in depression.

Chronic stress is particularly dangerous because:

Stress hormones reduce immune system effectiveness – make you more susceptible to illness especially colds and flu, digestive disorders (things like IBS), heart disease, some cancers, skin complaints and depression.

Stress hormones 'emergency borrow' vitamins, minerals and protein from body reserves - **chronic or unremitting stress can use up as much protein as 8 pints of milk in one day!**

Vitamins and minerals need to be replaced.





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Our food is generally much lower in essential nutrients and minerals than it used to be and processing depletes its value further. In addition, preservatives and chemicals in the foods we eat stress the body internally – so proper nutrition is critically important. Modern diets (especially Western diets) are already seriously deficient in B vitamins – the stress-busting vitamins.

Chronic stress is linked to comfort eating and chronic fatigue – we crave sugar and sweets because the stress has literally used our energy up.

The fastest way your brain knows to get energy back into body is to eat sugar and fat – but both produce ‘empty’ calories with no real nutritional value – and the body can’t process them in stress-state because the digestive system shuts down.

This often leads to weight problems - comfort eating during stressful moments – which tend to be many these days – is one of the main reasons our waistlines expand.

So what can you do about it?

Short-term or acute stress usually dissipates around the body naturally within a couple of hours if you’re healthy.

Chronic, unremitting stress is the bigger problem – especially if your immune system is not in full working order – and stress is increasingly linked to heart disease, cancer and diabetes.

We need to get the **Parasympathetic Nervous System (PNS)** into action – it’s the opposite to the SNS and regulates our relaxation response

Good nutrition critical – especially a good intake of B vitamins, zinc, magnesium and vitamins A, C and E

Activities that trigger our PNS

Practice regularly specialised relaxation techniques like meditation, mindfulness and yoga.

Take up activities that release endorphins (pleasure hormones) – dancing, singing, exercise (in fresh air releases endorphins faster than in gym)





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Attitude – how we perceive stress-provoking event and how we react determines its impact on our health – physical and mental

Learn to control what you can and learn to accept what you can't - and to know the difference!

