



Supercharge Your Sleep
#3 Motivation Station

@drsophiebostock
www.TheSleepScientist.com



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Welcome back!

Happy Friday!

How are you feeling? The sun came back out yesterday which will have given many of our circadian rhythms a bit of a boost.

(I got a little sunburnt out rowing... occupational hazard at the moment!)

Hopefully you haven't forgotten about your sleep habit goals, but if you have, fear not! This week is a great time to re-visit your **motivations** and maybe even ramp it up a step.

Over the page you'll find an image reminding you of some of the key ways that sleep fuels the **brain**.

Sleep is not just a 'nice-to-have' it's utterly essential if you want to be able to perform at your best, as well as to protect your long term health.

In the exercise this week, think about what is **MOST** important to you, and use that desire to reinforce the habits you're tracking this week.

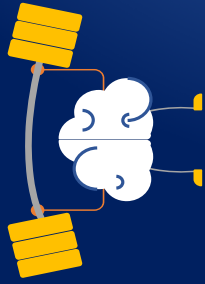
You've got this. Keep it up. I'll be back next week with a bit of a teaser before Thursday's session, which is all about the most powerful techniques to tackle insomnia.

Have a great weekend,

Dr Sophie Bostock

Sophie@thesleepscientist.com

HOW SLEEP BUILDS BRAIN POWER



Coping with stress

The amygdala is the brain's threat detection switch, and is usually kept in check by the logical PFC. One night with no sleep, and amygdala sensitivity increases by 60%. The PFC goes offline, making molehills look like mountains. Sleep reduces stress hormones and boosts positive mood.

Creativity

REM or dream sleep boosts creative problem-solving ability. Replaying real and imagined memories as dreams may help to slot information into context, enabling unconscious links which we were not aware of during waking hours.

Self-control

Sleep deprivation results in less activity in our centre of executive function in the PFC. This results in less strategic thinking, lower self-control and – in combination with altered activity in reward circuits in the OFC and insula – more hedonistic and risky behavior.

Focus & attention

The thalamus is the gateway to alertness/sleepiness. Just 24 hours without sleep, or multiple nights with fewer than 7 hours sleep, and the activity in the thalamus and PFC starts to slow down. We're prone to 'micro-sleep' lapses in attention.

Working memory

We rely on working memory to make rapid everyday decisions and simple calculations. When we're short of sleep, less activity in the parietal cortex can make even mundane tasks harder and more tiring. We're also more likely to create false memories.

Conversation skills

Tongue-tied? When we're well rested, the brain is able to recruit the temporal lobe for verbal processing and the inferior frontal gyrus for divergent thinking – we get better at thinking on our feet.

Learning

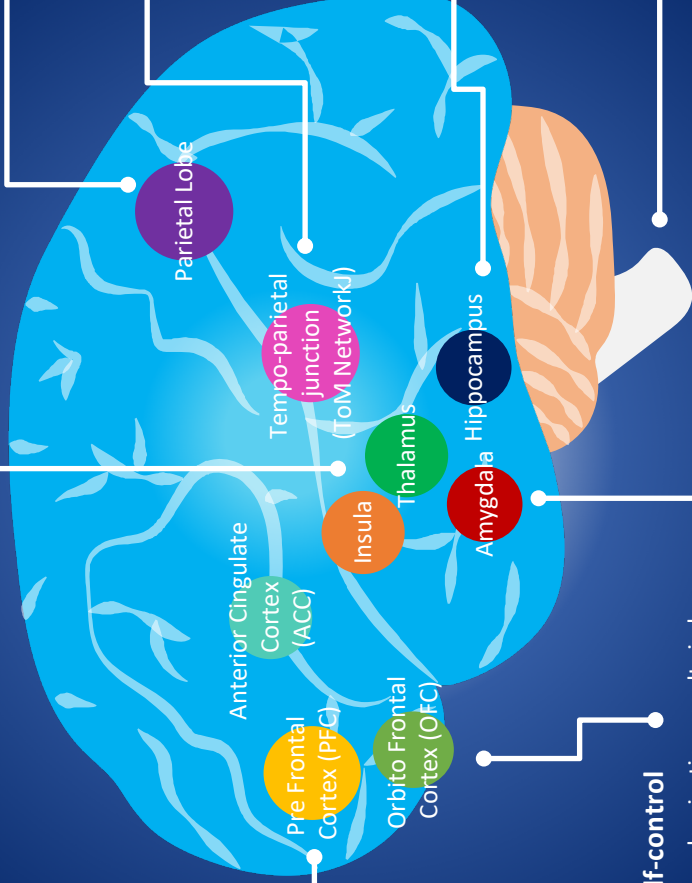
When our brains are saturated by new information in the short term storage of the hippocampus, sleep allows for consolidation of memory into the larger neocortex, renewing our ability to take in new information. One night without sleep can impair recall of facts by 40%.

Long term function

During deep sleep, the gaps between brain cells widen and toxins like beta amyloid are flushed from the brain via cerebrospinal fluid, which may help to protect long term brain health.

Empathy

Our ability to recognise others' emotions relies on sleep. When sleep deprived, the insula, ACC and ToM network are altered – we struggle to recognize facial expressions and bias towards registering threats. We are more likely to react with aggression than empathy, and more likely to withdraw socially.



Why? Motivation for action

Research shows that you're more likely to adopt new habits if you have a strong **motivation** to change. So, please tick the THREE MOST IMPORTANT reasons why sleeping well is important to you:

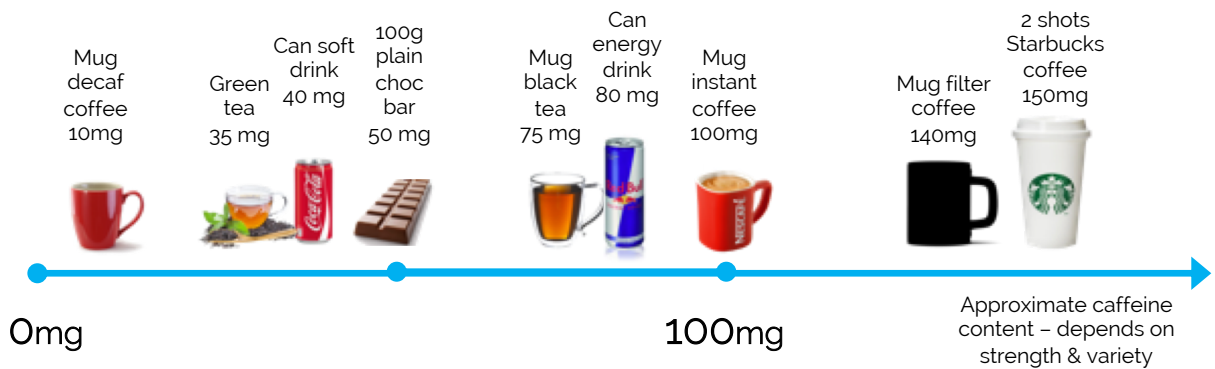
I would really like...

- more energy to enjoy life.
- to be able to cope better with stressful situations.
- to improve important relationships e.g. partner, children.
- to improve my performance at work e.g. focus, creativity.
- to improve my physical health e.g. fewer infections, less pain.
- to improve my general wellbeing.
- to end the frustration of being unable to sleep.
- to be able to support colleagues/friends/family with their sleep.

What made you join this challenge? What's the best possible outcome?

If you feel your motivation waning at any point, it's worth returning to this page.

HOW MUCH CAFFEINE?



A review of the effects of caffeine on health by the European Food Safety Directive in 2015 concluded that consuming **400mg** per day did not give rise to safety concerns in non-pregnant adults. For pregnant and breastfeeding women, there were no safety concerns for daily intake up to **200mg**.

The research behind these numbers is based on body weight – around **6mg/kg** per day is deemed safe. That's around 400mg for me - what's your safe limit?

It's difficult to assign an exact amount for everyone because people can have very different sensitivities or reactions to caffeine based on age, medical history, and tolerance.

Caffeine can increase heart rate and blood pressure. Therefore, those with heart arrhythmias, murmurs, and hypertension may be advised by their doctor to limit their caffeine intake. **If you feel stressed during the day, caffeine can actually increase the stress response, and make it harder to relax.**

These recommendations did not specify the *timing* of caffeine consumption in relation to sleep. Research has shown that caffeine consumed 6 hours before bed can still disrupt sleep quality, and make you feel tired and groggy in the morning.

- *Have you tried tracking your caffeine consumption for the day? Jot down how many teas and coffees you drink in a day.*
- *If you're reducing your caffeine intake, try a gradual reduction over several weeks to avoid withdrawal effects.*

Sleep diary & habit tracker



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Fill in your planned **wake up** and **ready-for-bed** times at the start of the week. Choose up to 3 pro sleep habits to keep track of. At breakfast each morning, tick successes from the previous day, and feel good about any successes!

Start date: _____	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Target wake up time? (Get out of bed within 10 minutes for a tick)	<i>Example</i> 5:30am ✓						
What's your target bed time? (Only sleep when sleepy)	10:30pm ✓						
How many hours were you in bed for last night?	9 hours						
How many times did you wake up? How long for in total?	2 (1 hr)						
How many hours were you asleep for?	6 hours						
What was your Sleep Efficiency? = hrs sleep / in bed * 100	67%						
1. e.g. get outside for 20 min	Y						
2. e.g. no eating 2hr before bed	Y						
3. e.g. phone out of bedroom	Y						
Rate your energy yesterday: 10=best ever, 0 = none	8, good day!						