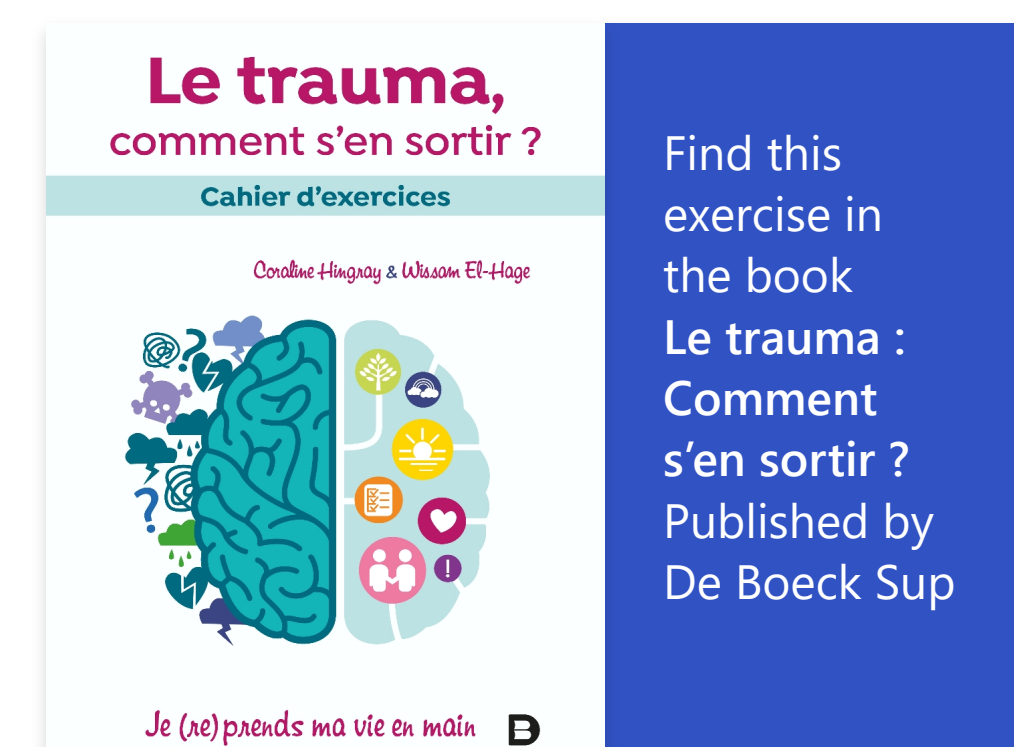


Practical information

WHAT HAPPENS IN MY BRAIN DURING A TRAUMATIC EXPERIENCE?



TRUE OR FALSE

“We are always in control of our behaviour, our reactions reflect our will!” **False!** When faced with intense fear, humans (like animals) have automatic survival responses that dominate over any other reaction: flight, fight or freeze.

“Fear can become so unbearable that at some point, everything shuts down!” **True!** In our brain, fear alerts us to the fact that our body is under threat and triggers a cascade of intense reactions, then sometimes reaches a sort of boiling point that shuts down all feeling.



A REAL-LIFE EXPERIENCE

“

The road is quite wet. I swerve and lose control. The car goes all over the place. I get dizzy, my vision is blurred... and suddenly I see the truck and I realise that I can't avoid it. I'm very scared, my heart is beating very fast. All of a sudden, I feel like I am stepping out of my thoughts, the scene becomes unreal, like in a film. I think intensely of my daughter. By the time I'm close to impact, I'm not afraid any more, I completely let go.

”



SOME SCIENCE

Trauma triggers a cascade of fearful reactions in the brain. The detection of danger leads to hyperactivation of the amygdala (a structure in the brain essential for decoding emotions and threats), the secretion of chemicals in response to stress (catecholamines) and activation of what is known as the HPA axis (connecting the brain and adrenal glands), which controls our stress response. **The defence response** is generated by the activation of the sympathetic nervous system, the accelerator pedal that prepares the body for survival by

triggering fight, flight or freeze behaviours, altering our blood flow to the muscles and brain, as well as other reactions (increased heart rate, sweating to cool the body, contraction of blood vessels for muscle action, dilation of veins to improve blood flow back to the heart, sugar metabolism, etc.). The scale of this defence response is modulated by other regions of the brain, in particular the prefrontal cortex, which may at some point shut down this burst of chemical activity to stop it from reaching boiling point.



A WORD FROM THE EXPERTS...

Instinctive behaviour: the 3 Fs

Your brain decides how you behave, especially when you are afraid. When the brain is alerted, instinctive survival responses take over, over which you have no control. These three behaviours are flight to get away from the danger, fight to counter the threat or freeze. At first glance, these behaviours may seem illogical and unsuited to the situation. However, sometimes freezing is useful. A victim who does not struggle reduces the violence of the attacker, which is appropriate if the fight is not an equal one (even if it is very guilt-inducing afterwards).

A red-hot memory

Going through trauma is a unique experience. The emotional impact is intense. The brain puts the body and mind on alert to defend and protect itself (increased vigilance, attention and memory, emotional alertness to confront danger, etc.). This state of alertness makes the experience indelible. It is impossible to voluntarily forget this trauma because remembering our dangerous experiences in the past is essential for our survival as human beings.

THE ESSENTIALS

- In the face of danger, the brain alerts the body and prepares us to defend ourselves.
- Our whole body is put to work to optimise our reactions.
- The memory records the trauma in an indelible way.