Effectively managing stress and engaging in recovery promoting behaviours improves our overall health and wellbeing, reducing risk for disease and allowing us to function optimally thereby setting the physiological foundation to reach peak performance in work, leisure and life.

To better understand the important relationship between stress and recovery, and its effect on your personal performance, it is useful to look at professional sport. Athletes are constantly seeking to improve both their physical performance (strength, speed, fitness, skill) and their mental resilience (decision making, focus, mental stamina), whilst simultaneously trying to avoid injury and overtraining. Appropriate training load and recovery results in enhanced physical and mental performance, however, if an athlete is training hard without achieving sufficient recovery they are at an increased risk of overtraining, fatigue and injury, which negatively effects their ability to perform when they need to. Therefore, it is essential to manage the balance between training load (physical stress) and recovery for optimal performance.

This same physiological principle applies to corporate performance where chronic stress (personal or work related) combined with poor recovery can result in diminished productivity and performance.

**HOW DOES CHRONIC STRESS EFFECT PERFORMANCE?**

Short term stress such as delivering a presentation can be beneficial to performance, enhancing alertness, memory and focus. However, when stress is experienced for prolonged periods of time without sufficient recovery it can be harmful to our physical and mental health, impairing cognitive performance and increasing our risk of burn-out and stress related work absence.

Chronic stress stimulates key physiological systems within the body such as increased sympathetic (stress response) activity, cortisol release (stress hormone), and proinflammatory cytokines (immune cells), whilst simultaneously reducing parasympathetic (relaxation and anti-inflammatory response) activity.

Some of the negative effects of chronic stress include:

- Adverse changes in brain structure and function such as -
  - Increased neurogenesis (new brain cell formation) in the amygdala - area of the brain responsible for fear, stress, anxiety and aggression.
  - Inhibiting neurogenesis in the hippocampus – area of the brain that regulates the stress response and is essential to memory and learning.
  - Atrophy of neurons (brain nerve cells) in the hippocampus and prefrontal cortex - brain regions involved in memory, selective attention, and executive function. Thus the ability to learn and remember and make decisions may be compromised by chronic stress and may be accompanied by increased levels of anxiety and aggression.
  - These structural brain changes may increase the risk of developing dementia and depression.
• Immune system dysfunction and stimulation of proinflammatory cytokines responsible for systemic inflammation and tissue destruction. Thereby increasing susceptibility of infections and auto-immune diseases.
• Chronically elevated heart rate and blood pressure, increasing the risk of developing heart disease
• Elevated circulating cortisol increases glucose and insulin release, increasing weight gain and the risk of developing diabetes.

Chronic stress is often associated with impaired sleep and recovery, which results in an amplification of the following:
• Activation of the sympathetic nervous system, stimulating the stress response
• Stimulation of pro-inflammatory cytokines and impaired immune response
• Metabolic changes such as insulin resistance
• Decline in cognitive performance and changes in mood
• Impaired memory consolidation
• Increased appetite, body fat and obesity

GETTING THE BALANCE RIGHT

We often think of stress in a very negative light, however, stress is essential to challenge us, pushing us to learn, grow and develop as individuals - such as getting a promotion, learning a new skill or becoming a parent. In the same way that appropriate training load combined with adequate recovery results in enhanced performance for athletes, if we can get the balance right between the demands of daily life and recovery, we will be happier, healthier, more productive and more effective in every area of our lives.

Therefore, engaging in behaviours that increase the activation of the parasympathetic nervous system and the relaxation response allow us to recover and recharge from the pressures of life, helping us to cope better in demanding situations, building our resilience.

STRATEGIES TO IMPROVE RECOVERY AND BUILD RESILIENCE

Practicing the following strategies regularly will promote recovery and resilience:
1. Mindfulness meditation
2. Physical activity and exercise
3. Adequate sleep
4. Healthy nutrition
5. Alcohol in moderation
6. Strong relationships (friends, family, community)
7. Downtime (breaks at work, daily leisure time, annual leave)

References: