

Powered-Up *Performers*

**Decoding the neuroscience of
peak-performance in a digital age.**

Discover the practices and protocols, grounded in science,
that will optimise your productivity & wellbeing.



Dr Kristy

You can't outperform *your biological blueprint.*

We're living and working in ways that are completely incongruent with how we're designed to function, as humans. This is why global rates of stress and burnout have risen in recent times. Our behaviours, particularly our digital behaviours, aren't aligned with our hOS.

“Ensure your behaviours and habits are congruent with your Human Operating System (your hOS).”

DR KRISTY



Today, we're living lives that are:



ALWAYS ON

It's estimated that the average Australian adult will spend 17 years of their lifetime (33% of their waking hours) on their phone alone! 28% of knowledge workers are now working after 10pm, to deal with their chronic 'digital debt'.



RARELY FOCUSED

2023 research, conducted by Economist Impact and commissioned by Dropbox, found that the average Australian employee is losing 600 hours each year to lost focus. The most common distractions leading to lost focus cited by respondents were work-related chat messages (166 hours), personal activities (146 hours) and work-related emails (82 hours).



NEVER RECOVERED

The digital demands of our days have increased in recent years. People are working at a relentless and unsustainable pace. Recent research confirms that over a third of working days don't include even a minute of recovery.

ANCIENT PALEOLITHIC BRAINS IN A DIGITALLY-DEMANDING WORLD

We have ancient, paleolithic brains that haven't evolved to cope with the incessant digital demands we now face today. Humans are biologically designed to go and seek information at a time, cadence and volume that suits us. We have brains that were biologically designed to forage and hunt for information: not to have unsolicited information constantly being thrust at us in the form of alerts, notifications and reminders. *It's hard to resist and it's easy to quickly become distracted by it.*

Digital micro-stressors trigger your nervous system. Your brain perceives these external signals – pings, vibrations, alerts – as a threat. Your brain cannot differentiate between a tiger chasing you and a Teams notification: they're both perceived as potential threats. Your brain works in concert with your endocrine system (which regulates your hormones) to flood your body with chemicals such as epinephrine (also known as adrenaline), norepinephrine and cortisol and create a variety of physiological responses. Your blood pressure soars, your heart rate accelerates and your fight, flight or freeze response (your sympathetic nervous system) is activated. Your senses are refined, too: your vision is primed to search for escape routes and your hearing to listen out for other potential predators. This physiological response occurs every time we hear a ping from one of our devices.

Infobesity

OUR BRAINS AREN'T DESIGNED TO PROCESS VOLUMES OF INFORMATION

Consuming
174 newspapers
every single day

Have you found it challenging in recent times to remember information? Have you found it harder to retain basic facts and information? You're not alone. There's a condition called 'digital dementia' that's being studied.

As humans, we're processing more information than we ever have in all of human history. In 2011, it was estimated that Americans consumed five times as much information daily as they did in 1986 – that's an estimated equivalent of *174 newspapers every single day*. A 2009 study suggested that adults were consuming 34.7 gigabytes worth of data every single day during their leisure time, which is more than some of our ancestors would have consumed in a lifetime! More recent estimates suggest that it's more than double that – closer to 74 gigabytes worth of data each day.

While the information coming our way has grown exponentially, our brains have not evolved. Our hippocampus – the brain's memory centre, which I liken to our brain's hard drive – has *not* increased capacity. We cannot load more RAM onto our hippocampus. To cope with our increased digital load, many of us have reverted to multi-tasking, working for long periods and having our days peppered with digital distractions. We've adopted digital habits that are completely incongruent with our neurobiology, with how our brains and bodies work best. As a result, many of us are living in a constant state of stress, exhaustion and distraction. If left unresolved, chronic stress can lead to burnout.



Powered Down & Burnt Out- Low-Res Versions of Ourselves

Many of our digital habits are incompatible with how we’re designed to function as humans. Global rates of stress and burnout continue to rise.



Gallup research identified that **five out of 10 Australians** are experiencing 'a lot of stress' at work.

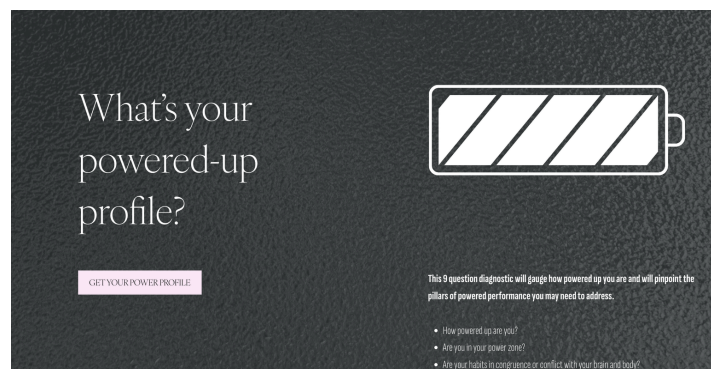


The State of Workplace Burnout 2024 report confirmed that **38% of people are experiencing burnout** (42% are women and 30% are men- highlighting a concerning gender wellbeing gap).



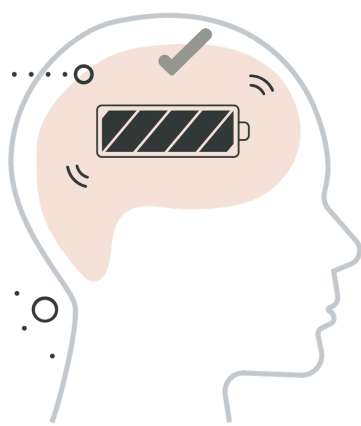
Gallup data confirmed that **only 20% of employees and leaders are thriving at work.**

Use my Powered-Up Profile tool.



Many of us are living and working in ways that are unsustainable and incompatible with our HOS.

This is why so many people are currently SED...



Stressed

Exhausted

Distracted



Menu of Micro-Habits

Air navigation experts use a rule of thumb called the '1 in 60 rule'. It suggests that for every 1 degree a plane veers off its course, it misses it's planned destination by 1 mile for every 60 miles that you fly. What I think this rule also shows is that even small adjustments (1-degree turns are miniscule) can yield big differences further down the track. The same is true with your digital habits: making small, seemingly insignificant changes can have huge implications over time.

My suggestion is to start with a micro-habit that will have a ripple effect.. I don't suggest that you make radical shifts and plan a complete digital overhaul. Start small. Implement one to three micro-habits at a time, and once they become embedded, pick a couple more to try.

What lever can you pull that will have most impact? Remember, as humans we have some basic biological constraints that we simply cannot outperform. Our most basic needs are that we sleep, move, connect, breathe, eat and have sunlight exposure. Which of your behaviours would have the greatest impact on your performance?

Making Your Micro-Habits Stick



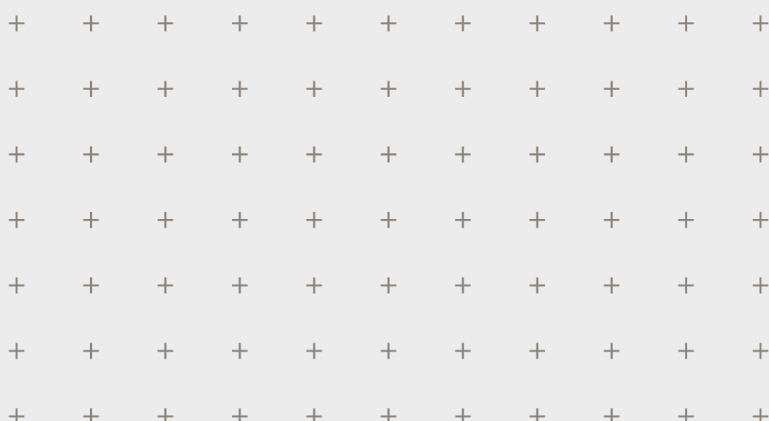
Science tells us our brain has the capacity to make a maximum of three changes at any one time. This is why I suggest coaching clients aim to implement 1-3 micro-habits at a time.



Big changes are hard to to achieve. So we're much better to make small, consistent changes and allow the benefits to compound over time.



It takes an average of 66 days to form a new habit. This is why fitness trackers and wearables can be great tools to track the impact of your micro-habits on your performance. I personally use and recommend WHOOP. You can try WHOOP here, using this [link](#).



Pillars of POWERED-UP PERFORMANCE

When you work *with*, rather than *against* your hOS, you can go from burnt out to powered up.

You can go from stressed to optimised.

You can go from exhausted to energised.

You can shift from distracted to focused.

There's a huge difference between those that SURVIVE and those who THRIVE.

Let's optimise your performance with the **three pillars of powered-up performance**.

On the following pages you'll find a menu of science-backed micro-habits to power up your performance.



BUILD YOUR STRESS TOLERANCE

Stress is an inevitable part of our modern lives. In a world teeming with technological advancements, rarely do we experience physical stress today. When we're ill-equipped to deal with physical stress we're also less likely to mount an appropriate psychological response to stress. We need to build our stress tolerance if we want to harness the positive potential of stress and mitigate the potential pitfalls of excessive stress.

You'll learn to monitor your stress & recovery scores, identify how your digital habits may be contributing to your stress in profound, yet invisible ways and how to apply a menu of micro-habits to optimise your stress tolerance.



OPTIMISE YOUR FOCUS (FQ)

The most critical skill to cultivate in the 21st Century is focused attention, given that we're now living and working in the 'attention economy'. High-performers are adept at orienting, controlling and sustaining their attention to bolster their productivity. Develop an arsenal of micro-habits you can use to optimise your focus and watch your productivity soar.

You'll identify your unique biological rhythms and peak-performance windows so you can improve your focus and be armed with a menu of micro-habits and brain-based protocols that have been scientifically validated to bolster your FQ.



REFRAME YOUR RECOVERY

In order to achieve sustainable performance we must work in congruence with our hOS, not in conflict. One of our biological constraints, as humans, is that we're not designed to be always on. Recovery is critical to sustainable performance in the digital world. There's a solid body of science underpinning rest and recovery, the three different types of breaks that are essential for preventing burnout and the simple, science-backed protocols that can be implemented to enhance performance.

We'll explore why sleep is the bedrock to performance. You'll be armed with micro-habits that will enhance the efficiency, timing and duration of your sleep and other targeted recovery practices. Use biometric data and personalised coaching to enhance your sleep, build an optimal sleep schedule and understand your sleep and recovery requirements for sustainable performance.

Pillar one Build Your Stress Tolerance



As humans we're biologically designed to cope with stress. However, we're designed for short bursts of stress and we're designed to resolve the stress cycle. So in years gone by if a tiger chased us we would have run into a cave and hid from the tiger- short burst of stress and a resolved stress cycle.

Digital micro-stressors (like the ping of an email or Teams chat) trigger your nervous system and now permeate our days. Your brain perceives these external signals – pings, vibrations, alerts – as a potential threat. Remember, your brain cannot differentiate between a tiger chasing you and a Teams notification: they're both perceived as stressors. Sure, our brains can psychologically discriminate between a tiger and a Teams notification, but physiologically we mount the same stress response we would in both situations.

Technology has also made us very comfortable with feeling comfortable. We're hot, we flick on the air-conditioning. We're hungry we order Uber Eats. We're cold we grab a jumper. When we rarely experience physical stress, we're ill-equipped to deal with psychological stress. And an inevitable part of the modern day is that we will experience stress. It's therefore paramount that we build our stress tolerance. We need to learn how to better manage stress and train our brains and bodies to mount an appropriate stress response. Below is a menu of micro-habits that can build your stress tolerance.

Stress tolerance micro-habit menu



Deliberate cold exposure- cold showers for 30-60 seconds (minimum) will see an increase in epinephrine, norepinephrine and dopamine (feel good neurotransmitters that will make you feel good and focused) . Only perform cold exposure in the morning, (as you need warm showers/baths before bed to lower your body temperature before sleep. The research suggests that 11 minutes of cold exposure/week is sufficient to reap rewards (it is a rough estimate as the level of 'cold' may differ from person to person).



Breathing- our breathing is the only physiological function in your body that is under voluntary and involuntary control, so it's the most potent (and scientifically-validated) way to regulate your stress response. Science has shown that taking control of your breathing can change the firing of your locus coeruleus, which impacts your production of noradrenaline (which makes you feel stressed). There is a myriad of deep breathing techniques, from box breathing to diaphragmatic breathing, alternate nostril breathing to 4-7-8 breathing (where you breathe in for a count of four, hold for a count of seven and then breathe out for a count of eight). So long as you exhale for longer than you inhale, breathing will have a calming impact: it will stimulate your vagus nerve, which will lower your heart rate and activate the parasympathetic nervous state (your rest-and-digest state).



Don't start your day with screens- Scrolling on your device in the morning can agitate your stress response: it activates your limbic system, which is your body's primitive (but very effective) threat alert system. The fight, flight or freeze response begins in the limbic system. Scrolling through your phone or opening the laptop lid first thing in the morning, especially when you're coming out of a beautiful, restful state, can really jolt your brain and cause you to feel unnecessarily stressed. When you wake, you transition into a delightful theta brain state (theta brain waves help us to process information and make memories), so you really want to protect that time and not erode it.



Dilate your gaze- Spending hours looking at your devices creates convergent movement in your eyes, which elevates your stress response. This can be traced back to our evolution: we adopt a narrow field of focus when we're in a heightened, stressed state so we can laser in on the perceived threat. Take some time throughout your day to stare into the distance, even for 1-2 minutes.



Meditation- Studies suggest that meditation has substantial cognitive and psychological benefits. The good news is that you don't have to do a 60-minute meditation practice to yield the benefits. Studies have shown that as little as ten minutes of meditation a day (although other research suggests 12 minutes as the minimum effective dose) can yield improvements in attention, focus, creativity, calm, resilience and compassion. Meditation increases the grey-matter density of the hippocampus (the part of the brain critical for learning and memory) and also decreases the grey-matter density of the amygdala (which plays a critical role in managing stress and anxiety).

Pillar two Optimise your Focus (FQ)



In today's digitally-demanding world, when our days are peppered with digital distractions, the skill of focused attention is under threat. It's now harder than it's ever been to stay focused. Digital technologies, by their very design, drain and divert our attention. Some are suggesting we're now living in the 'attention economy'. The term was originally coined by Herbert Simon in 1971 (long before the internet was adopted). Simon suggested that 'a wealth of information creates a poverty of attention and a need to allocate that attention efficiently among the overabundance of information sources that might consume it'. The term has also become popularised in recent times by Google's former design ethicist Tristan Harris, who talked about it in his TED talk and in *The Social Dilemma*.

I believe that the super skill we all need to cultivate is focus. While we've long known that high performance is often determined by a person's combined IQ (their general intelligence) and EQ (emotional intelligence), I believe a skill that's more important than both of those skills combined is our FQ (focus quotient). Below is a menu of micro-habits that can enhance your FQ.

Focus micro-habit menu



Morning sunlight- We need to ensure that our eyes are exposed to sunlight soon after waking (within 30 to 60 minutes is suggested); this controls the release of cortisol and melatonin, which impact sleep and mood. Sunlight also increases the brain's release of serotonin, a mood-boosting hormone and activates the hypothalamus which can help us feel calm and alert. Two minutes of morning sunlight is a minimum, ten minutes is great, and thirty minutes is fabulous. The photons will still cut through the clouds on an overcast day, so you should try to do this daily. If you wake up while it's dark, turn on all the lights in your house and go outside once the sun has risen. Yes, you can get sunlight sitting in your car or through a window in your kitchen, but it's 50 per cent less effective through a window, because the glass filters out wavelengths that are essential for stimulating the eyes and sending the wake-up signal to your brain. You should never look directly at the sun. Aim to have sunlight exposure without sunglasses. 12-14 hours it will also help to produce your sleep hormone, melatonin.



Identify your prime focus time- Your chronotype determines when you're most alert and focused, and dictates when you'd naturally like to fall asleep. It's biologically determined by your PER3 gene so it will naturally shift throughout your lifespan, but you can't manipulate it. Identify your peak-performance window and build a fortress around your focus during this time- activate Do Not Disturb/Focus mode, put a sign on your desk or door. There are three distinct chronotypes: (i) Lions are morning-oriented people with a medium sleep drive; (ii) Bears have a solar-based schedule and a high sleep drive; and (iii) Wolves are night-oriented people with a medium sleep drive. **You can identify your specific Chronotype and receive a customised report and plan for your day [here](#).**



Put your phone out of sight- The research is compelling when it comes to your phone being a source of distraction: just seeing your phone can be a mental brain drain. Research from the University of Texas at Austin confirmed that when you're working with your phone in your line of sight, it reduces your cognitive performance, even if it's on silent and in Do Not Disturb mode. Put simply, seeing your phone makes you dumber! Your phone is literally a brain drain. Put your phone in a drawer or in another room, or leave it in your bag, when you need to do deep, focused work.



Visual focus- to train your cognitive focus you need to direct your visual system. Focus on one location from 30 seconds to 3 minutes- yes you can blink and if your focus wanders, reorient your focus. You could focus on the tip of your pen or finger or even a cross on a piece of paper (it really doesn't matter so long as it's a fixed location). This trains your neural circuits involved in focus, especially your prefrontal cortex.



Snack, don't nibble on your inbox- I've found that email is still many people's Achilles heel. Email can dominate our work time, derail our productivity and diminish our mental wellbeing if we're not careful. Ideally, you should be checking emails at set times of the day, outside your peak-performance window. (Don't use your peak-performance window to respond to emails, because emails are 'shallow' work for most knowledge workers.) Research confirms that the sweet spot for checking emails is 2-4 times/day.

Pillar three Reframe Your Recovery



I've always been fascinated by what happens during pit stops. They're frenetic and precisely executed, and there are dire consequences if they're skipped. This has led me to ponder, why do racing drivers take pit stops? Why, in one of the most high-stakes race formats in the world, do they spend precious time refuelling, changing tyres, performing repairs and making mechanical adjustments?

It turns out that these pit stops are integral to a motor racing team's success. These supreme vehicles are under enormous stress, so pit stops help them to optimise their performance and identify issues early. They also allow them to refuel, because even the best vehicles can't run on empty. As knowledge workers, we need to act like racing drivers – who also strive for peak performance – by taking regular pit stops. If you want to thrive in the digital world, you need to be intentional about taking breaks.

We need to reframe recovery as a responsibility and not a reward. We need to see recovery as something that is fundamental to peak-performance, not as something that's frivolous or unnecessary. For optimal performance you need to ensure you have piccolo breaks (2-10 minute breaks interspersed throughout your day), tall breaks (1-2 hours where you psychologically detach from your work each day) and grande breaks (1/2 to full days off each week). This is what science confirms is our minimum effective dose- more than this is great but at a rudimentary level this is what you need for optimal performance.

Recovery micro-habit menu



Non-Sleep Deep Rest (NSDDR)- Non-sleep deep rest (NSDR) is an excellent tool that has been shown to put the brain and body in a rested state that mimics sleep in as little as ten minutes. This practice involves lying down and listening to a script that encourages you to scan your body while making long exhalations. This is not meditation or hypnosis, nor is it a nap. This practice trains your body to activate the parasympathetic nervous system on demand – you are literally training your body to switch to a rested state more efficiently. I often do this in the afternoon as my piccolo break, because it recharges me and allows me to power through the 3 p.m. slump. A great ten-minute NSDR script can be found [here](#).



Sigh- Humans engage in a physiological sigh roughly every five minutes whilst we're awake: we perform a double inhalation through the nose, followed by an exhalation through the mouth. This is a biological mechanism that helps us regulate our oxygen and carbon dioxide levels and, through this, our stress response. Sighing supports the biological processes required for stability and resetting arousal states. However, when using screens, we tend to sigh much less, indicating that we're usually more stressed when on our devices. 2-3 sigh cycles can help regulate your stress response and aid in your recovery. The good news is, you can do this on a Zoom/Teams call- just make sure you're on mute.



Close your eyes- Working online all day is mentally depleting. The temporal and occipital lobes in the brain, which process what we hear and see online, are working overtime on video calls. Another part of the brain called the 'fusiform gyrus', which processes faces, is highly active on video calls. A simple technique to counter this video fatigue is to simply close your eyes for 30 seconds. This gives your occipital lobe and fusiform gyrus a much needed rest and reboot. It moves your brain from a busy beta state into an alpha brain state, where you're focused and alert. Best of all, you can apply this strategy during your virtual calls when you feel the fatigue set in. The trick is to sit very still and mute yourself, and you can simply pretend that your camera froze!



Allow your mind to meander (aka, be bored)- I've never had a great idea germinate while I was in my inbox, nor have I ever solved a complex problem while in an Excel spreadsheet. Never. What about you? Where do you do your best thinking? Great ideas often come to us when we're 'off', and often when we're bored. When we're 'off', our brains enter what neuroscientists call the 'default mode network' (DMN). This is where we daydream. The DMN is a network of brain regions that interact when a person is not focused on the outside world. We turn off our prefrontal cortex, the part of our brain that does our conscious thinking, and enter a mind-wandering mode. Can you find pockets of time each week for you to be bored? Even 20 minutes will make a profound difference.



Consistent sleep and wake times- Good quality and quantity of sleep is the most critical aspect for optimal performance. A little known techniques that can dramatically improve your sleep includes having a consistent sleep and wake time. Having a consistent sleep schedule, even on weekends, reinforces your body's sleep-wake cycle. There's some preliminary research that suggests that a consistent sleep-wake cycle may be as critical as sleep duration in terms of sleep's impact on our performance and wellbeing.

What Next?

Create your Power-Up Plan

Create your own personalised *Power Up Plan*. Select the 1-3 micro-habits that will bolster your performance and wellbeing. Embed these micro-habits then add more habits over time.

Access the *Power Up Plan* by [clicking here](#).



Track your biometric data

I personally use and recommend WHOOP as a wearable device that allows you to track key biometric data that can optimise your performance and wellbeing. Track your sleep, stress, strain, recovery and a range of other measures. Find out more [here](#) and get one month's free access to the app.



Spacious Success Podcast

Spacious Success is a podcast for ambitious women who want to succeed without the hidden cost. Blending neuroscience and real-world insight, it explores how to perform at your best in ways that align with your Human Operating System, hOS. Listen [here](#).



Let's Connect

I share regular performance and wellbeing insights on social media and via my newsletter (rest assured, I won't add to your #infobesity). Click below to digitally connect.



About Dr Kristy Goodwin

Dr Kristy Goodwin: decoding the neuroscience of sustainable peak-performance in a digitally demanding world.

Dr Kristy Goodwin is a leading neuro-performance scientist and keynote speaker who helps organisations optimise performance, productivity and wellbeing in the age of AI and constant connectivity. Her work focuses on a critical challenge facing modern leaders and teams: how to sustain high performance without burning out our cognitive and human capacity.

Through her keynotes and advisory work, Kristy translates the latest neuroscience into practical, evidence-based strategies that help leaders and teams work in alignment with their Human Operating System (hOS). She equips organisations to reduce digital overload, enhance focus and decision-making, and design ways of working that support both performance and wellbeing.

Kristy is a Certified Speaking Professional (CSP) and recipient of the Australian Professional Speakers Association Breakthrough Speaker of the Year Award (2023). She holds a PhD on the impact of digital technologies and has lectured at Macquarie University and the University of Notre Dame. She is also the author of two books, including the award-winning *Dear Digital, We Need to Talk*.

In addition to her keynote work, Kristy partners with a select number of senior leaders and organisations each year through executive advisory and coaching engagements.



WEBSITE



LINKED IN



INSTAGRAM

Dear Digital, We need to talk...



If you want to put an end to constantly feeling stressed, overwhelmed, and distracted the best place to start is... with a good old-fashioned book. [Dear Digital, We need to talk...](#) in fact!

Dominate your digital distractions and stop screens from adding to your stress.

Learn brain-based strategies to tame your toxic tech-habits and thrive in the digital world. And no, don't worry. You don't need to cancel your Netflix subscription or take Slack off your phone. Grab your copy [here](#). Use the code FSDD for free shipping in Australia.