

Physical education

Hacking your biology to soothe yourself at times of distress

Have you ever felt distressed – maybe you were upset and crying or angry and storming around – and instinctively found yourself doing something with your hands and body to help yourself calm down? Some people curl into a tight ball when sad or might rock back and forth, while the response to severe pain, for instance, might be more unexpected, such as fainting.

There's an excellent biologically designed reason behind these reactions. The brain and body are connected and we instinctively learn to use this connection to soothe ourselves in times of distress. While emotions are patterns of neural functioning (that is, they give rise to certain patterns in the brain), they also have strong physiological influences in the body and can change its chemistry. When psychologists work with people experiencing mental-health difficulties or those who are upset or agitated, they often work on building their distress-tolerance capacities – the way in which they can settle and soothe intense emotion when it arises. While some of the techniques might be cognitive in nature (such as reframing thoughts), others employ physiological and bodily cues.

Getting to the core

The main biological system utilised at times of distress is the polyvagal system, which was first discussed in the mid-1990s by American psychiatrist and neuroscientist Stephen W Porges and developed from his experiments with the vagus nerve – this is a large nerve that originates in the cranium and runs down the body through all the main organ systems, including the cardiac, pulmonary and digestive systems. It's been suggested that the vagus nerve is a central component of the emotional management system and links closely to our capacity to prepare for action and to soothe ourselves.

It ties in with the sympathetic nervous system (that is, the activating part of the nervous system) and the parasympathetic system (the part that helps to de-escalate and soothe) and provides a bridge between brain and body, allowing us to finely tune and manage responses. Increasing vagal activation often prepares us for action (such as the flight part of the fight/flight responses to threat). While it's often been assumed that these two parts of the central nervous system are separate, in reality they interact, allowing us to closely manage our experiences and maintain an optimal level of arousal.

While discussion often focuses on de-escalating and relaxing (linked to decreased vagal tone), there's also a need for activation and arousal in order to engage and interact with the world. The vagal system helps with this in several key responses. It supports

with immobilisation and freezing when we experience extreme danger, as might occur during severe physical trauma. It also supports with mobilisation (such as becoming active so we can flee) and with building social cohesion and engagement.

When people have experienced traumatic events, this natural process of modulating activation levels can disintegrate, as they are habituated to experiencing extreme danger cues and might instinctively perceive some where there are none. Or they might default to coping in certain ways, such as freezing or dissociating and detaching from reality. This process is often driven by the vagus nerve and is beyond conscious control, leaving trauma survivors overwhelmed by a deeply felt sense of danger. At these times, cognitive distress-tolerance skills might be difficult to access as the brain cannot reason and logically argue with itself while in a state of extreme hyper-arousal or in fight/flight/freeze mode. Learning to use bodily techniques to soothe (or activate) yourself can help. They are designed to activate the vagus nerve and provide a bottom-up way of managing emotion by hacking the body to send messages to the brain.

More to learn

There are several techniques that can activate the vagus nerve (see panel, overleaf, and page 6). It's useful to experiment with a few to see which work best for you. And it's not just beneficial at those times when you want to find a calm state. There might also be occasions when you want to activate yourself, perhaps if you're feeling low or lethargic.

Human biology is both intricate and fascinating, and we're always learning more about the connections between body and mind. But what's clear is that understanding how they hook up can be used to our advantage – whether that's to soothe or to stimulate our emotions.

Words: Ahona Guha

Ahona has a doctorate in clinical and forensic psychology. She has trained in a range of areas, including schema, cognitive behavioural, acceptance and commitment, and dialectic behavioural therapy. She practises privately and works in the field of public mental health, providing specialised clinical services to forensic clients. For more, visit ahonaguha.com

Turn the page to explore ways of working with your biology



