SCISOC

UNSW

TOMORROW'S FUTURE SCIENTISTS



WELCOME TO OUR

Monthly Newsletter

As we move into July, SCISOC wishes all students the very best as the semester comes to a close. Whether you're preparing for final exams, wrapping up assignments, or enjoying a well-deserved break, we hope you're taking the time to celebrate everything you've accomplished this term.

What better way to unwind than by diving into SCISOC's very own newsletter... **PRISM!**

This month's edition showcases the fantastic work of our Publications Subcommittee, bringing you the latest updates from across SCISOC. You'll also find fascinating developments from the world of science, as well as useful university tips, resources, and opportunities to help you make the most of your break and get ready for the term ahead.

Happy reading, and enjoy your break—we look forward to seeing you next semester!



SCISOC X PSYCHSOC X APRS CRUISE

The Frostbitten and Shipfaced cruise set sail from King Street Wharf at 6:30pm, bringing together members from SCISOC, APRS and PSYCHSOC for an unforgettable evening on Sydney Harbour. Against the backdrop of the city's glittering skyline, students embraced the winter theme in shades of blue, white, silver and gold, creating the perfect atmosphere for a night on the water.





From catching up with old friends to meeting new faces across the three societies, the cruise was filled with great conversations, music and plenty of laughter. With drinks flowing, stunning harbour views and a lively atmosphere throughout the night, the event was the perfect chance to take a break from uni and enjoy one of the biggest society collaborations of the term. It was truly a night to remember.



VOLUNTEER IMMERSION PROGRAM

Throughout Term 2, our Volunteer Immersion Program (VIP) members dedicated their time to making a meaningful impact across the community.



From preparing over 1,000 sandwiches to support people experiencing homelessness across the Randwick area, to transforming NDIS spaces through vibrant murals, our volunteers helped create warmer, more welcoming environments for those who use them every day.

The term concluded with a wholesome visit to Monica's Doggy Rescue, where volunteers spent the day walking rescue dogs and giving them some much-needed love and attention. It was the perfect way to celebrate a term of giving back, highlighting that meaningful volunteering comes in many forms.



A huge thank you to everyone who volunteered their time, compassion and enthusiasm throughout the term. Whether it was making sandwiches, brightening community spaces or spending time with rescue dogs, every contribution made a lasting difference.



Sleep: The Lost Art of Peerless Recovery

How Sleep Affects Performance and Recovery and How to Maximse Sleep Quality

Why have we stopped prioritising sleep?

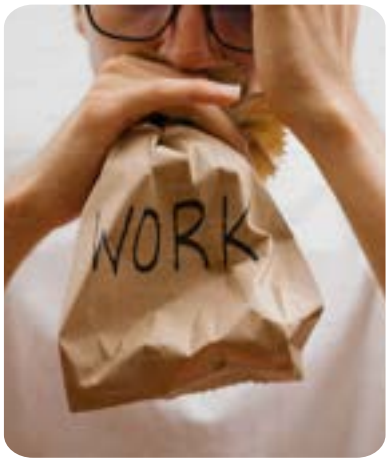
The modern world's "hustle culture" and toxic sleep mentality have placed our body's most important recovery engine into a steep decline in today's young adults. Around 1/3rd of young adults in Australia are sleep deprived, and there are several contributing factors that these individuals have in common.
(Flinders University, 2026)

- *Workload stress:* Especially in University students, where high levels of academic pressure and university workload eat into students' sleep times

(Vic Department of Health, 2026; OneTwenty, 2026).

- *Hustle Culture & Social Media:* With the ever increasing affect of social media on young adults and the glorification of 'sleeping less and working more', young adults are flexing their 5 hours of sleep as a "badge of honour"

(Cornell University Press, 2022)



The Productivity Trap: Affects of Sleep Deprivation

Sleep deprivation becomes a positive feedback loop with worsening productivity, especially in modern society's hustle culture.
The average length and quality of sleep of young adults is much less than recommended leading to adverse health effects such as mental health issues, fatigue and loss of acute cognitive function.
As these individuals are become less productive, they feel the need to work more to 'make up for' their productivity gap, further worsening their rest and recovery.
(Journal of Clinical Medicine, 2026; Cornell University Press, 2022)



How can we Improve Sleep?

Sleep quality is a multi-faceted problem to tackle, especially for young adults both partaking in 'hustle culture' and university drinking culture.

Cut out:

- Drinking and smoking

(EatForHealth, 2026)

- Chronic stress sources
- Stimulating activities 1 hour before bed (Gaming, doomscrolling, work etc)

Start Practicing:

- Sticking to a consistent sleep schedule (same sleep/wake up times every day)
- Sleeping at least 7 hours per day
- Wind down routine before bed (Reading, stretching, meditating)

Sources: https://www.betterhealth.vic.gov.au/health/healthyliving/teenagers-and-sleep; https://onetwenty.com/blog/sleep-deprivation-college-students-statistics; https://news.flinders.edu.au/blog/2026/05/01/1-in-3-young-adults-not-getting-enough-sleep/; https://cornellpress.cornell.edu/vital-strife-2022/; https://sleep.hms.harvard.edu/education-training/public-education/sleep-and-health-education-program/sleep-health-education-95; https://www.eatforhealth.gov.au/guidelines/guidelines



Beyond the Bicep; Creatine and its effects on Cognitive Function

How Phosphocreatine Powers Brain Function and Boosts Mental Performance

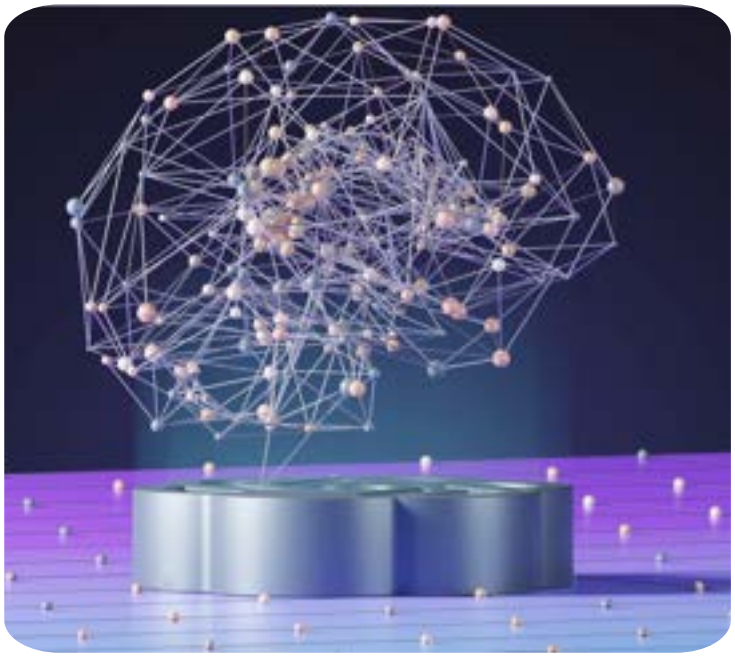
The modern research landscape has expanded far beyond bodybuilders, shining a light on how bioenergetics support the brain. Around 20% of the body's total energy is consumed by the brain, and this energy supply dictates mental acuity.

(Bond University, 2023)

Cellular Fuel Shortages:

High mental workload and intense cognitive tasks rapidly deplete adenosine triphosphate (ATP), leading to brain fog and mental fatigue.

(MDPI, 2025)



The Brain Energy Gap

When brain energy demands outpace ATP synthesis, cognitive processing speed drops and working memory suffers, leading to adverse cognitive outcomes such as:

- Executive dysfunction
- Poor recall
- Lowered mental endurance

What does creatine do?

Energy buffer: Acts to recycle ATP to meet the high energy demands of active braincells

Mental support: Helps maintain performance during heavy cognitive strains

(National Institution of Health, 2019)

How can we Optimise Creatine Levels for Brain Function?

A targeted approach to dietary supplementation and daily nutritional habits.

Monohydrate Supplementation: Taking 3-5g of pure Creatine Monohydrate daily

(Melbourne Functional Medicine, 2025)

Dietary Sources: Consuming high-creatine foods such as salmon, red meat and poultry

Consistent daily intake: Maintaining regular daily dosing over erractic loading phases



Sources: https://optimise.mfm.au/blog/creatine-benefits-beyond-the-gym/; https://www.mdpi.com/2076-3425/15/6/541; https://pmc.ncbi.nlm.nih.gov/articles/PMC6093191/; https://bond.edu.au/news/how-much-energy-do-we-expend-using-our-brains



The Anatomy of Nicotine Addiction

How neurological rewiring and Neurotransmitter Cascades drive dependance

Why does Nicotine create such powerful dependancy?
Nicotine's rapid absorption hijacks the brain's natural reward and survival pathways within seconds of consumption.



The neurochemsitry doesn't lie, 23% of the worlds population is addicted to cigarettes, with 17% of young adults using tabacco products in the US
(AddictionHelp, 2026)

The Science behind the addiction
Dopamiergic hijacking: Nicotine binds directly to nicotinic acetylcholine receptors (nAChRs) in the brain, triggering rapid releases of dopamine that overload the brain.
Rapid Receptor Desensitation: Constant exposure causes nicotinic receptors to desensitise, prompting the brain to increase the production of new receptors, thus amplifying cravings when nicotine levels drop.
(National Institution of Health, 2015)



The Cycle of Dependence: Neuroadaptation
With repeating and prolonged exposure, the brain adjusts its baseline chemical balance, and smoking becomes the new 'normal'.
When blood nicotine levels decrease, withdrawals symptoms such as irritability, anxiety and impaired focus affect the individual. To relieve these sensations, individuals are coerced to consume more nicotine, reinforcing the cue-reward loop and strengthening the neurobiological habit.
(National Institution of Health, 2020)

How can we break the cycle?
Overcoming nicotine addiction requires disrupting both the neurological feedback loops and behavioural triggers built into addiction.

- *Nicotine Replacement Therapy:* Using patches or gym to steadily down-regulate receptors
- *Behavioural Reconditioning:* Replacing habitual triggers with stress-reduction behaviours

Sources: https://pmc.ncbi.nlm.nih.gov/articles/PMC4564314/; https://pmc.ncbi.nlm.nih.gov/articles/PMC7163392/; https://www.addictionhelp.com/nicotine-addiction/statistics/



KANDI 101



What do I need?



Optional: Lighter

Kawaii Charms

Coloured Beads

String

Letter & Numbered beads

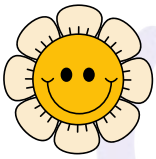
Scissors





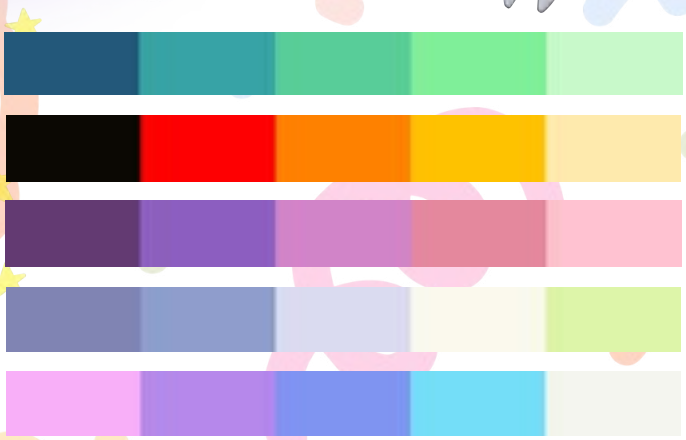






Step 1: pick your vibe

First, decide what kind of bracelet you want to make. Go rainbow, neon, pastel, spooky, sparkly, whatever matches your vibe.



Step 2: Choose your phrase

Spell out a word with letter beads like "KO26," "daddy darren" or "ILOVEABGS" and lay it out onto the table!







Step 3: Put it all together (YAY!)

A) Lay out your design on the table

B) Put it on the string and tie it up (at least 3 times) to make sure it's secure



BE CAREFUL DON'T DROP THE STRING AND LOSE ALL YOUR BEADS

***TIP:** Using a lighter, burn off the end pieces of the string after you've tied it*









YAY!

