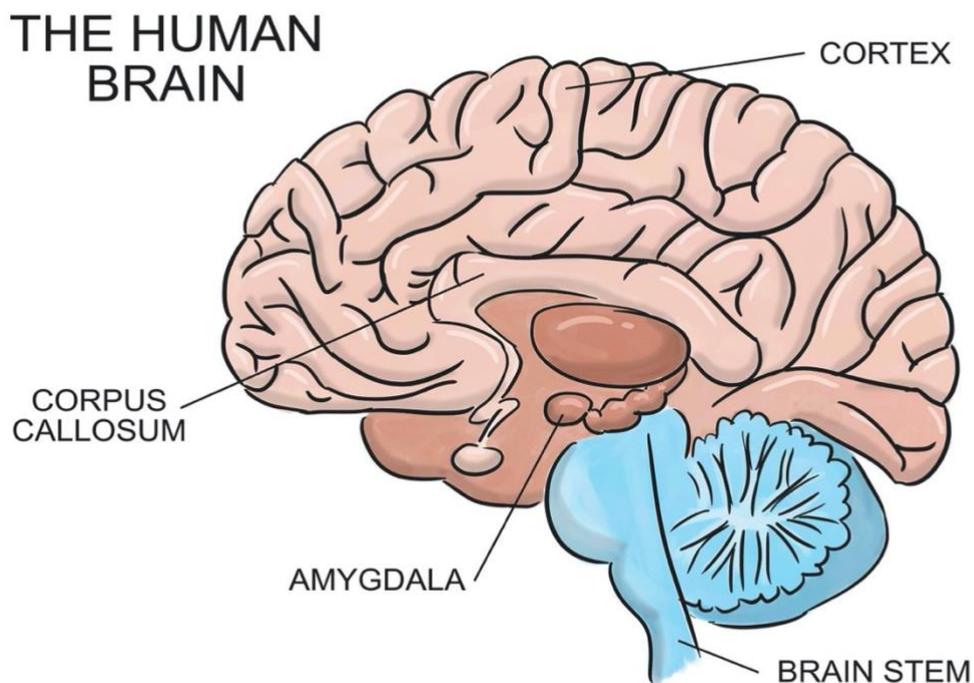


Brains and Regulation

How our brains work during times of trauma and stress.



There are three primary parts of the brain. When we are traumatised, stressed or anxious it can be helpful to understand our brain.

The Cortex

- Fully developed by 25 years of age.
- Receives reduced blood flow in trauma – that means it shuts down in trauma as the lower regions take over.
- Responsible for logic, reason, judgment.

The Limbic Region

- Mature at birth
- It is the emotional epicentre of the brain
- A small almond shaped portion of the brain within the limbic region is called the 'amygdala'.
- It is the amygdala's role to keep us safe. It is always on patrol; it is in essence the alarm system for the body. In an emergency state the amygdala takes over and helps us stay alive. However, it can give us false triggers, particularly after trauma. At other times we want our amygdala to work in conjunction with the other parts of our brain.

The Brain Stem

- Responsible for basic life functions – heart rate, respiration, temperature, blood pressure.
- Is functioning from about 7 months gestation.
- We retreat from the upper brain to the lower brain in trauma.

In everyday life our cortex is able to think and reason well. The three parts of the brain work like parts of a machine, each with a part to play. When there is a crisis or perceived crisis, the **amygdala** in the **limbic** region acts like smoke detector. Its job is to keep us alive. When a bear suddenly jumps in your window and is hungry, your amygdala should trigger, so you get a lot of adrenaline to either fight the bear, run away from the bear, or play dead and hope the bear goes past you. This is your fight/flight/freeze response. When the amygdala is triggered, the cortex receives less blood flow as the smoke detector diverts blood to our muscles so we can fight the perceived danger.

This is good in a short-term crisis; it helps us stay alive. With the Pandemic, we are living in a sustained longer-term crisis. In other words, the bear is here to stay for a while, and we need to find ways to manage it. We need to find ways to bring our cortex back online and negotiate with our limbic region. This is known as regulation. The smoke detector (amygdala) wants to help keep us alive, so it encourages us to seek out as much information as possible, so we know how to stay safe. Early in the Pandemic we may have felt driven to watch the news more than was healthy for our wellbeing. Our cortex, the thinking part of our brain then needs to work harder to sift through all the information and work out what we really need, to help us to find some balance and continue living with some quality of life.

The **Window of Tolerance** shows what happens when our fight/flight/freeze response is triggered. We move out of the window into hyper - or hypo-arousal. This can happen very easily after trauma. When we are exposed to stressful or traumatic events our window can also narrow, so people with a previous history of trauma may be more susceptible to trauma and move out the window of tolerance more quickly or more often. We may need to work and be intentional to get back in the window. Using mindful practice can help us to get back in our windows, to regulate. It is vital that we take care of ourselves and practice self-care in trauma recovery, including minimising exposure to too much news and social media if this is triggering. Managing as best we can what *is* in our control, working to manage ourselves and what is taking place within is. Let us focus on what we can we **can** do.

Window of Tolerance

