

## End of Term Reflection

It's been interesting to try and bridge my understanding of Psychology with Biology. There are so many connections still to be made, but it's been interesting to learn how our physical stresses, even at the cellular level, can affect our mental state and vice versa. In the brain, chronic psychological stress elevates cortisol levels, which enter neurons and alter gene expression in ways that weaken synaptic connections. These molecular changes contribute to impaired memory, emotional dysregulation, and slower cognitive processing. Prolonged cortisol exposure also disrupts mitochondrial function, reducing ATP production and leaving neurons less capable of supporting complex psychological tasks. Meanwhile, stressed glial cells release pro-inflammatory signals that influence mood by altering neurotransmitter availability. Understanding this link demonstrates that mental health is ultimately rooted in the ability of cells to adapt or from their failure to adapt.