How to get the perfect night's sleep



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My aim is to give you and understanding as to why and how we sleep and to empower you with information and tips to help your children get a great nights' sleep

Workshop structure

The science of sleep

The how, why and when

Ten steps to a perfect night's sleep

What to do to get your children's sleep back on track

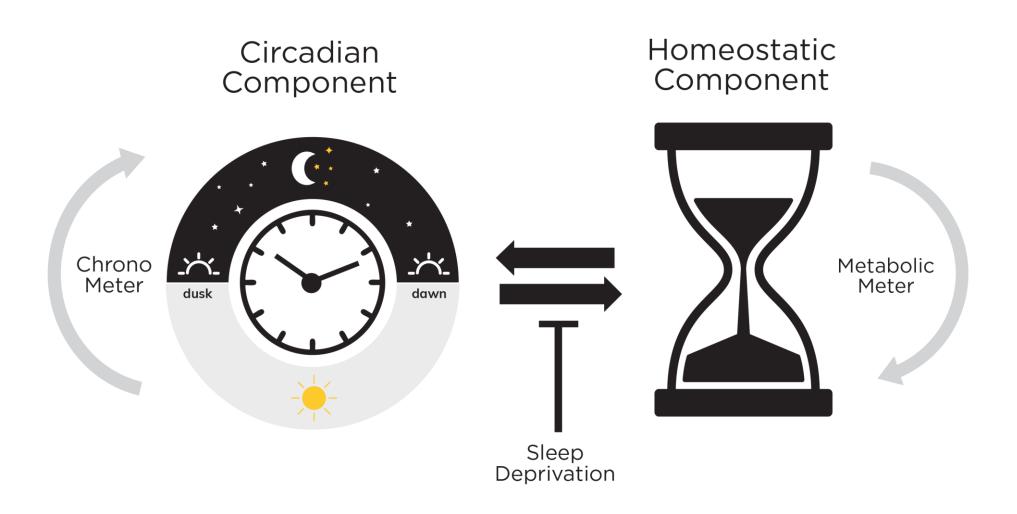
Practical ideas

The art of switching off incorporating meditation, relaxation, breathing techniques

Q+A

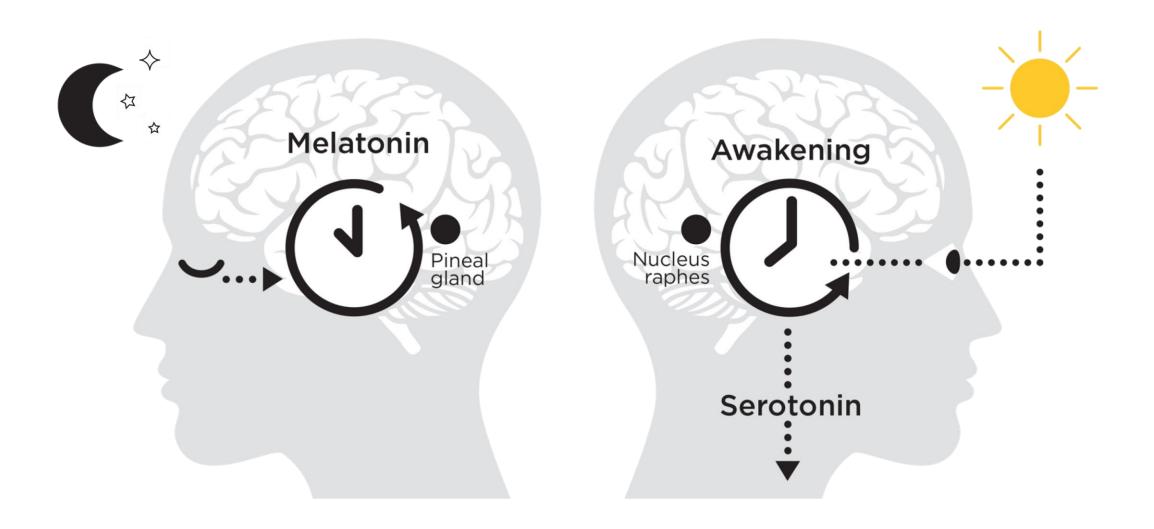
Sleep wake cycle is controlled by 2 mechanisms

Our body clock & our internal homeostatic regulation system



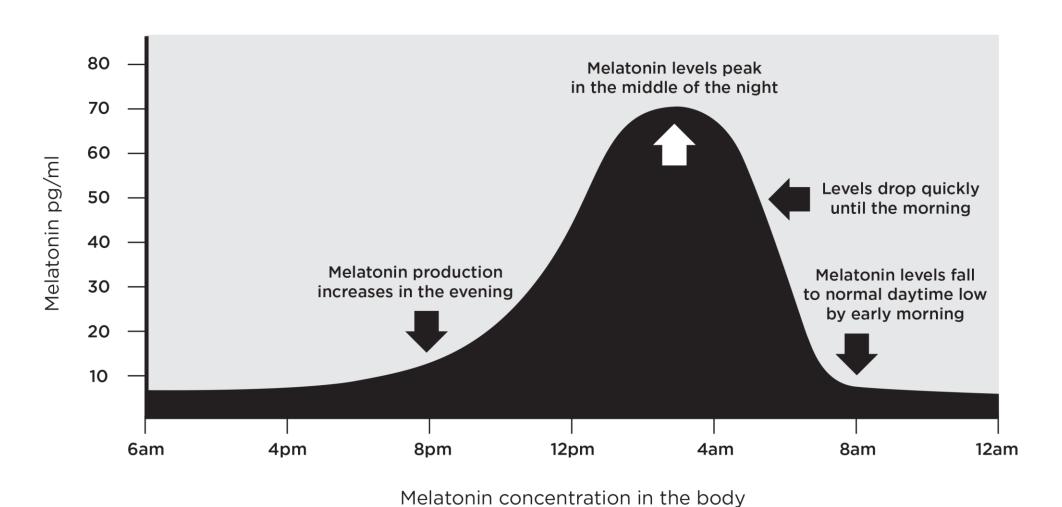
Light receptors responding to decreased blue light

Creating our desire or urge to sleep



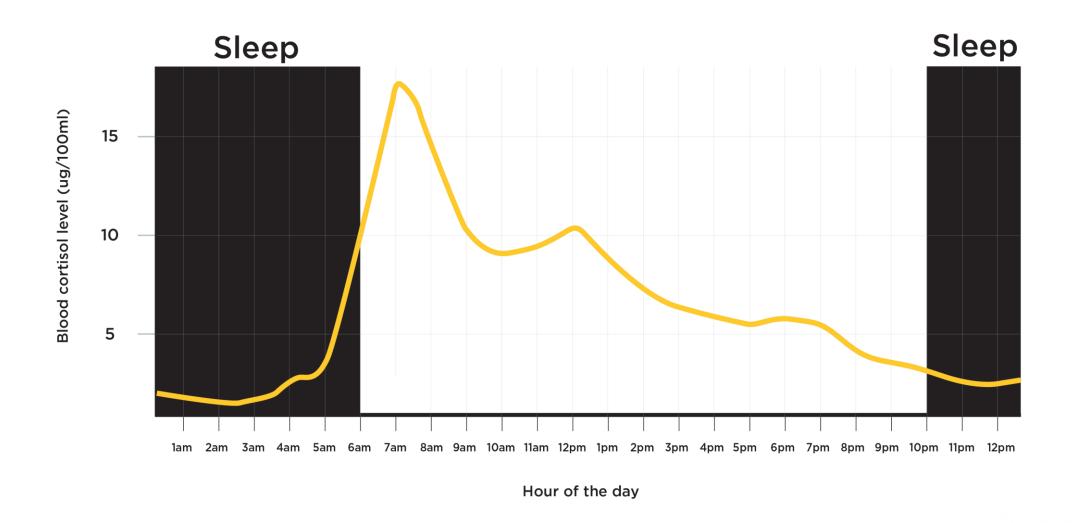
Melatonin levels peak in the middle of the night

And it falls to minimal levels during the day.



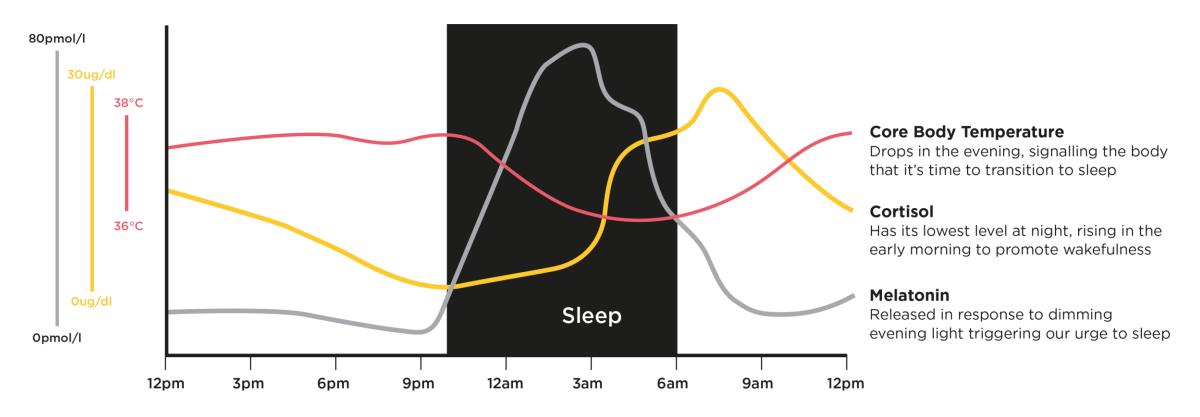
Then our rising cortisol levels prompt us to wake

It's function here is to increase our energy and promote early morning alertness



Decreases in light & temperature are cues for sleep

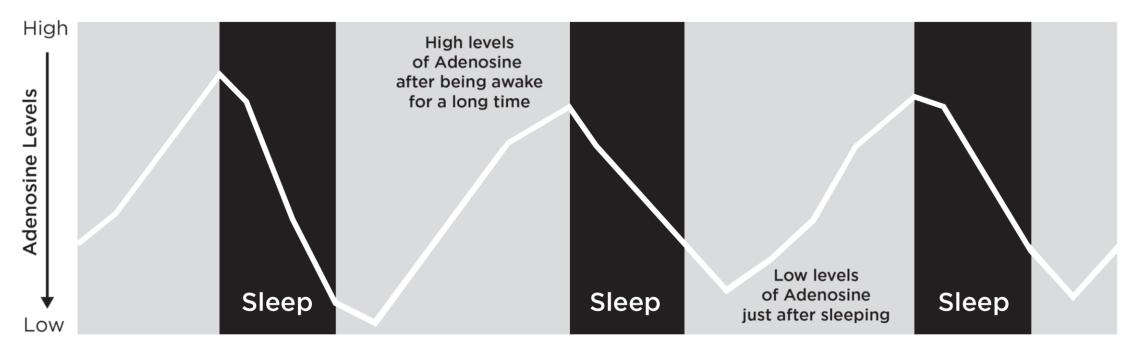
With the setting sun these environmental changes trigger our body clock.



The normal synchronous relationships between sleep and daytime activity and varying levels of cortisol, melatonin and body temperature

Homeostatic pressure for sleep builds during the day

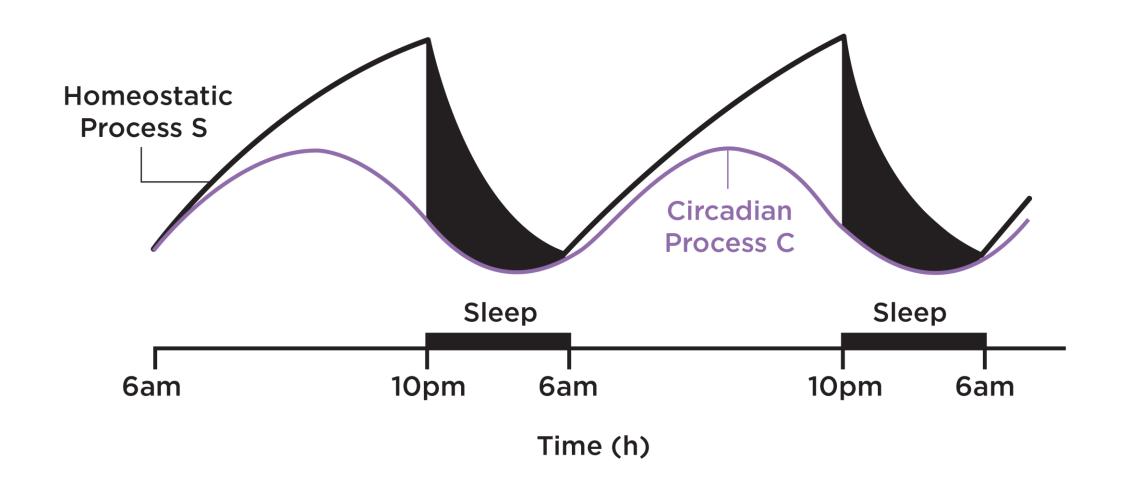
Adenosine levels rise in the brain signalling a need for sleep



12pm 3pm 6pm 9pm 12am 3am 6am 9am 12pm 3pm 6pm 9pm 12am 3am 6am 9am 12pm 3pm 6pm 9pm 12am 3am 6am 9am 12pm **Time of Day**

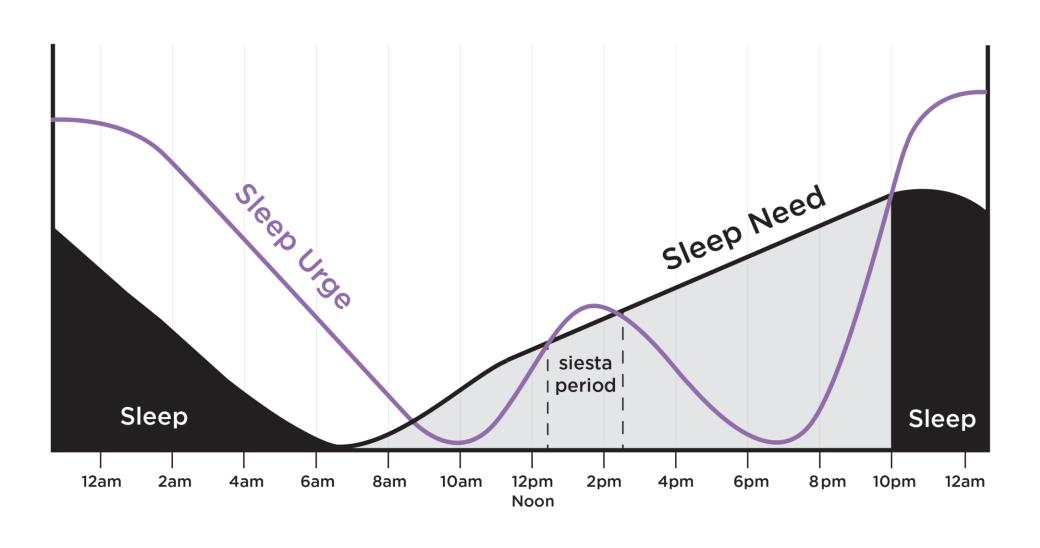
We've an optimum time for sleep - our Sleep Window

Shaped by sleep pressure, circadian rhythms, environmental cues & lifestyle



What time should we go to sleep?

Most of us should aim to fall asleep somewhere between 10pm & 12am



But it depends whether you are a lark or an owl

We optimise our sleep when we sleep in line with our sleep preference



Morning chronotype

go to bed

wake up

Est % of pop

9pm to 11pm

5am to 7am

(20%)



Evening chronotype

go to bed

wake up

Est % of pop

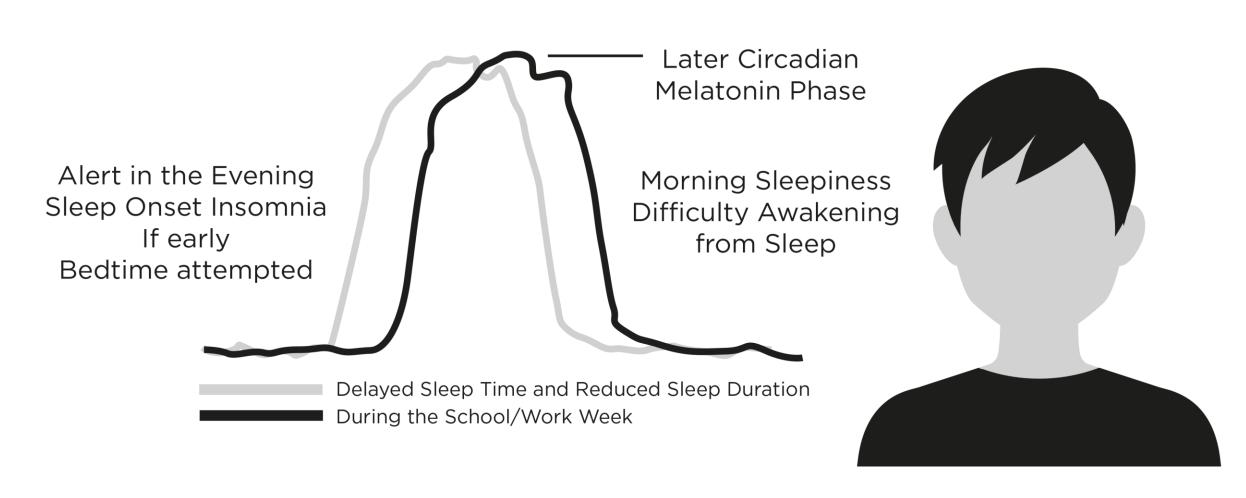
11pm to 1am

7am to 9am

(30%)

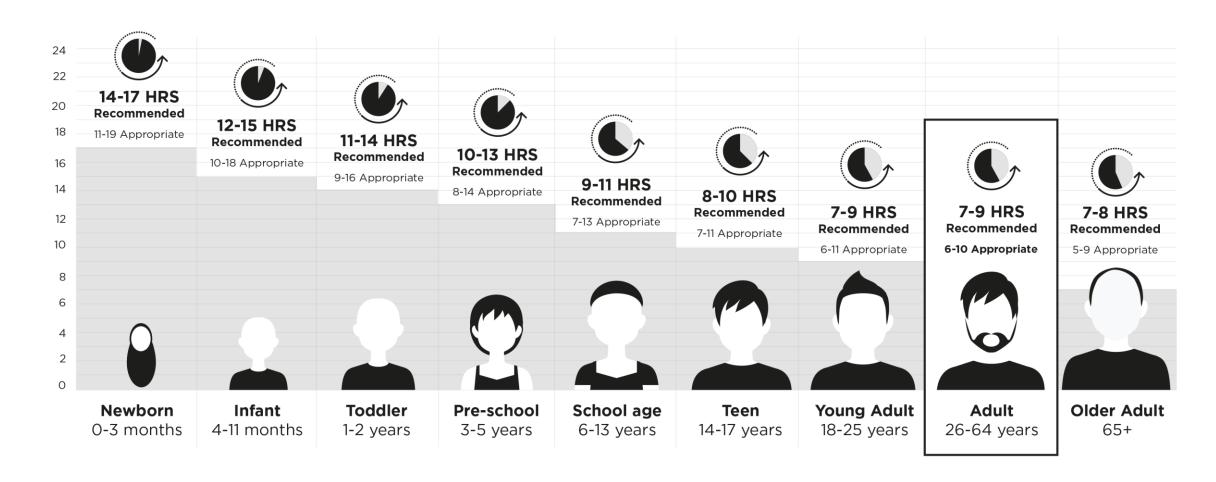
Teenagers become 'super night owls'

Puberty hormones trigger a delay in Melatonin's release at night



How long should I sleep?

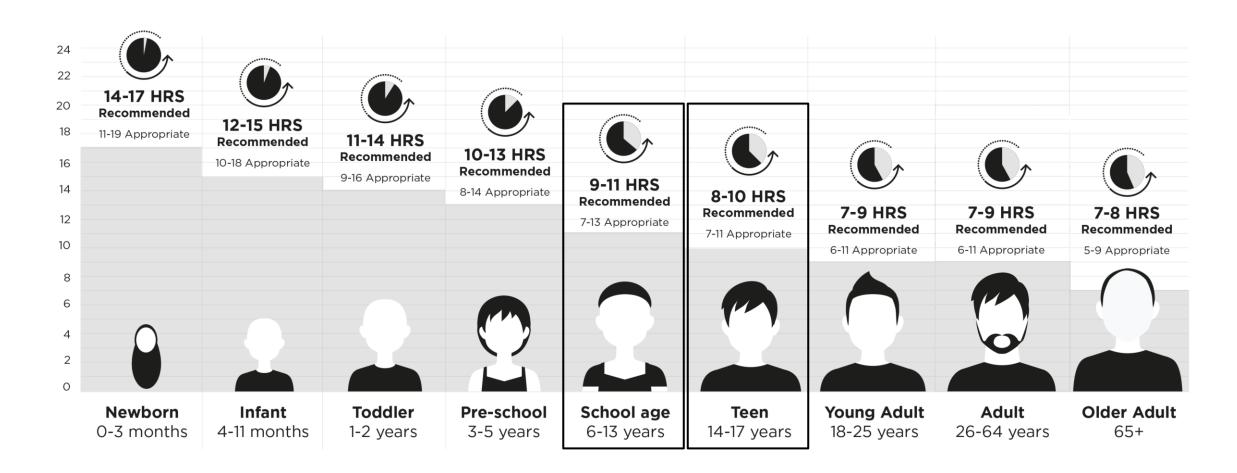
It's recommended that adults get somewhere between 7 and 9 hours each night



Source: National sleep foundation

How long should they sleep?

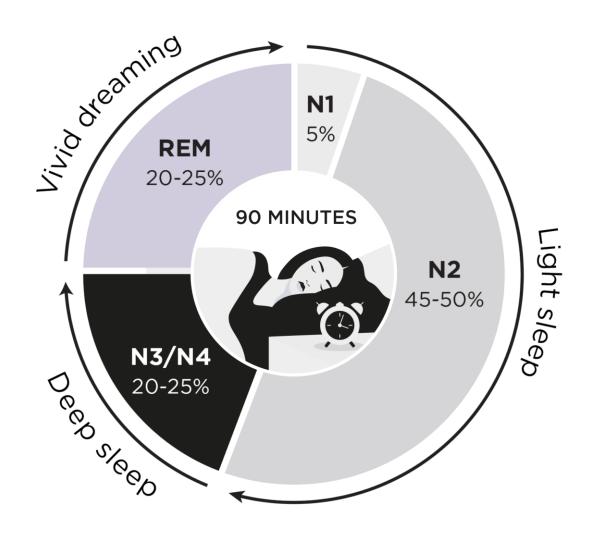
It's recommended that school age children get between 8 and 11 hours each night



Source: National sleep foundation

We sleep in stages which build into cycles of sleep

4 Stages of None Rapid Eye Movement sleep followed by 1 stage of REM



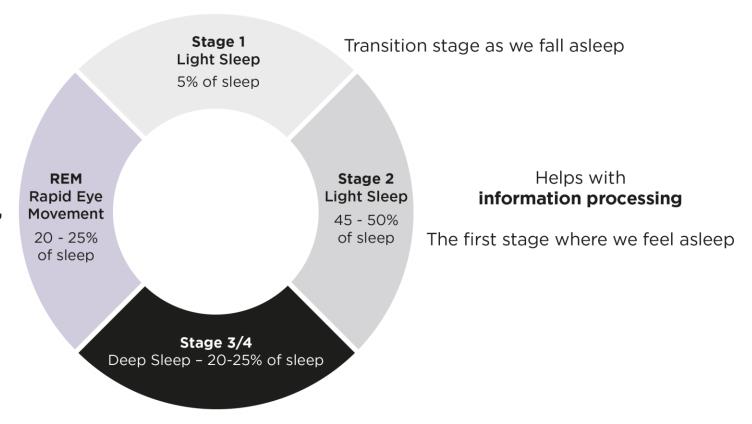
The nature of each stage is very different

And each contributes a unique benefit to our physical and mental health

Integral functions in memory consolidation and emotional regulation

Enhances **creativity** and **problem solving**, enables us to **learn complex tasks**

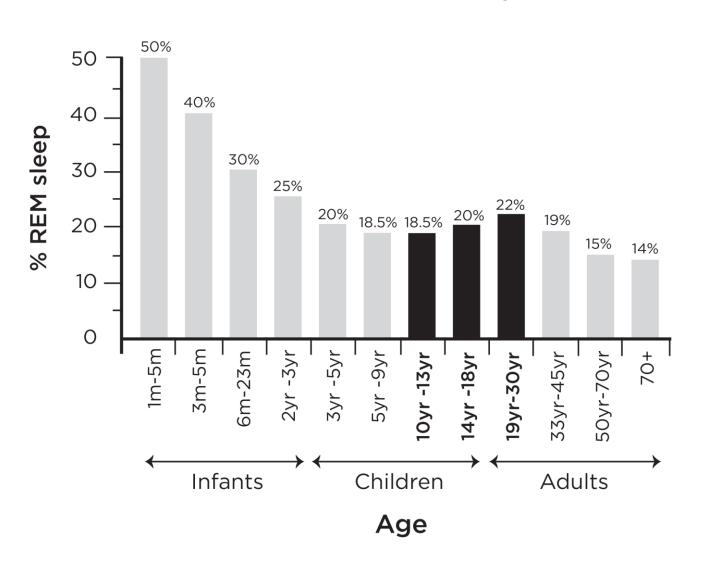
Children need this for brain development



Growth hormone released for **physical restoration** and **repair Brain detoxifies** during Deep Sleep. **Immune system restored** too.

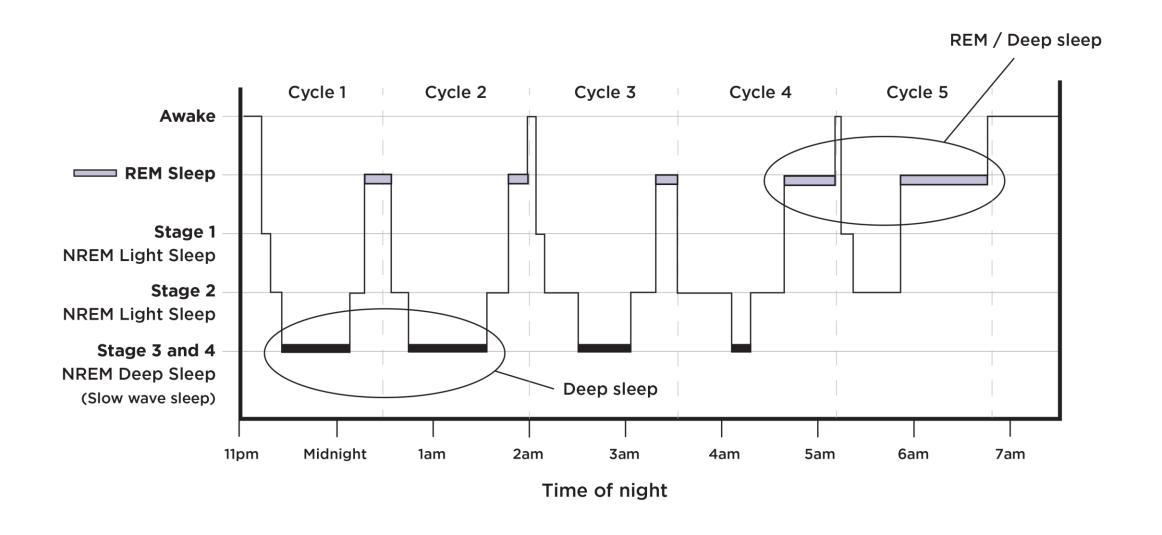
Babies need more REM Sleep

Helps with the developing brain



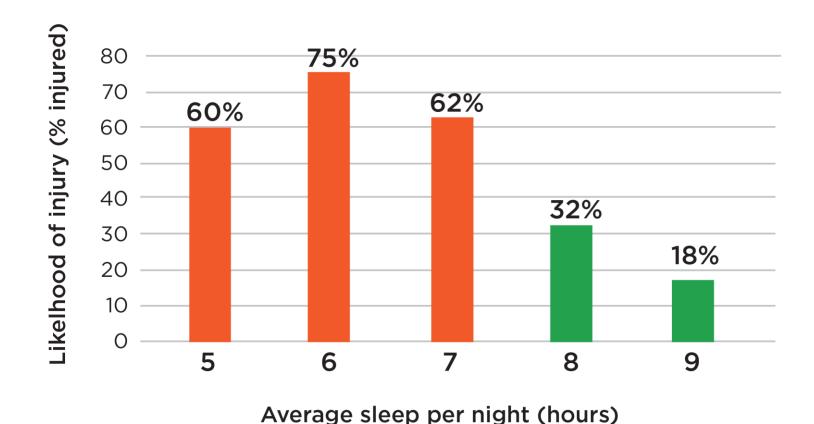
Sleep Cycles vary in composition, and time-length

With more Deep Sleep at the start of the night, and more REM at the end



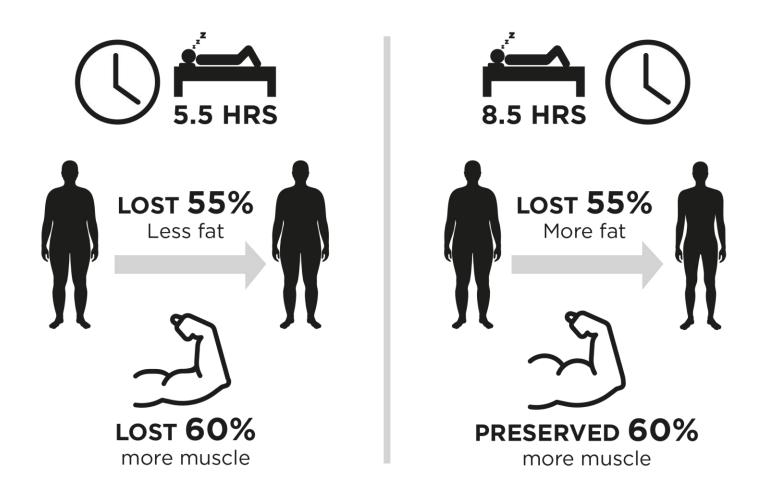
What are the effects of sleep deprivation?

For kids who like sport you could say they risk injury – or frame it as peak fitness?



For teenagers who want to build muscle

We build muscle with sleep and loose muscle without sleep



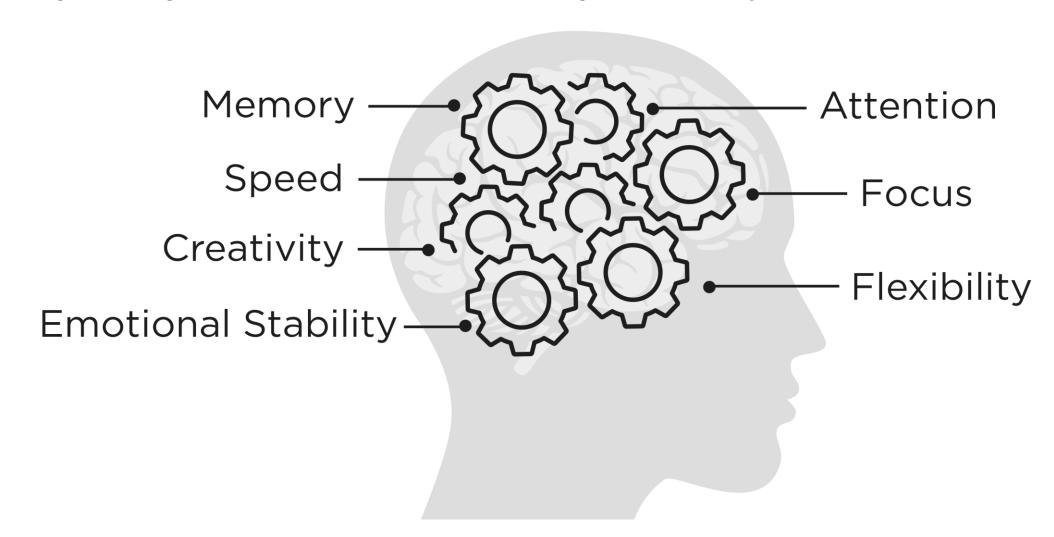
Sleep is vital for our skin

A good night's sleep will boost repair and reduce breakouts



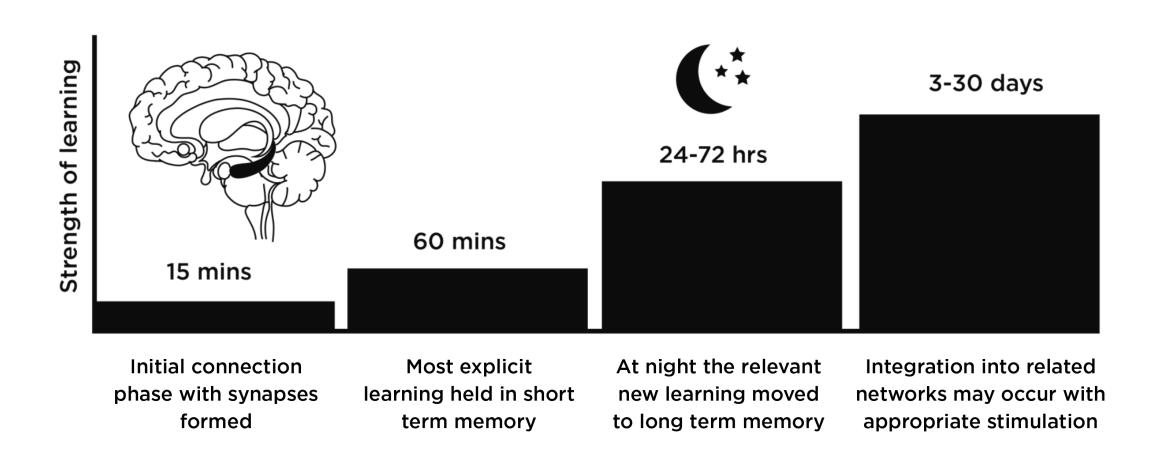
Sleep is vital for our brain function

A good night's sleep maintains our cognitive ability and emotional stability



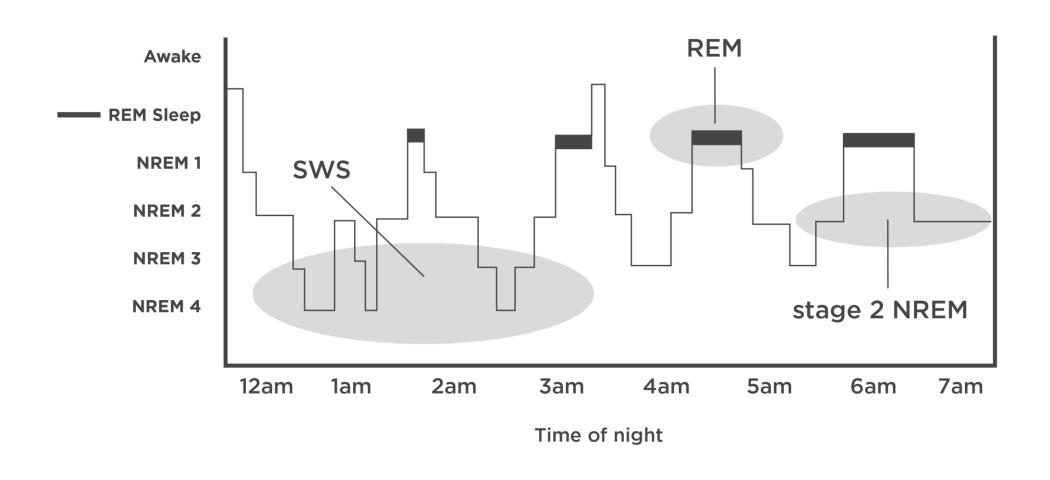
Our long-term memory is updated when we sleep

40% of what we learn is lost if we sleep less than 6 hours



REM and None REM Stage 2 key for learning

And these are back weighted during the nights' sleep



Top 10 Steps to a perfect night's sleep

How to manage the conflict between our modern lifestyle & our paleo-physiology

Paleo-physiology

Sleep first, wake second, Hunter Gatherer, designed for lots of movement, fight or flight reactions

Paleo-lifestyle

Fresh food (meat and vegetation), no deadlines , clear bright day & a cold dark night, in tune with environment

We control our environment & have 'god-like technology'

Manipulate light and heat, live wake first, sedentary, attached online, alert late into the evening.

Step 1. Have a consistent bed & wake time

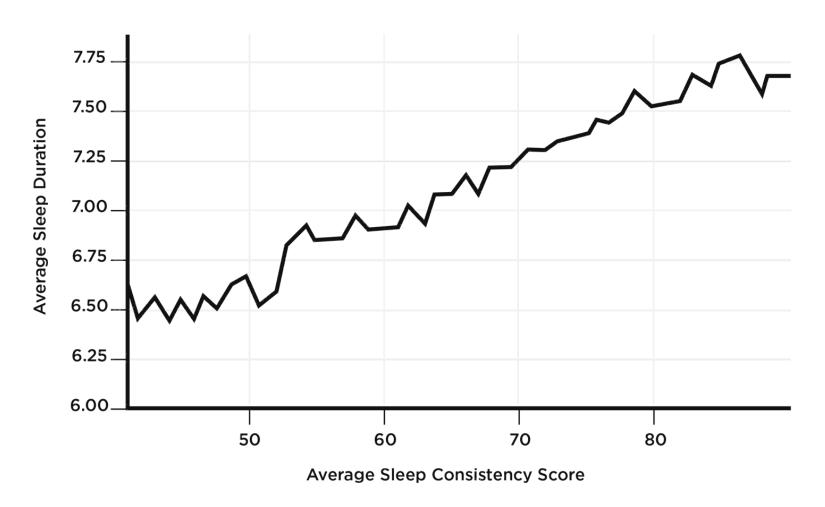
7 days a week, avoid social jet lag by keeping weekend catch up to 2 hours max

			Wake up at -\(\tilde{\to}\)-						
				School day				Weekend	
			7.00am	7.30am	8.00am	8.30am	9.00am	9.30am	
Hours of sleep 🗘			Get to sleep by 🕲				Get to sleep by 🕲		
Age	Recommended*	Suggested	Sunday to Thursday			Friday/Saturday			
10	9-11 hours	10.0 hours	9pm	9.30pm	10pm	10.30pm	11.00pm	11.30pm	
11	9-11 hours	10.0 hours	9pm	9.30pm	10pm	10.30pm	11.00pm	11.30pm	
12	9-11 hours	10.0 hours	9pm	9.30pm	10pm	10.30pm	11.00pm	11.30pm	
13	9-11 hours	9.75 hours	9.15pm	9.45pm	10.15pm	10.45pm	11.15pm	11.45pm	
14	8-10 hours	9.5 hours	9.30pm	10pm	10.30pm	11.0pm	11.30pm	12.00am	
15	8-10 hours	9.25 hours	9.45pm	10.15pm	10.45pm	11.15pm	11.45pm	12.15am	
16	8-10 hours	9.0 hours	10.00pm	10.30pm	11pm	11.30pm	12.00am	12.30am	
17	8-10 hours	9.0 hours	10.00pm	10.30pm	11pm	11.30pm	12.00am	12.30am	
18	7-9 hours	8.5 hours	10.30pm	11pm	11.30pm	12am	12.30am	1am	
19	7-9 hours	8.5 hours	11pm	11.30pm	11.30pm	12am	12.30am	1am	

^{*}National Sleep Foundation (USA)

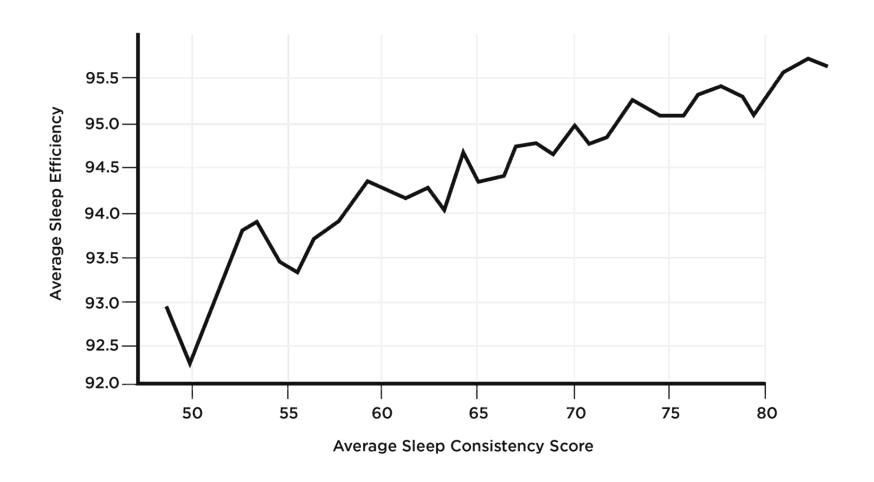
Maintaining sleep consistency

Increases the amount of time you will sleep



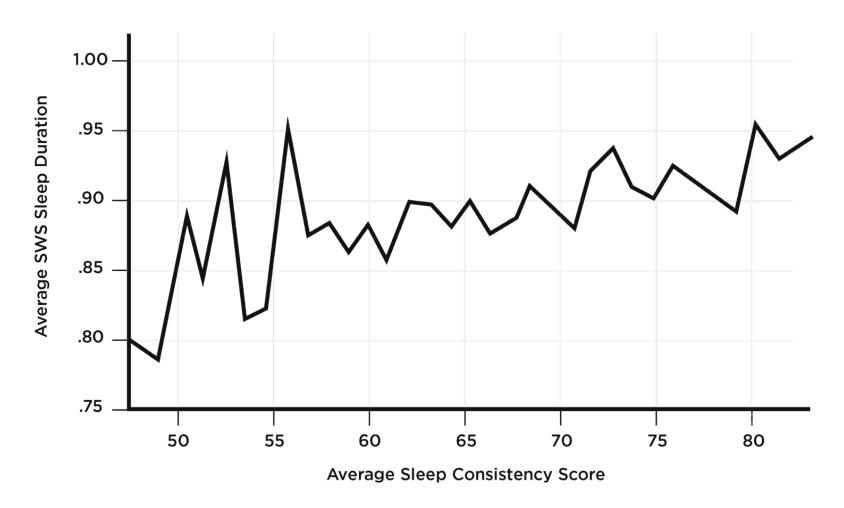
Sleep consistency improves your sleep efficiency

You will fall asleep quicker & have less broken sleep



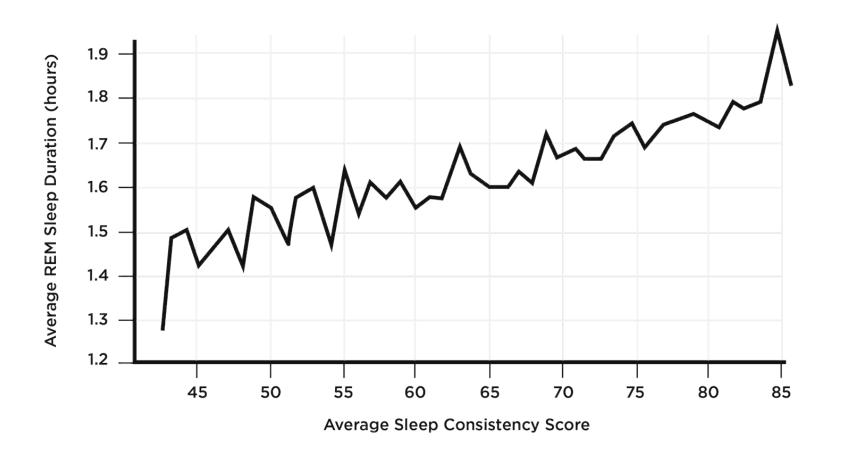
Sleep consistency restores your body

Increases your amount of deep (slow wave) sleep



Sleep consistency boosts your REM sleep

It has a massive impact on your cognitive restoration



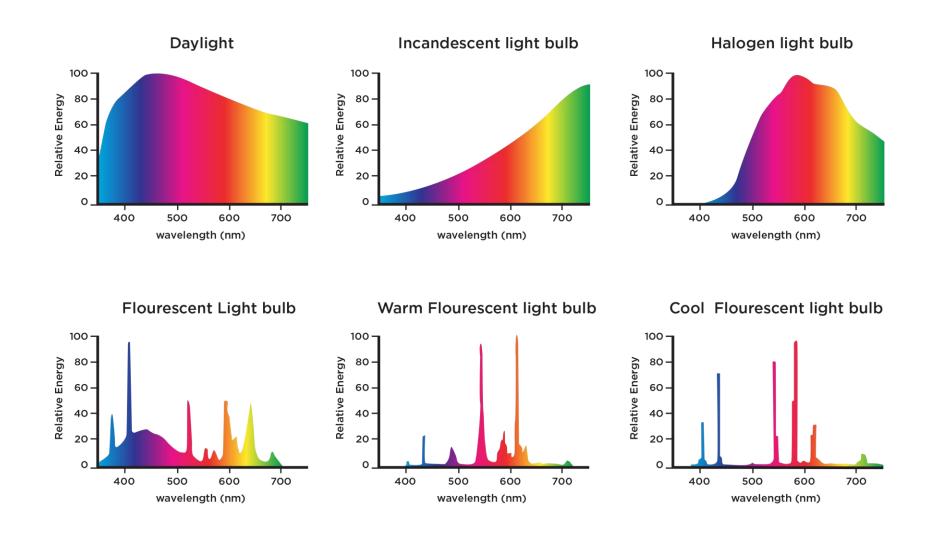
Step 2. Create a calm & bright morning routine

Exposure to sunlight strengthens the body clock – no use of snooze button



Natural daylight provides lots of blue light

Not even fluorescent light bulbs get close to providing as much



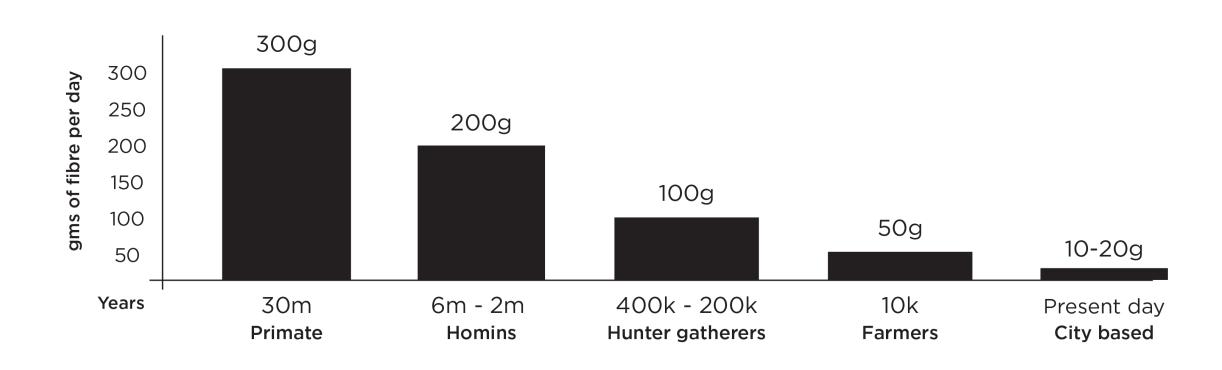
Step 3. Eating for sleep

Mediterranean Diet - all the colours of the rainbow to provide a range of nutrients



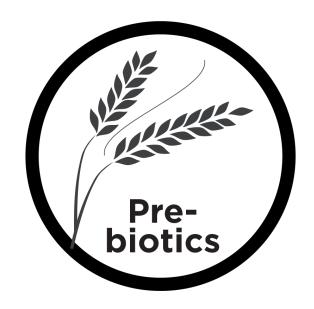
We eat a lot less fibre than we used to

Swapping fresh for hyper-processed food

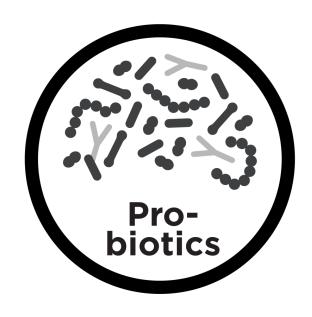


Probiotics/Gut Bacteria use fibre for fermentation

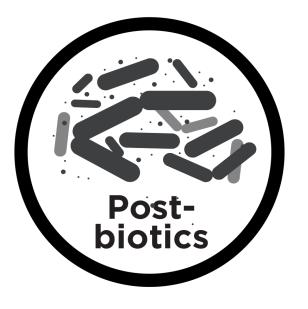
This process of fermentation creates some of more calming neurotransmitters



None digestible Carbohydrates or dietary fibre



Live gut bacteria* that promote health benefits to your body.

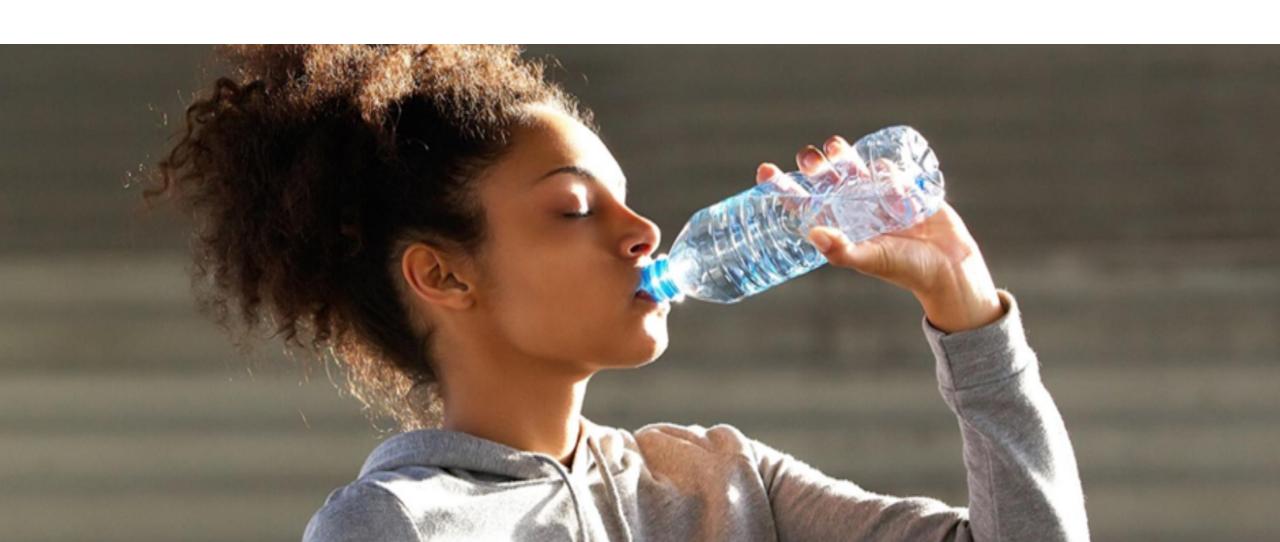


Metabolites produced by probiotics through fermentation.

^{**} Also found in fermented and cultured Foods: Kefir, Kombucha Kimchi, Sauerkraut, Yalkult/Aptimel, Live Bio-Yoghurt, Tempeh

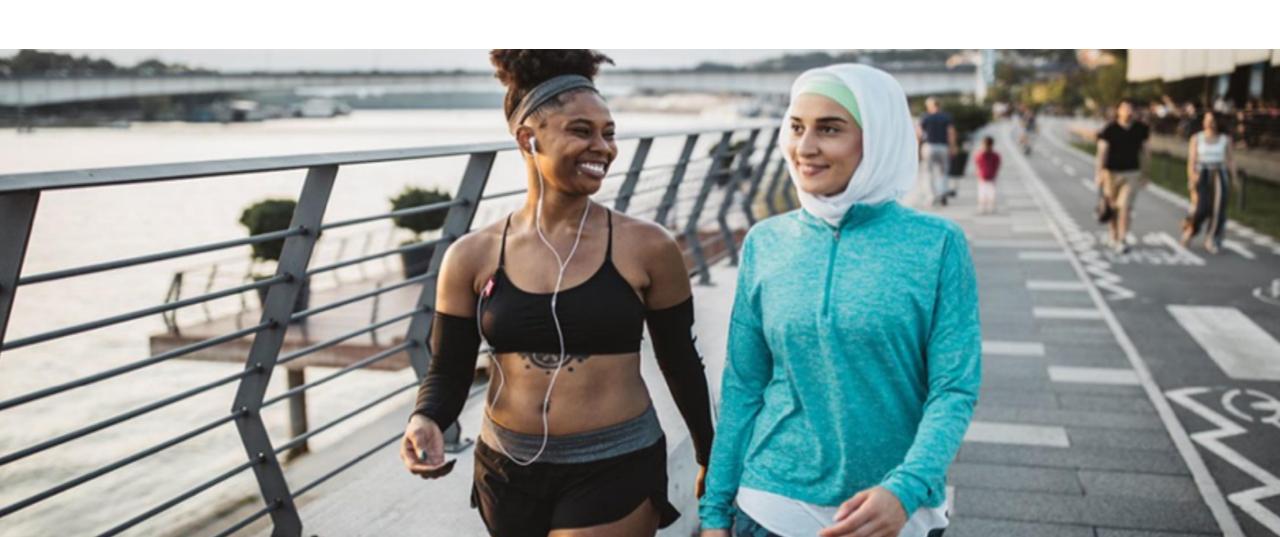
Step 4. Drinking right for sleep

2l of water a day & establish clear no caffeine consumption if possible



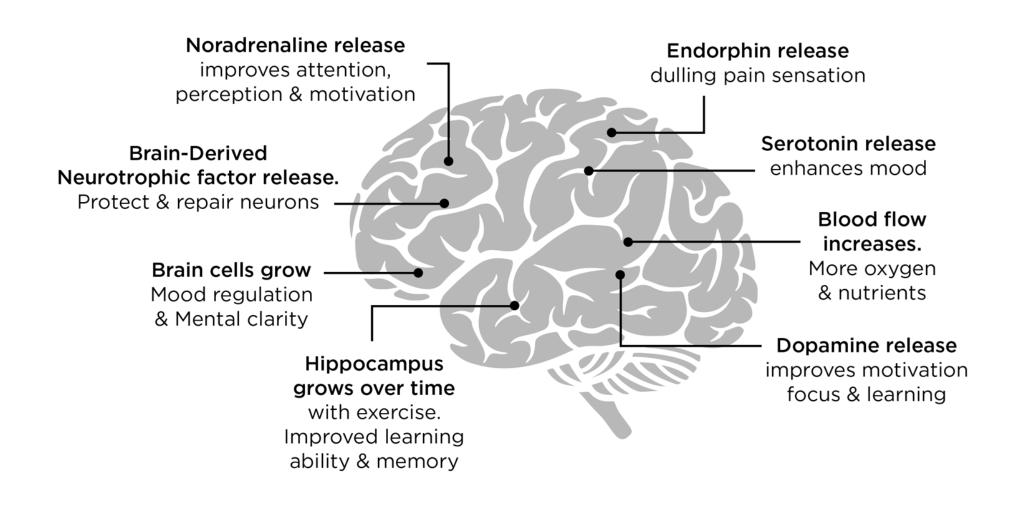
Step 5. Exercise right for sleep

Even 20 minutes walking, three times a week is a proven to help improve sleep



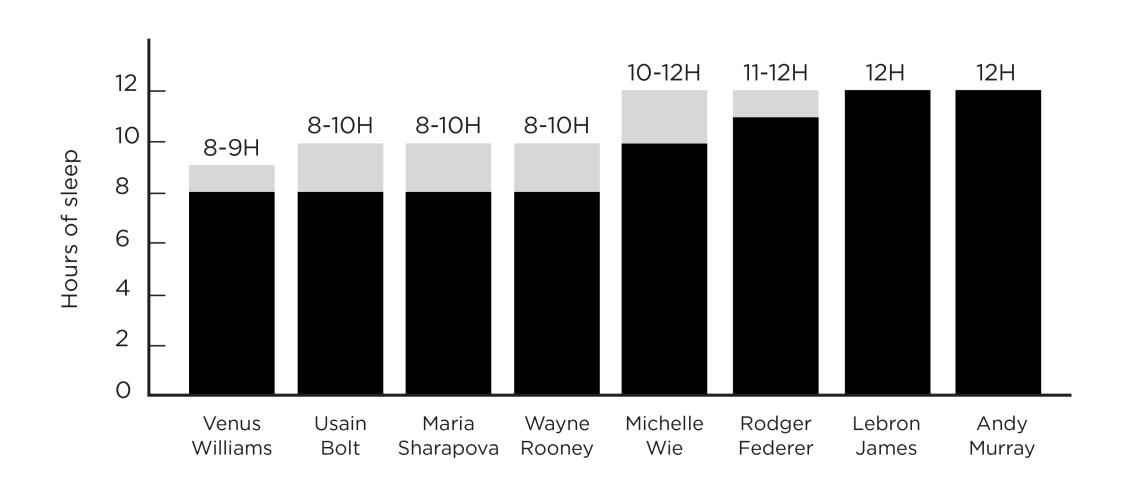
Exercise improves brain health & overall function

Hunter Gatherers walked between 5 and 9 miles every day



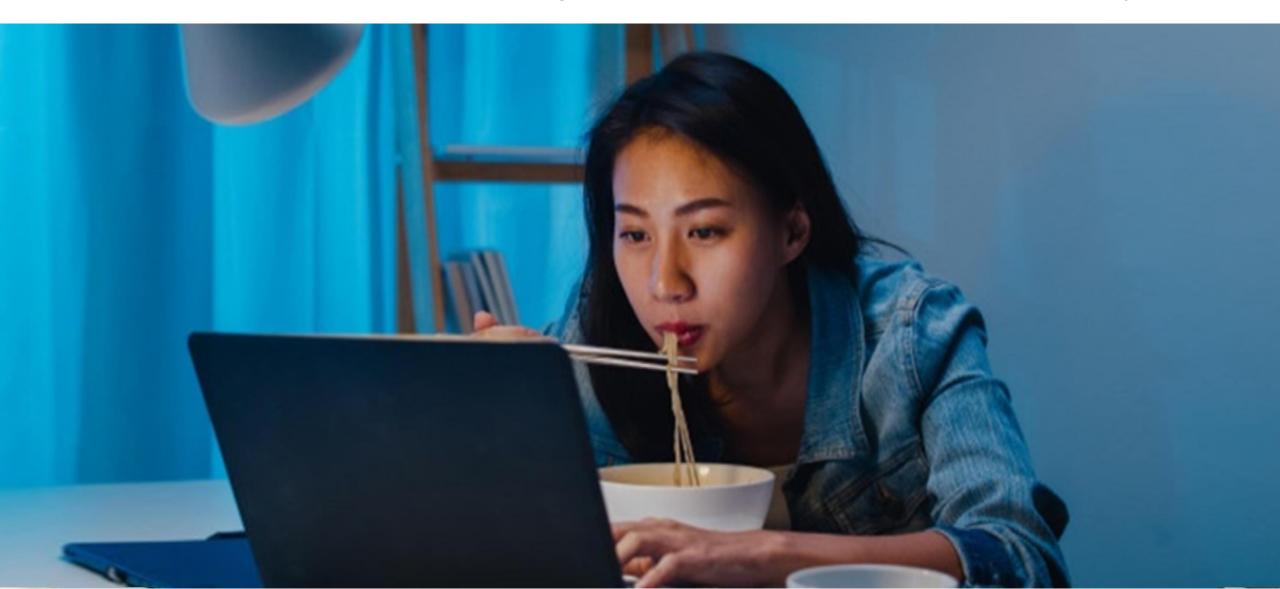
Elite athletes sleep longer

With increases in deep sleep driving recovery



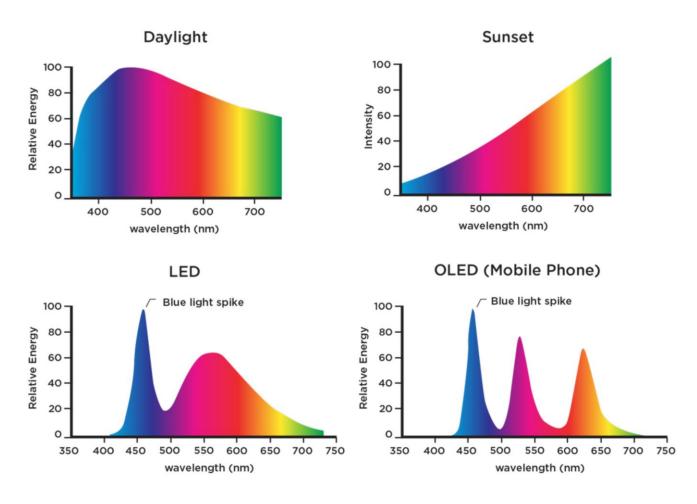
Step 6. Family boundaries around tech

We need a tech curfew starting at least 1 hour before bed, and ideally 2



The sun would have set hours before we slept

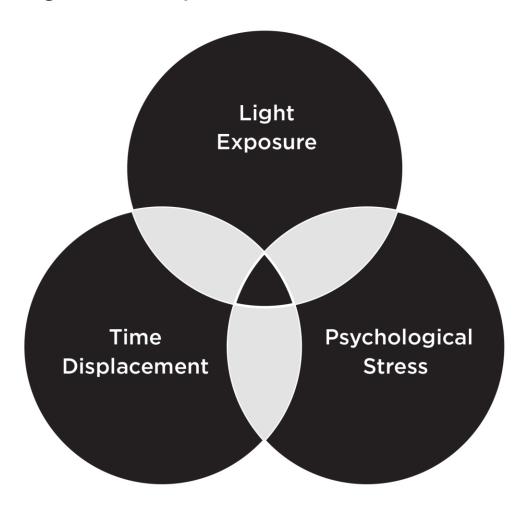
Emitting the longer, redder, wavelengths of light rather than the blue light of tech screens



Source: Liu, Huh, Shah, Spectral distributions of light

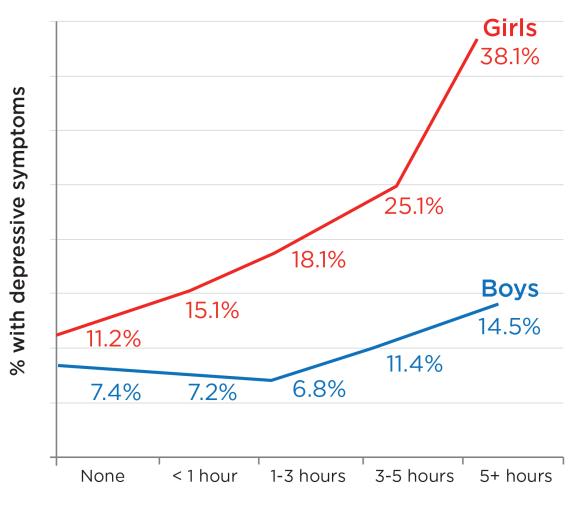
Tech's sleep disturbance isn't just about blue light

It also disrupts our ability to get to sleep on time & creates FMO when eventually doze off



Social Media use affects girls more than boys

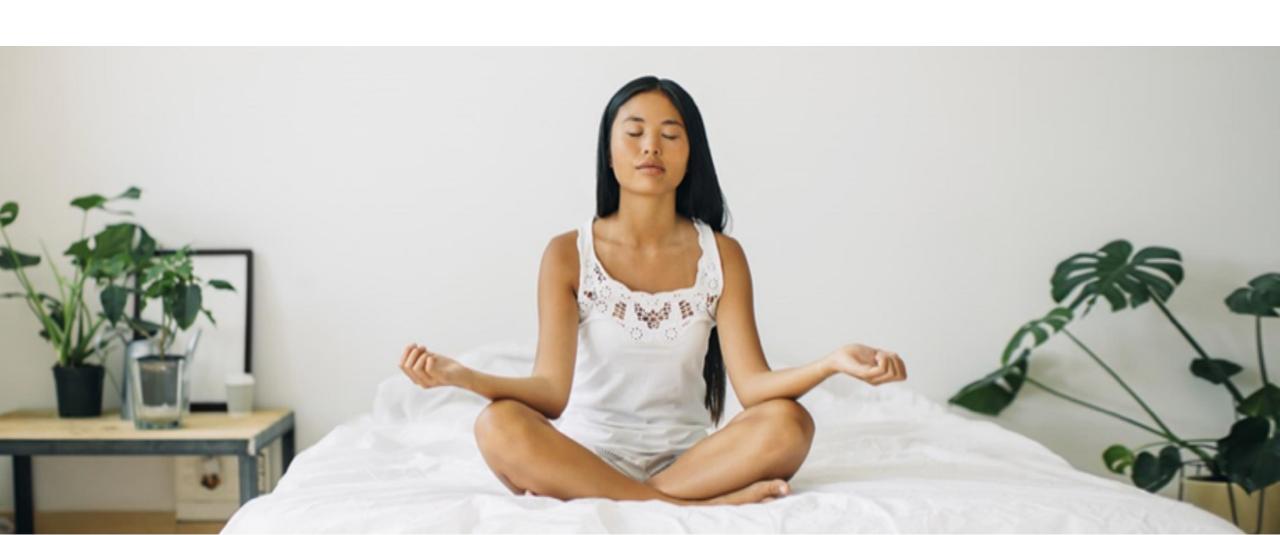
If you sleep 6-9 hours



Weekday hours of social media use

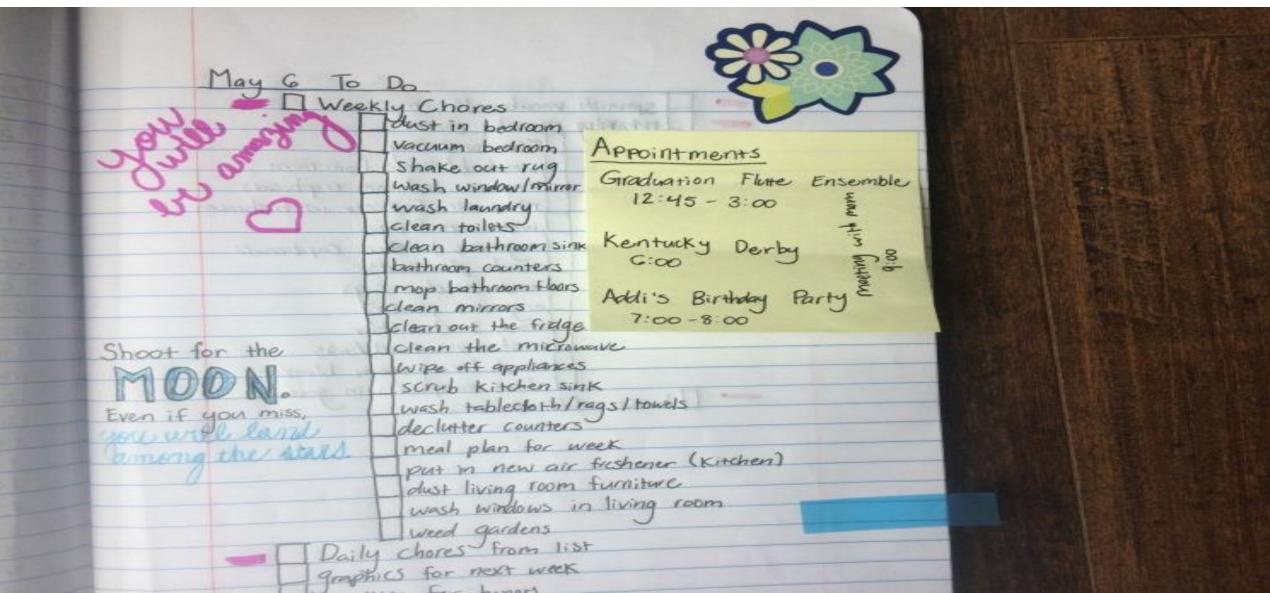
Step 7. Create a consistent bedtime routine

This conditions your brain to anticipate sleep through the Pavlovian effect



Step 8. Prepare for the next day and sign off today

To do lists, try journalling, write a gratitude list



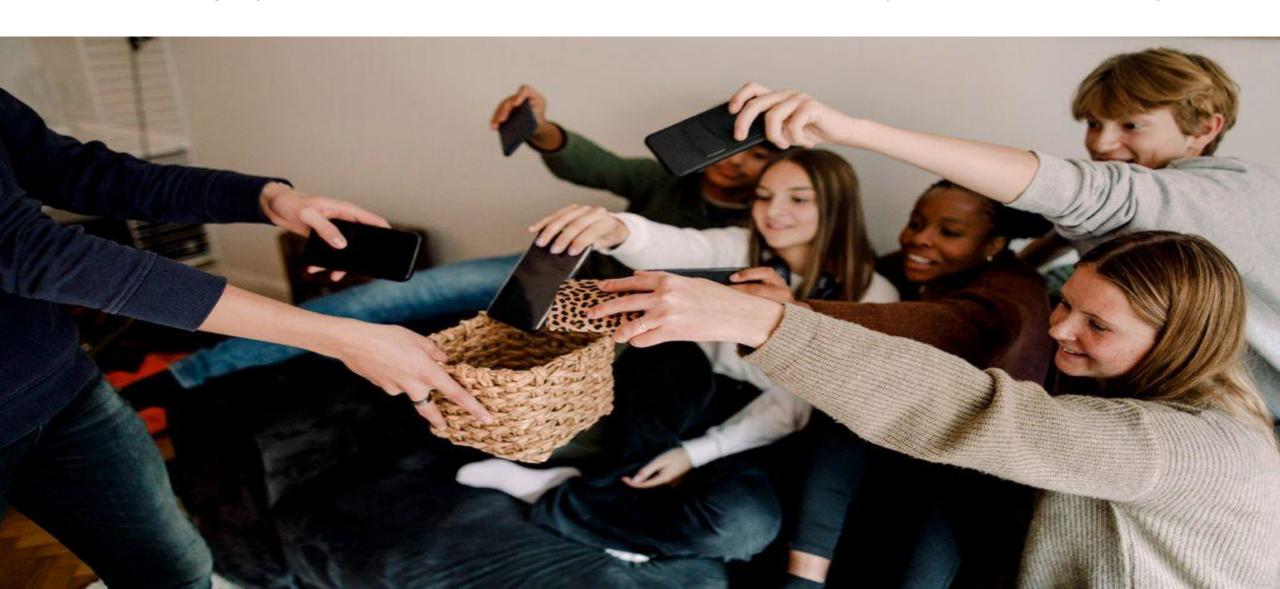
Step 9. Make their bedroom a haven for sleep

Change the decor between study and sleep with absolutely no use of tech in bed



Step 10. It's one rule for all

Leading by example, it's what we do, not what we say that children copy



Practical Ideas

(None Sleep Deep Rest)

Engage your relaxation response

Helping you to relearn the art of sleeping

Meditation

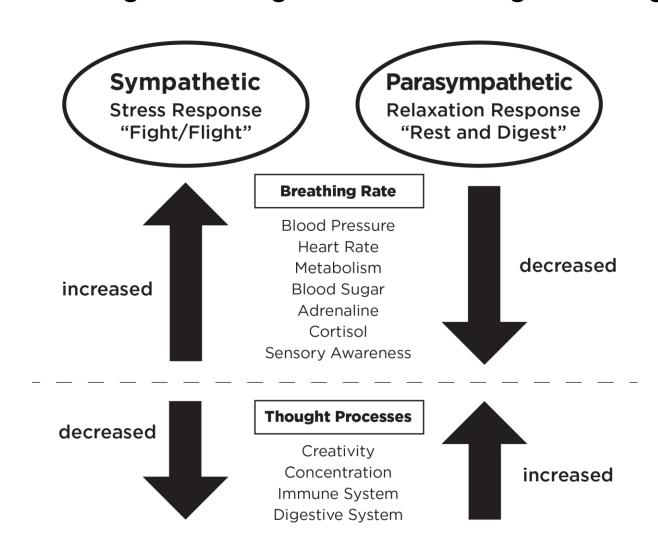
Brings brain wave close to Deep Sleep D wave

Breathing Techniques and Progressive Muscle Relaxation

Breathe out longer than in

Engage their relaxation response

Achieved by reducing breathing rate or focusing on thought processes



Meditation

Mindfulness and Yoga

Meditation Tapes

Try all the free ones until you find one that works for you

Yoga Nidra

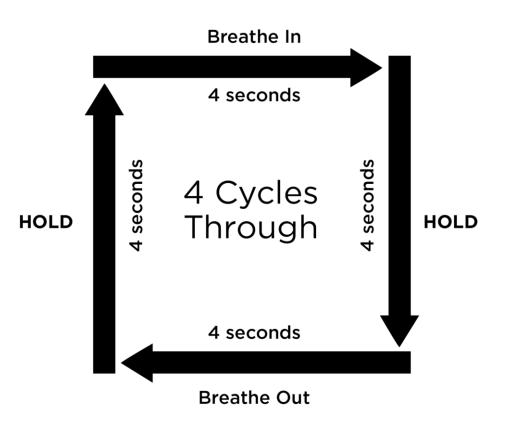
Proven to help you sleep better

Listening to sounds

From outside the bedroom to inside the room, then inside your body, or even white noise.

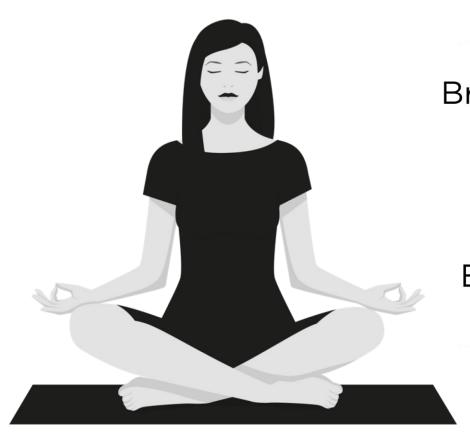
Box breathing technique

To destress and reduce cortisol



4-7-8 breathing technique

Exhale more than inhale to reduce your heart rate



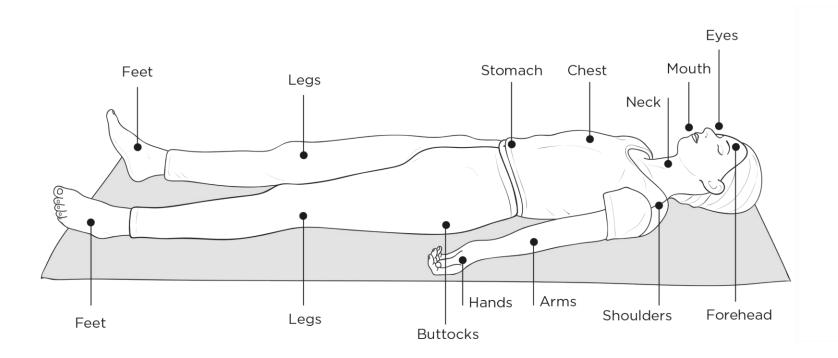
Breath in for 4 seconds through nose

Hold for 7 seconds

Exhale for 8 seconds through mouth

Progressive muscle relaxation (PMR)

Squeeze and release from your feet up to your face



Breathe in for 4 seconds
Through nose
Tensing your muscles

Hold for 2 seconds Squeezing tight

Breath out for 6 seconds

Through mouth

Letting go of tension



Step 1. Have a consistent bed & wake time

7 days a week, avoid social jet lag by keeping weekend catch up to 2 hours max

		School			
			7.00am	7.30am	
	Hours of slee	Get to s			
Age	Recommended*	Suggested		Sunday	t
10	9-11 hours	10.0 hours	9pm	9.30pm	Ī
11	9-11 hours	10.0 hours	9pm	9.30pm	Ī
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19	7-9 hours	8.5 hours	11pm	11.30pm	Ī

Wake up at -\(\hightarrow\)-									
School day				Weekend					
7.00am	7.30am	8.00am	8.30am	9.00am	9.30am				
	Get to	Get to sleep by 🕲							
	Sunday	Friday/Saturday							
9pm	9.30pm	10pm	10.30pm	11.00pm	11.30pm				
9pm	9.30pm	10pm	10.30pm	11.00pm	11.30pm				
9pm	9.30pm	10pm	10.30pm	11.00pm	11.30pm				
9.15pm	9.45pm	10.15pm	10.45pm	11.15pm	11.45pm				
9.30pm	10pm	10.30pm	11.0pm	11.30pm	12.00am				
9.45pm	10.15pm	10.45pm	11.15pm	11.45pm	12.15am				
10.00pm	10.30pm	11pm	11.30pm	12.00am	12.30am				
10.00pm	10.30pm	11pm	11.30pm	12.00am	12.30am				
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^{*}National Sleep Foundation (USA)