



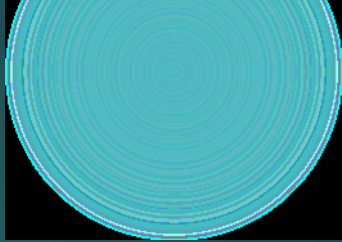


Performing under Pressure; on the Biology, Psychology and Sociology of stress in high-performance professions


III - ON THE PSYCHOLOGY OF STRESS

Stress as a subjective experience

- ▶ Like many evolved behaviours, the phenomenological expression of stress (how people behave in response to stress) may vary widely, while the underlying physiology is universal.
- ▶ Often the behavioural expression depends heavily on the context in which stress is experienced.
 - ▶ Panic / Hyper focus
 - ▶ Egocentrism / altruistic care for others
 - ▶ Enabling others / taking on the problem at hand



On the role of physiological stressors in the appraisal of psychological stress: How rational is our experience of stress really?



The importance of the preceding minutes to hours

- ▶ Are you hungry or thirsty?
- ▶ Did you get enough sleep?
- ▶ Are you ill / in pain?
- ▶ Are you deficient in something
 - ▶ Dehydration
 - ▶ Magnesium
 - ▶ Etc.
- ▶ Did something else stress you in the preceding minutes



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Feedback loops: The perception of stress without a direct stressor

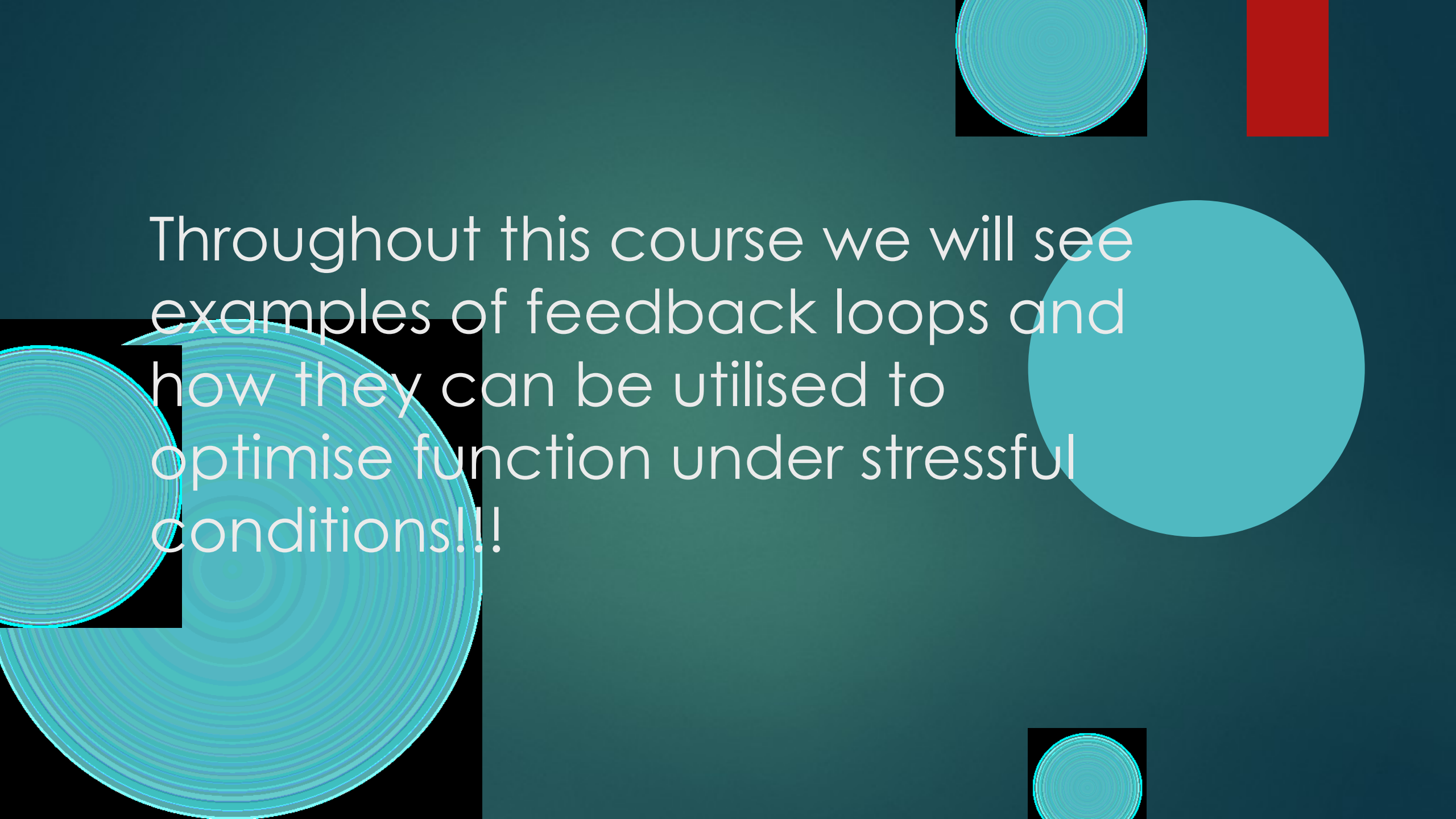
- ▶ Neurotransmitter metabolism takes time

- ▶ Transferred anger

- ▶ Non-stressor related cortisol functioning and its psychological effects

- ▶ Inflammation raises cortisol levels to push immune system
- ▶ Nightmares and morning cortisol levels
- ▶ Excessive carbohydrate intake






Throughout this course we will see examples of feedback loops and how they can be utilised to optimise function under stressful conditions!!!

Nutritional deficiencies

- ▶ A deficiency in vitamins, minerals or water can have serious effects on neurological functioning. If you are feeling stressed or frustrated and cannot figure out why it may make sense to get bloodwork done to see if you are not deficient in anything. Common deficiencies to look out for:





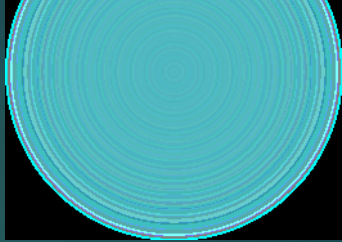
- ▶ Magnesium
- ▶ Calcium
- ▶ Iodine
- ▶ Iron
- ▶ Vitamin D, A, B12,



Experience: we react in
line with what we have
tried before

Anticipation of future problems based on previous experiences

- ▶ Triggers for stress reactions
 - ▶ What were your parents like
 - ▶ What were your peers in early life like
 - ▶ Where did you grow up (place and social strata)
- ▶ Experiences with specific individuals
 - ▶ How did they react previously?
- ▶ Which responses worked in the past to get you out?
 - ▶ Familiar reactions and behaviours
 - ▶ Certainty of outcome (the devil you know)



Your family's past:
how those before
you set you up for life

The importance of your family's past

- ▶ Transmission of trauma through generations
 - ▶ Stressed out mommy rat
 - ▶ Holocaust survivors and the shock wave through the generations
- ▶ Grooming behaviour by mom

Matthews, S. G., & Phillips, D. I. W. (2010). Minireview: Transgenerational inheritance of the stress response: A new frontier in stress research. *Endocrinology*, 151(1), 7–13. <https://doi.org/10.1210/en.2009-116>

Krippner, S., & Barrett, D. (2019). Transgenerational trauma: The role of epigenetics. *Journal of Mind and Behavior*, 40(1), 53–62.

Sharp, H., Pickles, A., Meaney, M., Marshall, K., Tibu, F., & Hill, J. (2012). Frequency of Infant Stroking Reported by Mothers Moderates the Effect of Prenatal Depression on Infant Behavioural and Physiological Outcomes. *PLoS ONE*, 7(10). <https://doi.org/10.1371/journal.pone.0045446>

Strathearn, L. (2011). Maternal neglect: Oxytocin, dopamine and the neurobiology of attachment. *Journal of Neuroendocrinology*, 23(11), 1054–1065. <https://doi.org/10.1111/j.1365-2826.2011.02228.x>

The importance of culture

- ▶ What does your culture eat?
- ▶ Where did it emerge?
- ▶ How do you arrange inheritance