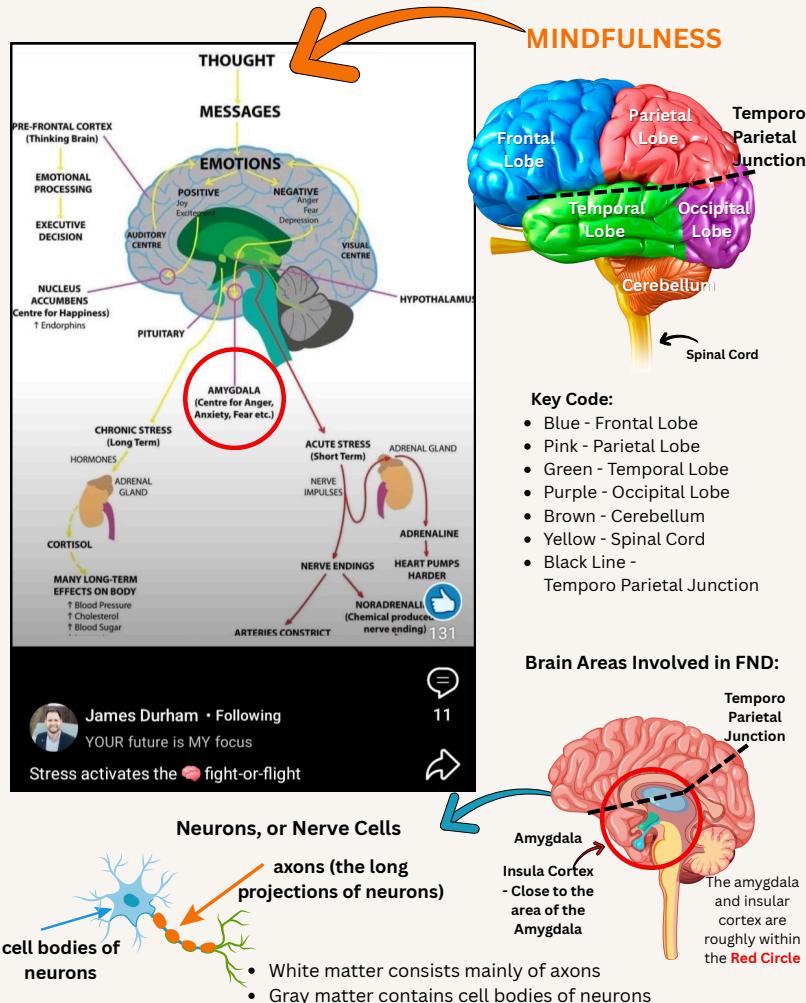


Brain Areas Involved in FND



As **James Durham** shared in his LinkedIn post, he highlighted the inner brain center responsible for fight-or-flight responses and the continuous loop of stress affecting all our bodily systems. He also touched on the principle of mindfulness – how thoughts influence emotions, which in turn shape our actions and behaviours. Together, this creates a synergy that helps regulate the nervous system.

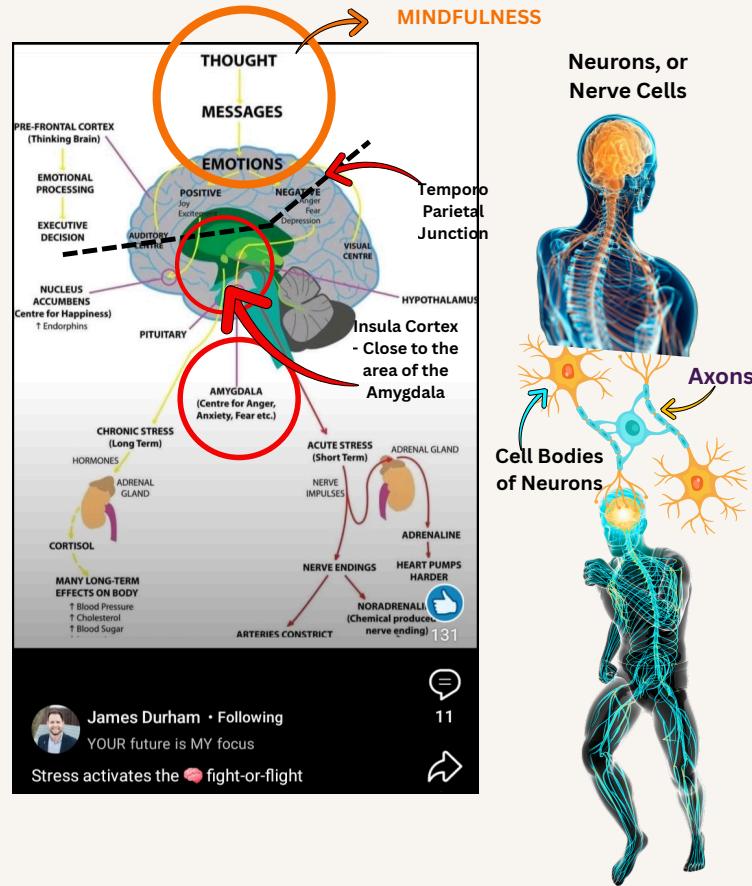
The same inner brain centers and networks are also believed to be involved in **Functional Neurological Disorder (FND)**. These networks are not visible to the naked eye, which adds to the complexity of FND. However, through functional MRI (fMRI) brain scans, we now know that disruptions occur across several key areas, including the amygdala, insular cortex, and temporo-parietal junction. Alterations in both white and grey matter volumes have also been reported. As a result, FND is now recognised as a **brain-network disorder**.

Research shows that the affected brain networks are responsible for multiple functions, including motor control, pain processing, emotional regulation, and the sense of self-agency. FND lies at the intersection of neurology and psychiatry and is best understood through the **framework of the Biopsychosocial Model** (biological + psychological + social).

References:

1. James Durham LinkedIn post: TBIOneLove
2. FND Action (UK): A summary of Functional Neurological Disorder as part of their “Inform the Doctor” Campaign
3. Chat GPT AI Technology
4. Google Search
5. Mayo Clinic: “How your brain works” Article

Your Nervous System & FND



As **James Durham** shared in his LinkedIn post, he highlighted the inner brain center responsible for flight-or-fight responses and the continuous loop of stress on all of our bodily systems.

Furthermore, he touched on the principle of mindfulness, where thoughts impact on emotions, which in turn affect ones' actions and behaviours. Together, it creates a synergy that helps regulate our nervous system.

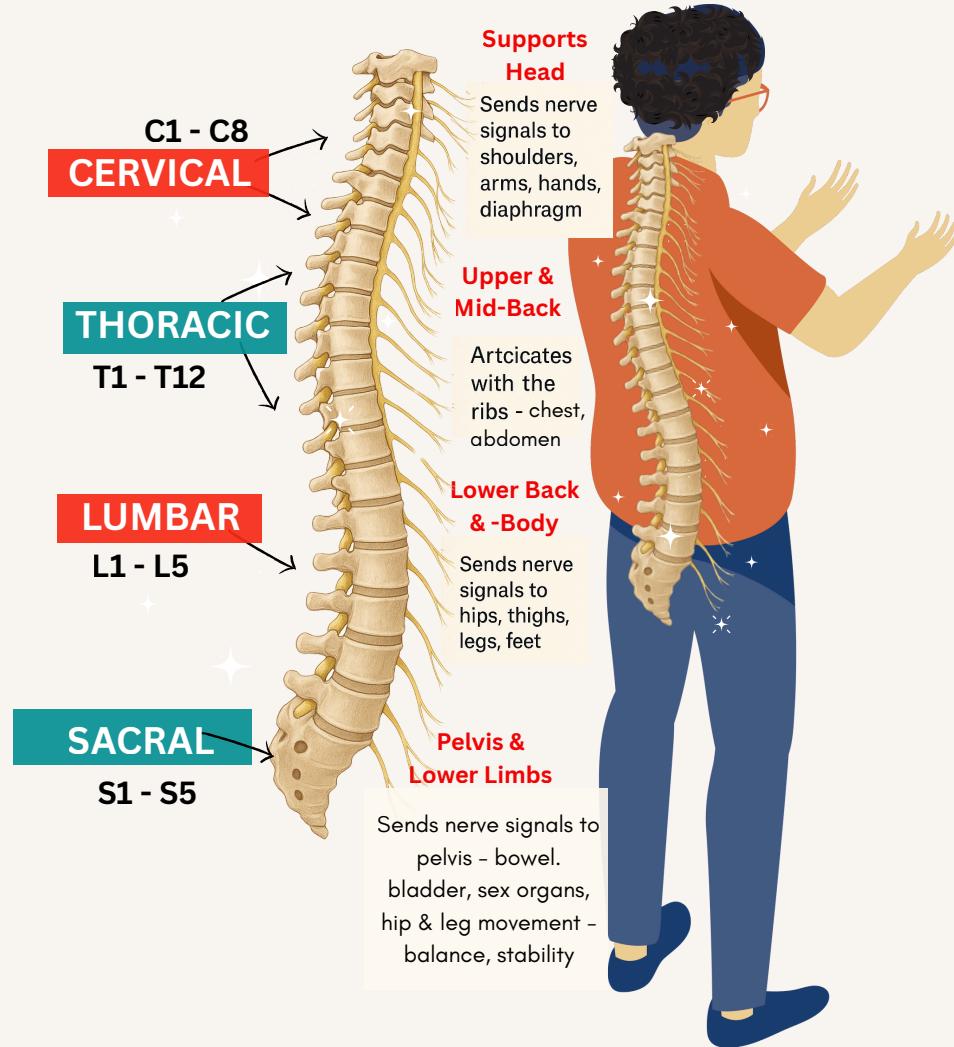
The **nervous system** is like your body's wiring system, and is divided into the **brain, spinal cord, and nerves**. It's made up of **billions of tiny nerve cells**, called **neurons**, that pass messages between the brain and the rest of the body. These messages control how you move, feel, think, and even keep automatic things like breathing and heartbeat going.—without you having to think about them.

With **Functional Neurological Disorder (FND)**, the wiring (**nervous system**) itself isn't damaged, but the messages don't get through properly. It's a bit like having a glitch in the system: the signals get scrambled, delayed, or misread, similar to when robots (traffic lights) are out of sync. That's why someone with FND can have very real symptoms — like seizures, tremors, weakness, or blackouts — even though scans or tests might look normal. This disruption in signals occur deep within the brain, and are not visible to the eye. That is what makes FND so complex. **Hence, FND is now known as a Brain-Network disorder.**

While we can describe FND simply as a **glitch in the brain's messaging system**, brain scans now show us in more detail **which areas are affected**. Through "functional" MRI (fMRI) brain scans, we now know that there are disruptions to many key brain areas, including the Amygdala, Insular Cortex, and the Temporo Parietal Junction. Alterations in both White and Grey Matter Volumes have also been reported.

FND affects multiple functions including motor movement, pain processing, emotional processing, and self agency. It lies between the fields of neurology and psychiatry, and is best understood through the framework of the **Biopsychosocial Model (Biological + Psychological + Social)**.

Your Nervous System & FND



Living with FND can be really tough – symptoms are real and often frightening, yet they don't always show up on medical tests. That can leave many people feeling confused or even dismissed. But there is hope. **When we start to understand that FND is the result of the brain and nervous system miscommunicating, it helps us make sense of what our bodies are doing.**



This understanding is an **important first step** on the journey toward diagnosis, treatment, and finding strategies to cope and heal.