



PEAK
HUMAN
PERFORMANCE

PEAK PERFORMANCE

B L U E P R I N T





- TELOMERES & THE 3PP®
- PILLAR 1 / SLEEP
- PILLAR 2 / NUTRITION
- PILLAR 3 / EXERCISING

Disclaimer

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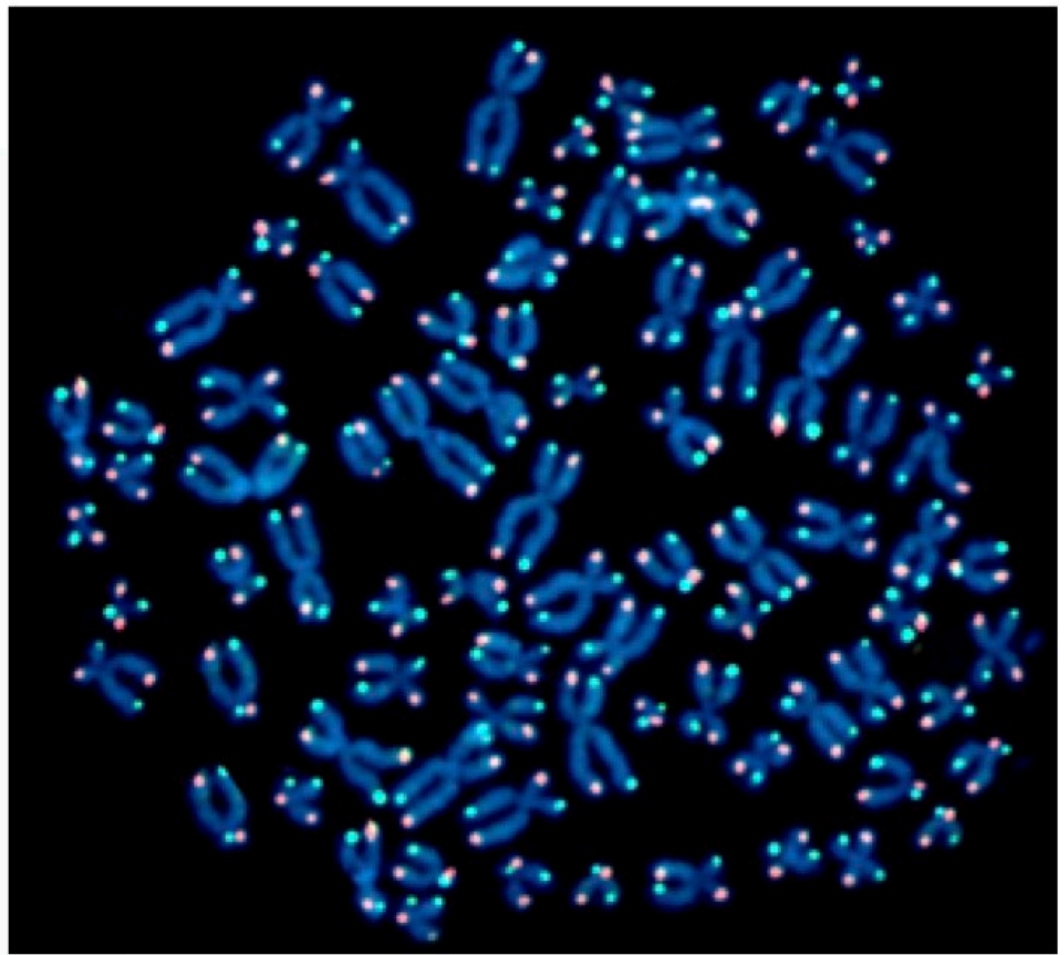
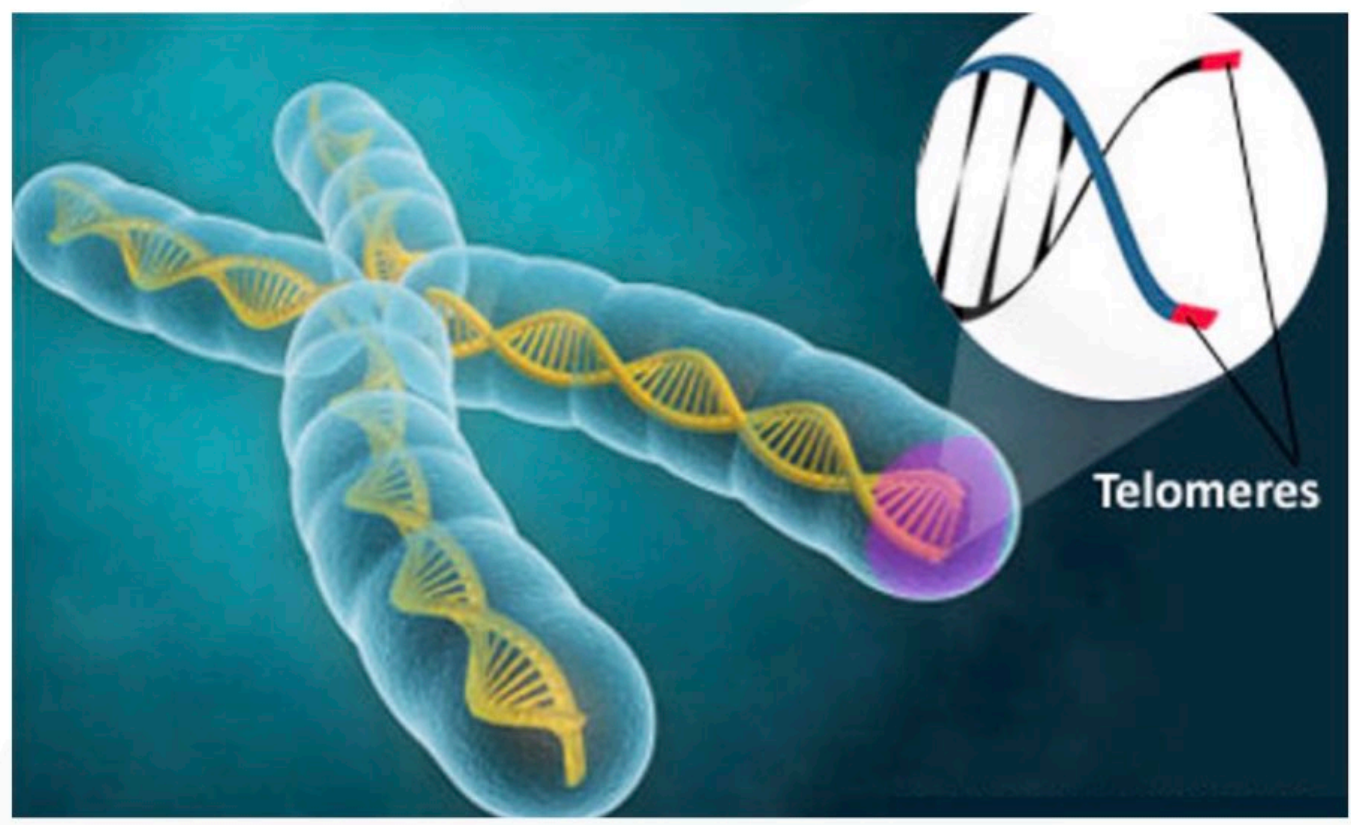
The 3 PILLARS & the Telomeres?

- Scientists (Dr E.Blackburn and Dr E.Epel) showed:
 - Fixing Sleep & Nutrition: Telomeres shortening stopped
 - Adding Exercising: Telomeres becoming longer



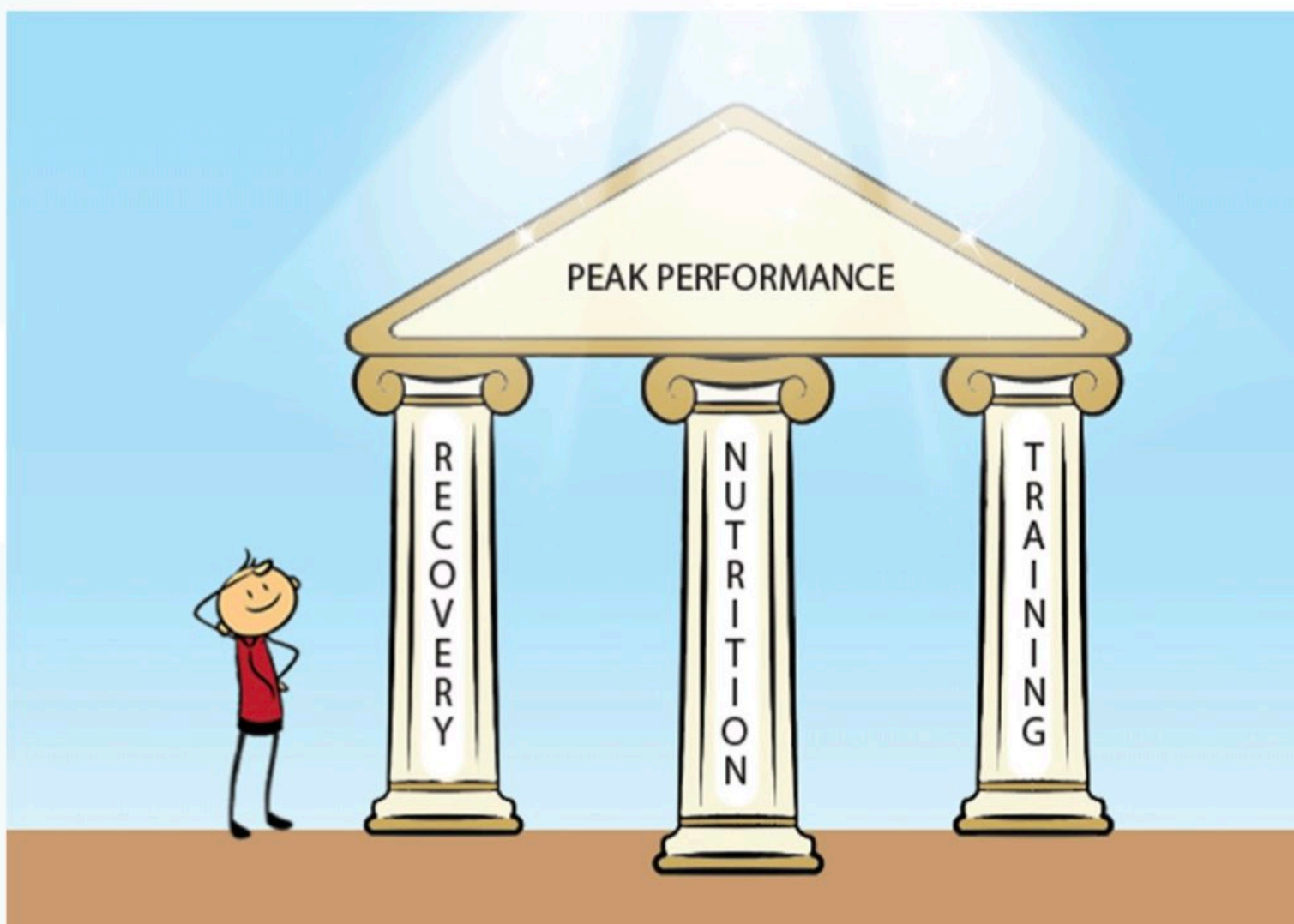
We have to focus on all three!

Eli Puterman et al, 'Determinants of telomere attrition over one year in healthy older women: Stress and health behaviors matter' (2014), www.ncbi.nlm.nih.gov/pmc/articles/PMC4310821



The Three Pillar Principle (3PP®)

- Recovery
 - Sleep
 - Stress Management
- Nutrition
 - Inflammation
 - Immune system
 - Energy levels
 - Cognitive function
- Training
 - Posture
 - Strength
 - Muscle mass
 - Hormonal profile
 - Brain health



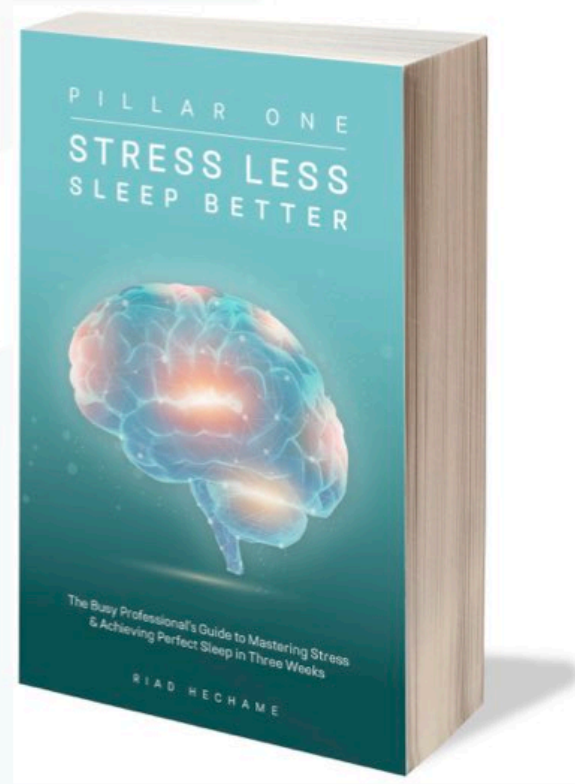
3PP® / Levels of impact



PILLAR ONE	PILLAR TWO	PILLAR THREE
RECOVERY	NUTRITION	TRAINING
PROPER SLEEP	SAINT NUTRITION	MUSCLE MASS & OPTIMAL STRENGTH
STRESS MANAGEMENT	LOWERED INFLAMMATION & STRONG IMMUNE SYSTEM	POSTURE & STRUCTURAL BALANCE
STOPPED AGING		REVERSED AGING
COHERENT MIND	COHERENT ORGANISM	COHERENT BODY

PILLAR ONE RECOVERY

Based on:



Stress Less, Sleep Better
The Busy Professional's Guide to Mastering Stress
& Achieving Perfect Sleep in Three Weeks

PILLAR ONE RECOVERY



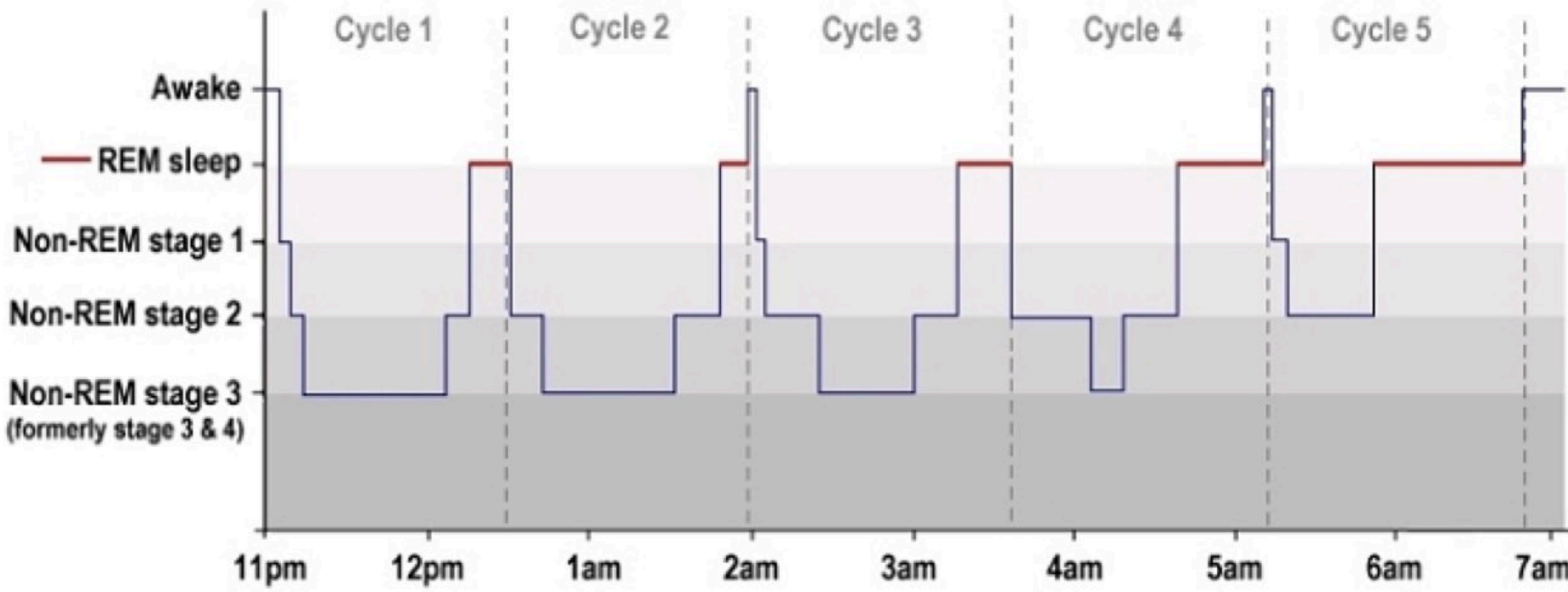
- ▷ ENHANCING SLEEP
- ▷ OPTIMISING STRESS MANAGEMENT
- ▷ ACHIEVING HEART COHERENCE

What is sleep??

"You can't fully experience wakefulness during the day if your sleep during the night is compromised."

- Sleep has multiple consecutive cycles of about 90mins.
 - REM Sleep:
 - Alpha: interconnection & Fostering of EQ*
 - NREM Sleep:
 - Delta: Detox
 - Theta: Information consolidation

* Matthew Walker, *Why we sleep: the new science of sleep and dreams* (Pen-quin, 2007)



What Bad Sleep Can Do To You

"Don't let sickness be your motivator."

DNA damage

- A study on 49 healthy on-call doctors required to work overnight has found:
 - lower DNA repair gene expression
 - more DNA breaks
- Damaged DNA increases after only one night of sleep deprivation. DNA is the blueprint for protein synthesis, mutations can cause serious health issues, including the generation of cancerous cells.

Wiley Newsroom, 'Sleep deprivation may affect our genes' (2019), <https://newsroom.wiley.com/press-release/sleep-deprivation-may-affect-our-genes>



Altered microbiome

- Sleep deprivation alters the human gut microbiome, which has a direct impact on our cognitive function, stress and anxiety.

J R Anderson et al., (2017), 'A preliminary examination of gut micro- biota, sleep, and cognitive flexibility in healthy older adults' (2017), www.ncbi.nlm.nih.gov/pubmed/29031742

Leaky BBB and neurodegenerative diseases.

- An increase in inflammatory properties due to sleep loss can lead to an impairment of the blood brain barrier (BBB). The inflammatory markers attack the BBB which becomes leaky.

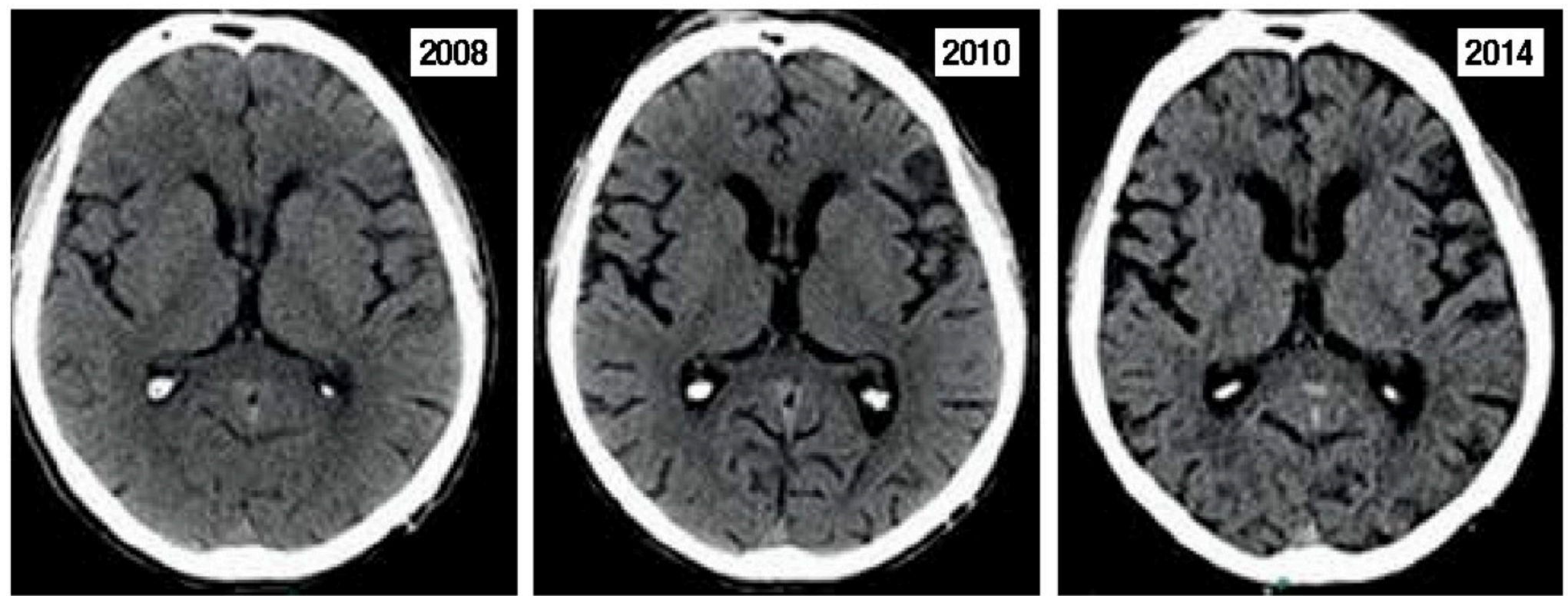
G Hurtado-Alvarado et al., 'Blood-brain barrier disruption induced by chronic sleep loss: low-grade inflammation may be the link' (2016), www.ncbi.nlm.nih.gov/pmc/articles/PMC5050358/



Brain Atrophy

- Recent research has shown that sleeping fewer than 6 hours or longer than 9 hours can lead to an atrophied total cerebral brain volume.

Andrew J Westwood et al., 'Prolonged sleep duration as a marker of early neurodegeneration predicting incident dementia' (2017), <https://n.neurology.org/content/88/12/1172>



What Good Sleep Can Do For You

'Sleep is the only sedentary activity, which protects from weight gain.'

— Chaput JP, Klingenberg L Sjödin⁴²

42 J-P Chaput; L Klingenberg and A Sjödin, 'Do all sedentary activities lead to weight gain: sleep does not' (2010), www.ncbi.nlm.nih.gov/pubmed/20823775

Neurogenesis

- Good quality sleep helps regenerate our cognitive function as it ensures fresh neurons are produced and protected to grow. Sleep deprivation does the contrary.⁴⁸
- Sleep also enhances insulin-like growth factor (IGF-1), brain-derived neurotrophic factor (BDNF) and GH, all of which are promoters of neurogenesis.

48 Dr Michael Merzenich, Soft-wired, How the New Science of Brain Plasticity Can Change Your Life (Parnassus Publishing, 2013).

49 Carina Fernandes et al, 'Detrimental role of prolonged sleep deprivation on adult neurogenesis' (2015), www.ncbi.nlm.nih.gov/pmc/articles/PMC4396387/

Neuroprotection

- Different studies have shown that optimised melatonin levels help protect neurones by scavenging endogenous free radicals, activating several antioxidant enzymes and preventing programmed cell death.

J C Mayo et al, 'Melatonin prevents apoptosis induced by 6-hydroxydopamine in neuronal cells: implications for Parkinson's disease' (1998), www.ncbi.nlm.nih.gov/pubmed/9551855

Delayed onset of Alzheimer's

- A study has shown that when sleep disorders are successfully treated, cognitive decline can be significantly slowed down. The onset of Alzheimer's disease can then be delayed by five to ten years.

S Ancoli-Israel et al, 'Cognitive effects of treating obstructive sleep apnea in Alzheimer's disease' (2008), www.ncbi.nlm.nih.gov/pubmed/18795985

Stress Mangement

- Good quality sleep allows the brain to intentionally erase information related to stress and negative experiences and therefore helps to massively reduce stress loads.

Andy R Eugene and Jolanta Masiak, 'The neuroprotective aspect of sleep' (2015), www.ncbi.nlm.nih.gov/pmc/articles/PMC4651462/

Decision Making

- Jeff Bezos, Amazon's boss
 - makes sure to sleep 8 hours every night as not to risk making poor executive decisions the day after.
 - and keeps 'high IQ' meetings only in the mornings even if they would have to wait until the day after.⁵⁴

⁵⁴ www.businessinsider.my/jeff-bezos-why-8-hours-sleep-important-when-making-important-decisions-2018-9

Anti-aging & Tissue repair

- During sleep, we secrete melatonin and GHs, which are highly effective at stimulating collagen formation in skeletal muscles and tendons. GHs plays a big part in maintaining a collagen matrix, leading to the appearance of youthfulness.

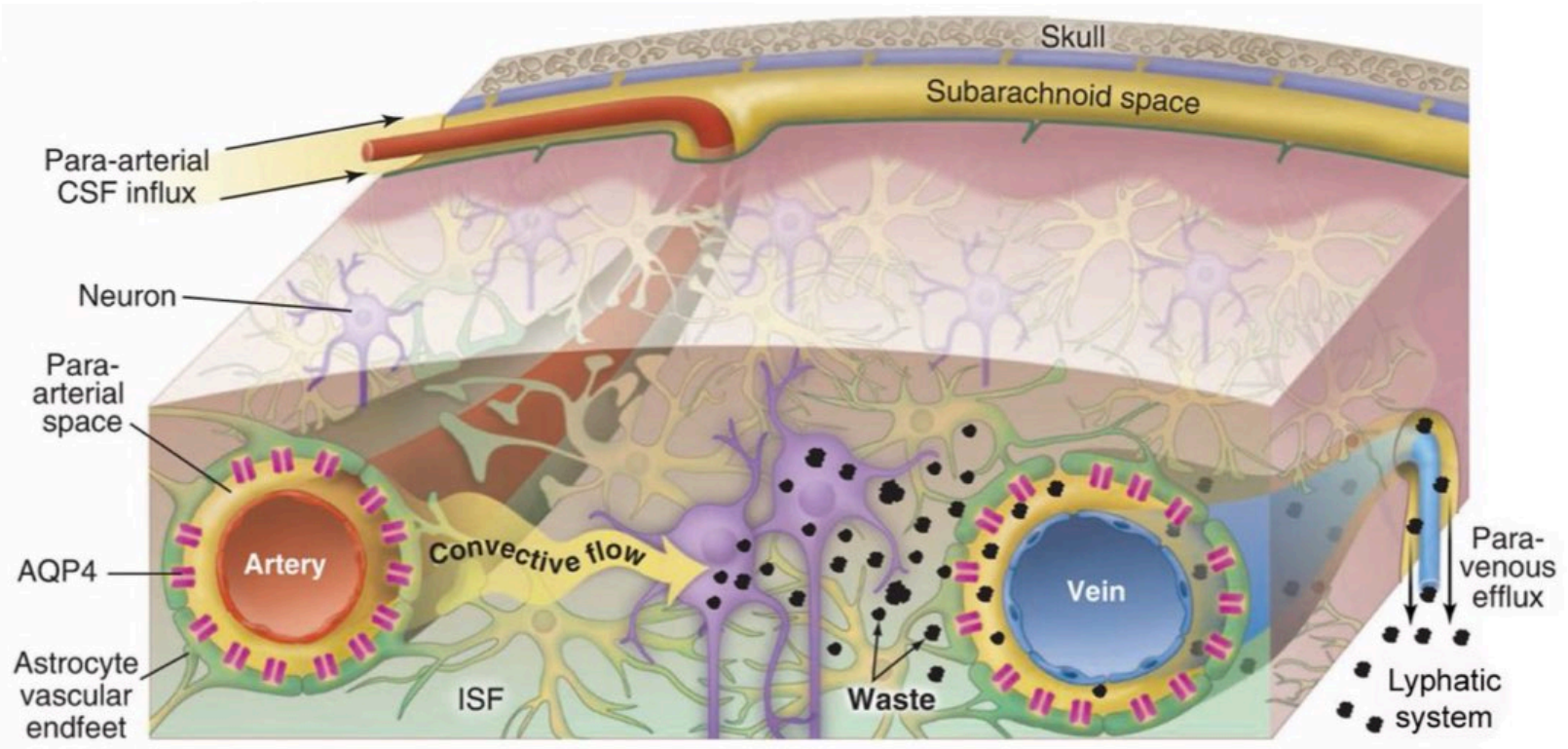
S Doessing et al., 'Growth hormone stimulates the collagen synthesis in human tendon and skeletal muscle without affecting myofibrillar protein synthesis' (2010), www.ncbi.nlm.nih.gov/pubmed/19933753

The science of beauty sleep (2019), www.tuck.com/science-beauty-sleep

Detoxification

- During NREM sleep, the so-called glymphatic system of the brain is working hard at disposing of toxic waste products and metabolites from the daily firing of neurons. A study has shown that brain cells reduce their size during sleep, allowing an increase of the intercellular space by up to 60%. This allows for them to flush with cerebrospinal fluid to rinse toxic waste products, including β -Amyloid protein, which is linked with Alzheimer's disease, out of the brain.

Dr Maiken Nedergaard, 'Neuroscience. Garbage truck of the brain' (2013), www.ncbi.nlm.nih.gov/pmc/articles/PMC3749839



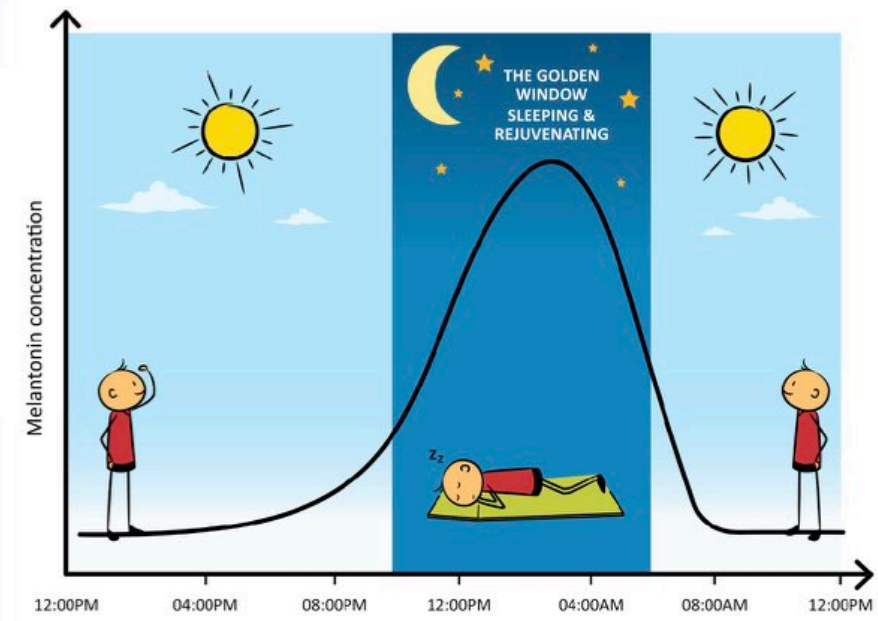
Techniques to Achieve Perfect Sleep In One Week

Timing

- Surf on the cortisol curve:
 - Rise with rooster
 - Meditate, pray and plan the day
 - Brain peak performance is in the morning
 - Physical peak performance in morning up to early pm (ideally during midday).
 - Reduce brain and body activity in the evening
- Prepare the evening
- Go to bed 15 minutes earlier each day. Do this each night until you hit your target.
- Anticipate. If you plan to be punctual, then you'll often be late
- Keep the same sleep pattern throughout the week
- Avoid napping in the late afternoon

'Your future depends on your dreams, so go to sleep.'

— Mesut Barazany



Nutrition

- Coffee and stimulating tea only up to mid day.
- Leave gap for digestion 2 and 3h. 4h for body composition goal.
- Optimise your last meal:
 - Sugary or highly spiced meals or alcohol tend to lead to fragmented sleep.
 - Fructose leaves liver working nightshift.
- Reduce water consumption towards the evening.
- Fix your gut flora: 95% of serotonin is produced by gut bacteria

Supplementation

- Magnesium ideally threonate, or a mix of amino acids and magnesium chelates
 - ~1h prior to bed
 - Cure of 3x a day

Environment

Sleep like the cavemen (optimal humidity, cool temperature, no light and no noise)

- Darkness: Our skin senses light¹. Use sealed blackout material on windows
- Temperature: the body preparation mechanism for sleep. T affects how fast we fall asleep, and how long and well we sleep by enhancing the REM sleep.

Kazuo Okamoto-Mizuno and Koh Mizuno, 'Effects of thermal environment on sleep and circadian rhythm' (2012), www.ncbi.nlm.nih.gov/pmc/articles/PMC3427038/

- Noise: Eliminate all sources of noise in your bedroom or use ear plugs (Sleep® or Sleep® Pro.²)

1 N Hoang et al, 'Human and Drosophila cryptochromes are light activated by Flavin photoreduction in living cells' (2008), www.ncbi.nlm.nih.gov/pubmed/18597555

2 www.flareaudio.com

Lifestyle

Displays will stress you

- Display light hinders producing melatonin production, the sleep and rejuvenation hormone, while inducing cortisol production, the stress hormone. You end up tired and wired, which is not a good recipe for quality sleep.

Earn your recovery

- Exercise while surfing on the cortisol wave.

Meditate and pray

- Use techniques for concentration and deep connection with yourself, such as correct breathing to achieve heart coherence.

Spread the positive word

- Inform friends that you go early to bed and switch off your phone by a fixed time.

Wrong Techniques

Medication

- No medication is devoid of side effects.
- Sleep medication can:
 - Cause cancer
 - Increase the risk of accidents, epilepsy and anxiety,
 - Memory loss ¹
 - **Kill.** (Sleep medication as zolpidem, temazepam, eszopiclone, zaleplon, triazolam, flurazepam, quazepam and barbiturates. The number of Americans killed yearly by sleep medication is almost as high as the number of people killed by smoking, 500,000 vs 560,000.⁷¹ And even if you survive these nasty medications, they will make sure that your memory eraser is working optimally.)²

¹ Hsin-I Shih et al, 'An increased risk of reversible dementia may occur after zolpidem derivative use in the elderly population' (2015), www.ncbi.nlm.nih.gov/pmc/articles/PMC4603066/

² Daniel F Kripke, 'Hypnotic drug risks of mortality, infection, depression, and cancer: but lack of benefit' (2018), www.ncbi.nlm.nih.gov/pmc/articles/PMC4890308/

Alcohol

- Alcohol consumption results in overly high liver activity, delays and reduces REM sleep. It also reduces melatonin production.

¹⁰ Ebrahim et al, 'Alcohol and sleep I: effects on normal sleep' (2013), www.ncbi.nlm.nih.gov/pubmed/23347102

PILLAR TWO NUTRITION

P I L L A R

T W O

NUTRITION



- ▷ FIGHTING INFLAMMATION
- ▷ STRENGTHENING IMMUNE SYSTEM
- ▷ BOOSTING ENERGY LEVELS

Nutritional Stress

'Depression is an inflammatory disease'

— Dr David Perlmutter

- ⊕ Reduce inflammation
 - Mind pro inflammatory food
 - Transfats (kills neurons)
 - Gluten (40% have issues, rest may have issue)
 - Dairy*
 - Take care about your good friends (gut bacteria)
 - Avoid food monotony
 - Earn your carbs

D Perlmutter, *The Grain Brain* (Hodder & Stoughton, 2018).

Performance nutrition

- Neurotransmitter Balance
 - Meat & Nuts Breakfast: brain drive, speed and memory
- Hormonal Balance
 - Insuline management: Keto to reestablish insulin sensitivity
 - Cortisol management: Avoid pro inflammatory food
- Enough Protein
- Mineralised Water
- Fibers
- Nutrition Gap requires natural supplementation

- Superfood for cognitive function
 - Nuts
 - O3s
 - MCTs

PILLAR THREE TRAINING

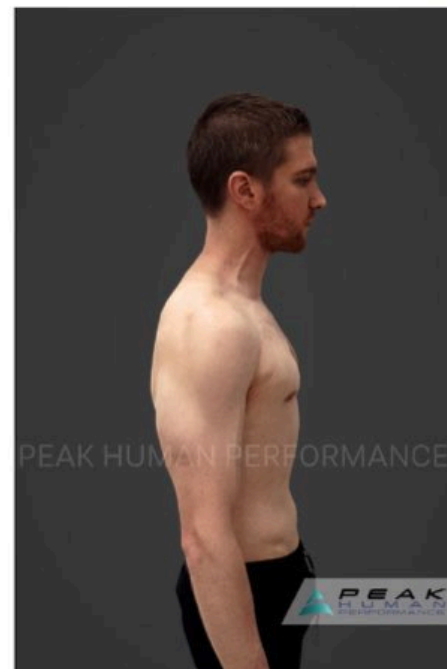
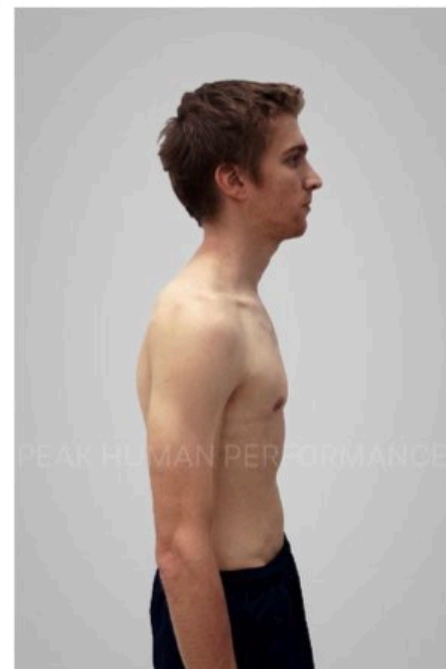
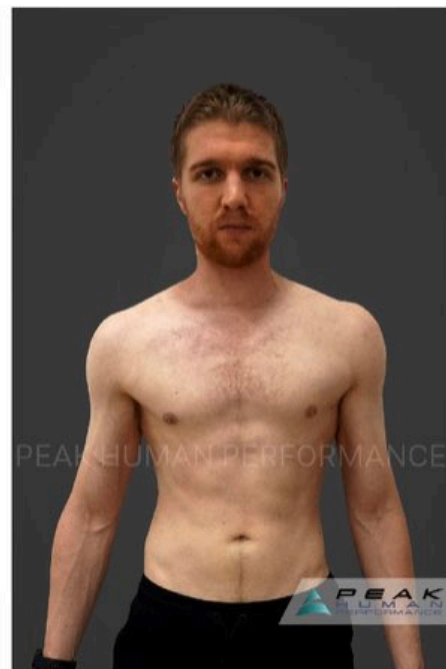
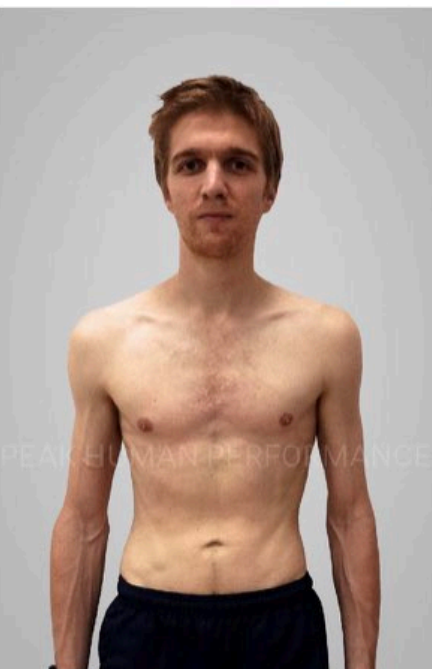
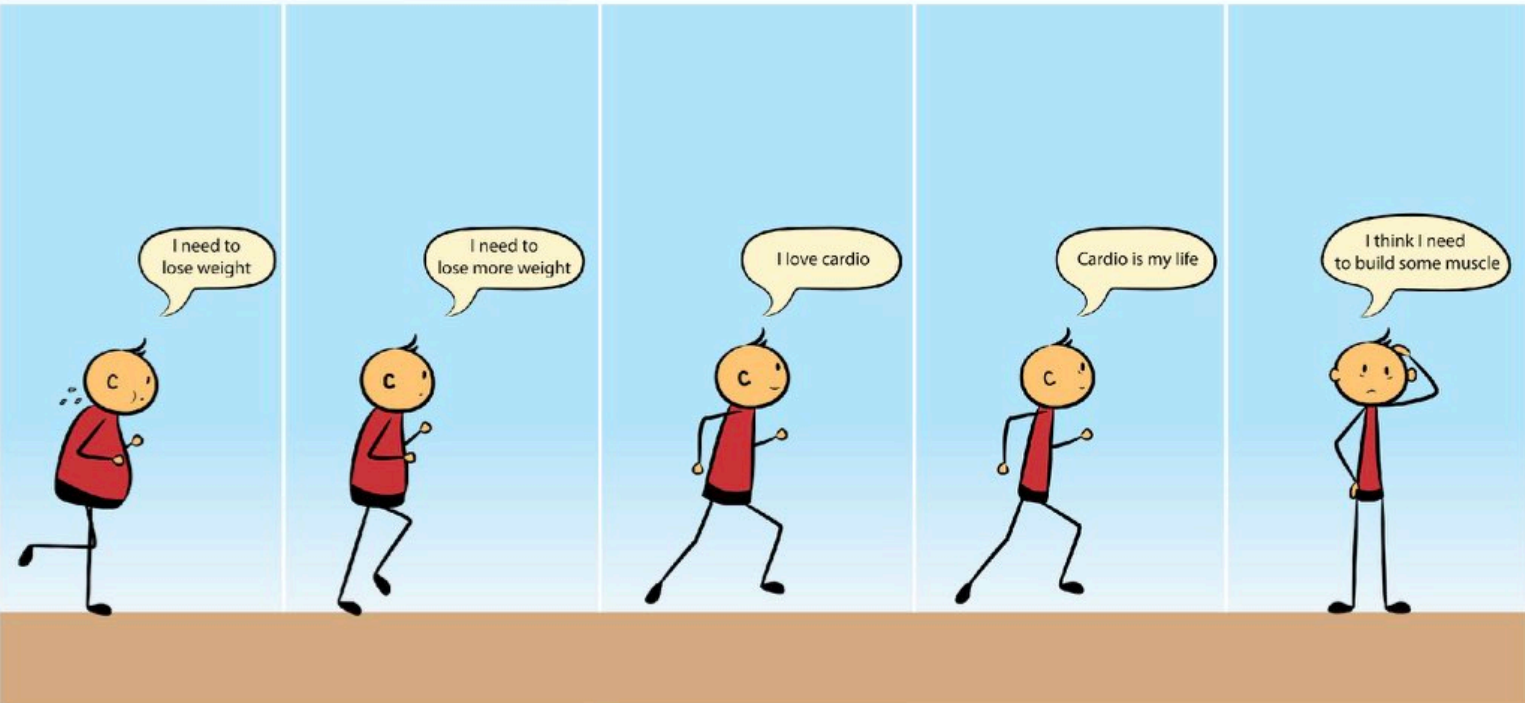
PILLAR THREE TRAINING



- ▷ IMPROVING BODY COMPOSITION
- ▷ OPTIMISING MUSCLE MASS & BONE DENSITY
- ▷ INCREASING MENTAL & PHYSICAL STRENGTH

Sport as a stressor

- Sport is a stressor
 - Raises Cortisol
 - Increases toxic load (fat loss)
 - Mechanical (joints etc)



Why resistance training is superior

- Impact on:
 - Hormonal profile ⚡
 - Neurotransmitter profile ⚡
- By far strongest anti-aging response:
 - Neurogenesis (via BDNF pathway)
 - Impact on:
 - Muscle mass
 - Tendon capacity
 - Ligament capacity
 - Cartilage regeneration
 - Joint health
 - Posture
- Detox

'Strength is the mother of all qualities'

— Prof Dr. Dr. Dietmar Schmidtbleicher



Thank you!



*"Let's focus on health and wellbeing ...
... and see everything else falling in place."*

Assess your sleep and stress

- Stress assessment questionnaire:
 - PHPStrengthClinic.com/Stress
- Sleep assessment questionnaire:
 - PHPStrengthClinic.com/Sleep

Stress Less, Sleep Better

The Busy Professional's Guide to Mastering Stress
& Achieving Perfect Sleep in Three Weeks

- Available end May 2021 at:
 - Kinokunya Store & Online Shop
 - Amazon & Kindle

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