



DR LAUREN BURNS
Elevating Potential

SLEEP MASTERCLASS

The effects of sleep on human health are vast, multifactorial and significant to a myriad of biological functions and human behaviour, including executive function, microbiome changes, immune function and even loneliness.

HOW SLEEP AFFECTS OUR OVERALL HEALTH

In this masterclasses Lauren highlights how sleep affects our overall health and wellbeing. How critical it is to our memory and executive function and provides practical strategies for good sleep hygiene.

Sleep plays a critical role in maintaining executive function and cognitive performance. Sleep deprivation can impair memory consolidation, attentional processes, inhibitory control, and cognitive flexibility, all of which are essential for optimal executive function.

Renowned sleep expert, Dr Matthew Walker demonstrates in his research, one of the most significant benefits of sleep is its role in memory consolidation. During sleep, the brain processes and consolidates memories, making them more accessible and easier to recall. This is because the brain forms new neural connections and strengthens existing ones during sleep, allowing us to retain and use information more effectively. (Anderson et al, 2011)

Sleep also plays a critical role in emotional regulation. It helps regulate the amygdala, the part of the brain responsible for processing emotional stimuli. When we don't get enough sleep, this regulation is disrupted, leading to increased emotional reactivity and difficulty managing our emotions. (Lim et al, 2010)

A lack of sleep, on the other hand, can lead to weakened immune function and increased susceptibility to illness. Additionally, sleep deprivation can lead to mood changes, increased stress levels, and decreased job satisfaction, which can negatively impact work relationships and organisational outcomes. Poor sleep quality has been linked to a higher risk of chronic health conditions such as diabetes, cardiovascular disease, and obesity, as well as mental health issues such as anxiety and depression. (Besedovsky et al, 2012, Lo et al, 2006)

Lauren's doctoral work focused largely on connection and interpersonal relationships and their effect on performance. An incredibly fascinating body of research by Dr Matthew Walker and his team, is around how sleep deprivation triggers vial loneliness.

What they found is not only does a lack of sleep lead 'individuals to become more socially avoidant, keeping greater distance from others' but people who perceive others as lonely, can trigger the 'transmission of loneliness from a sleep-deprived individual to a non-sleep deprived other.' In other words, people who are well-rested, actually feel lonely after contact with a person who is sleep-deprived, creating a 'viral' effect. Additionally, people were less likely to interact and collaborate with sleep-deprived individuals, despite having no knowledge of their sleep status. (Walker et al, 2006, Walker, 2018).

In essence, sleep deprivation has very real consequences, whether it be effects on executive function, memory, performance, immune function or behavioural profiles of social withdrawal and loneliness. Fortunately, implementing good sleep hygiene and creating good habits can greatly impact our ability to reap the benefits of a good night's sleep.

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Sleep is also beneficial to supporting immune function, by activating and supporting immune cells, which help to fight off infections and disease.