

WHAT HAPPENS TO THE BRAIN WHEN TRAUMATISED?

Individual responses to traumatic events vary between people, but there are several predictable effects of trauma on the brain that are important to know about if we are to understand the ways in which traumatic experiences can affect our thoughts, feelings, behaviours and bodies.

During and after a traumatic event, there are changes in areas of the brain involved in the fear response (the 'amygdala'), in storing and encoding memories (the 'hippocampus'), and in problem-solving, logical reasoning, planning and decision-making (the 'prefrontal cortex' or PFC).

The amygdala is a primitive brain region that operates outside our conscious awareness. It has one main job to do: it senses danger and activates the alarm. Evolution means that it will always override the more sophisticated and much slower PFC brain functions when survival is at stake. When the alarm goes off, the body is quickly prepared for action and all non-essential systems are switched off to maximise the chances of surviving.

The hippocampus's usual task is to code and store our memories in an organised way so you can retrieve them later when you want to - rather like a filing cabinet. But at times of danger, the hippocampus goes off-line and a very different sort of memory gets stored.

These trauma memories are made up of vivid sensory fragments that can be difficult to put into words, and which are involuntarily triggered by environmental reminders of the event.

People often try very hard to stop these memories from coming into their heads because they feel so frightening when they occur, but these efforts to block them out don't usually work very well, and they can slow down the brain's own natural attempts to convert the trauma memory into a 'normal' memory.

KEY POINTS

- In a brain that has been traumatised, the thinking and memory storing systems are under-activated, and the fear centre is over-activated. This means that we get 'stuck' in fight-flight-freeze mode
- You didn't choose for this to happen: it is a result of your brain and body's naturally evolved way of trying to protect you from harm
- PTSD is an understandable reaction to a traumatic event: understanding what is happening in your brain can make it feel a bit less frightening
- Just as the brain can change in response to past traumatic events, it can change again in response to future experiences: it is 'plastic' and continues to rewire itself

WHAT CAN I DO RIGHT NOW?

Talk to someone you trust about what you are experiencing: social support is key to recovery after trauma, and you are not alone

Please don't suffer in silence – ask for help from a qualified psychological therapist who is fully trained to work with the body and the mind after trauma

Practise simple grounding skills to help you feel safe in your body. Focus on your current environment and try to identify 3 things you can see, 3 things you can hear, and 3 things you can feel on your skin. This can help to anchor you in the here-and-now and remind you that you are safe

FURTHER READING

The Body Keeps The Score (Bessel van der Kolk, 2015)

London Trauma Specialists Brain model of PTSD: <https://www.youtube.com/watch?v=yb1yBva3Xas>

The Compassionate Mind Approach to Recovering from Trauma (Deborah Lee, 2012)

