

Connecting Your Body to Your Emotions

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What is an Emotion?

An often-unknown sense we all have is interoception, of which emotions are a part. Interoception refers to the inner signals the body receives in relation to heart rate, breathing depth and rate, hunger and thirst, the need to defecate and urinate, blood pressure, temperature, an itch, ticklishness, and pain, to name a few bodily functions. Interoception also includes the signaling, interpretation and response to emotions.

Emotions are a physical reaction that occur in the moment lasting for a short period of time, minutes only. We are not responsible for our emotions. They are usually unconscious reactions which occur spontaneously within our body.

Feelings are different to our emotions. Feelings are a result of how we process our emotions internally. They are longer lasting in our body. We are in control of how we manage our feelings.

For example, anger is a spontaneous emotion that is signified physically in the body by faster heart rate and breathing, clenched fists, tension in the brow, jaw, and shoulders, sometimes accompanied by a reddening face. It may be a reaction to your child telling you a lie or a car tailgating you. After that flush of anger, you then get to decide if it manifests as a continued angry feeling in your body by how you choose to manage this emotional reaction.

For example, if you catch your child telling you a lie, do you stay angry with your child, label him a liar, be quick-tempered with him and others you encounter later in the day, carry the physical reaction in your body and display it by slamming doors, hurried and tense movements, impatient



and loud outbursts of barely contained rage? Or do you tell yourself this is a stage your child may be going through, calm your breathing and heart rate, create an atmosphere of safety for open conversation between you and your child, and discuss the importance of being honest for the growth of trust and personal accountability? Does it become a calm and mutually respectful teaching moment or is it lost in the fury of continued manifestations and displays of rage throughout the day, carried into the commute with your tailgating, speeding and horn blowing, then into your working day with impatience and short-tempered interactions with your colleagues?

The immediate physical reaction of anger experienced in your body in this case, is emotion. How you deal with and manage the physical emotions determines the subsequent feeling you are left with.

Sensory regulation can be used after the emotion is experienced to help calm or arouse your nervous system as needed and regulate your emotions to a better feeling.

How can emotions be managed to influence our feelings positively?

It is important to tune into your body because emotion is felt in the body. It is possible to increase your awareness of what sensations you are feeling in your body. Your body's sensations are telling you the story of what emotion you are experiencing. Are you listening to your body? Do you need help to hear its messages?

Sweaty palms, clenched fists, racing pulse, rapid breathing, tension in the forehead, dizziness, flushed feeling in the face, an urge to pace or fidget or move quickly and disjointedly may be nervous agitation or anxiety in you, possibly anger. How you classify this bodily reaction labels the emotion you are experiencing. This **identification of emotion uses your previous experiences of this emotion.**

There are other factors in play with your emotional reaction. For example, you may be exposed to the same stimulus resulting in the same physical sensations on two separate occasions yet experience a different emotion. Factors that can influence your emotional reaction in addition to previous experience of the emotion include your mental state at the time, your level of awareness of the environment, and your observation of other people's emotional responses.ⁱ

For example, if you are sitting quietly, deeply engrossed in a horror book and someone touches you lightly on the shoulder, you may be greatly frightened and jump in your seat; if however, you are sitting on this same chair in the same environment, but this time you're feeling relaxed as you scan the room with your eyes and you see others smile over your shoulder, you may turn and smile comfortably and expectedly when someone touches you on the shoulder. Same stimulus and physical sensation, different mental state, environmental awareness, and social cues, resulting in different emotional reaction.

Increasing your awareness of your body helps raise your awareness of emotions. Being able to identify the emotion you are experiencing through the sensations you are experiencing helps you to process the emotion and manage the feeling you wish to create. This helps prevent the downward spiral if you are feeling sad or low. And it stops or reduces the escalation of heightened emotions if you can identify sensations, link these to an emotion and intervene with action to alleviate further experience of that emotion. **Body awareness supports a quicker, more targeted, and meaningful response to emotions you may wish to shift.**

Modifying our Emotions



Emotions are a function of the nervous system. Sensations are perceived in our senses and messages from the senses are then sent along neural pathways to the spinal cord and up to our brain for processing. The cerebral hemispheres of the brain perform most of the more involved interpretation and organising of the sensory information for use by the body. The limbic system, often referred to as the emotional centre of the brain and the reptilian or primitive brain, is situated in the cerebral hemispheres. The limbic system generates emotional behaviour. The reptilian brain is so called because it controls our automatic and instinctive behaviours essential for survival such as breathing and heart rate, the fight, fright and flight response, and emotions such as anger and fear. To keep emotions well regulated, it requires modulated messaging from sensory stimuli.ⁱⁱ

The strong compulsion to act out on emotions such as rage and fear can be mitigated through body awareness. A part of the brain known as the medial prefrontal cortex, located at the front of the cerebral hemispheres, is the only part of the cerebral cortex that can modify the response of the emotional centre known as the limbic system. It has a particular influence on the amygdala which generates strong emotions used in survival. It does this through the receipt of sensory information from muscles, joints and internal organs which it transfers into a conscious awareness. This bodily awareness of the internal body signals, known as the interoception sensory system, allows for modification of emotional responses.ⁱⁱⁱ

The medial prefrontal cortex is the centre of self-awareness in the brain. If the body receives a stimulus that creates an uncomfortable emotional reaction such as embarrassment, fear or nervousness, the sensations can be overwhelming if we do not go into ourselves and sit with the feeling, thereby identifying what we are feeling, why we are feeling it, and asking ourselves is it an appropriate response. We feel into it, reflecting on it the context of lessons we've learnt, mistakes we've made, our values, who we want to be and how we want to respond.

This is done from the top-down process, meaning we draw on past experiences and background knowledge to interpret the stimulus, via the self-awareness part of the brain, the medial prefrontal cortex, to modify our emotions. This pathway allows us to determine whether the potential threat of the stimulus is real or not, resulting in an appropriate response. The objective reflection of the stimulus in relation to thoughts, feelings and emotions followed by a more measured, mindful response modifies the emotional brain centre, the limbic system's, automatic emotional reaction to the stimulus.^{iv} Mindfulness activities such as yoga, tai chi and journaling further develop this top-down processing of emotion.

Without modulation from the self-awareness centre, the reptilian brain centre receives the stimulus and reacts automatically, without determining if the threat is real. This is known as the bottom-up processing of the stimulus. It incorporates no preconceived ideas, knowledge, or expectations. Emotion is modified in this process through further stimulus such as breathing, touch and movement. Without the use of further sensory stimulus to help regulate the emotion to a state of calm arousal, the person will be moved to a fight, flight, or freeze reaction either immediately or following subsequent uncomfortable stimuli that accumulate over the day.

There is a place for both the bottom-up emotional brain reactions and the top-down self-aware emotional responses. The spontaneous emotional reactions keep us safe in times of danger and emergency where a speedy reaction is essential to avoid harm, for example to withdraw a hand when we touch a hot stove or braking to avoid a collision with a car. Our automatic emotional reactions become potentially harmful when we feel fear and wish to flee from supermarket noises or a car back-firing. The threat is not real and a more appropriate response is desired. The top-down self-aware process is required for objective reflection of the cause, context, and most helpful



response in these situations. Utilisation of the medial prefrontal cortex in modifying emotion must occur prior to an automatic emotional reaction of the reptilian brain.

By tuning into your body and feeling the sensations your body is experiencing as the immediate physical reaction to the stimulus, the emotional call of the stimulus, you get to decide how the emotion settles in your body. If it's anger, does your reptilian brain cause you to scream, shout and throw objects to release steam but ultimately doesn't resolve the issue; or, do you sit quietly, reflect on the matter internally, draw on your experiences to guide you to respond in the most appropriate manner in the top-down process using your self-aware centre of the brain to regulate your emotions?

Incorporating a sensory approach to regulating your emotions helps you move your nervous system into a comfortable, appropriate arousal level for the demands of the environment and situation you are in. This can enable you to participate in your interests or to socialise with friends, for instance. Combining the sensory processing approach with mindful self-reflection of the top-down approach amplifies the benefits of the outcome on your long-term feeling and results. How you process and respond to the physical emotion determines the subsequent feeling you are left with.

Sensory regulation can be used after the emotion is experienced to help calm or arouse your nervous system as needed and regulate your emotions to a better feeling.

Can Emotions be Generated?

Research has demonstrated that facial expressions can generate emotional states. By simulating contraction of certain muscles that replicated emotional states, subjects in a study by the psychologist Ekman were able to feel those feelings the expression mimicked and experienced appropriate arousal levels in their body for these emotions. A similar study by Strack showed subjects felt happier and found cartoons funnier when they simulated a smile as opposed to a frown. This has implications for people experiencing symptoms of depression. By forming a smile, even though fake, they can marginally generate a lighter mood.^v

Similar findings have resulted from studies on the effect of posture on body function and emotions experienced. In adopting an attitude of depression by maintaining a posture of sagging shoulders, slumped back, with downcast head and eyes, we can generate a feeling of a depressed state. A study of hypnotised subjects showed that it wasn't possible to express joy whilst in a slumped posture indicative of depression, and the reverse was also true of a joyful posture. Whilst in a state of joy, breathing is freer, the head, shoulders and back are upright, and the arousal level is expectant of action.

Through body awareness of our postural state, we can modify our postural set and change the feedback from our muscles and joints through our proprioception sensory system, which can alter our body function and emotional state. By simulating a joyful posture, we can generate a happier emotional state.^{vi}

Alexithymia

Alexithymia is a condition whereby individuals are not aware of their body and what it is experiencing, and thereby fail to recognize what emotional reaction they have had. They lack the language to describe an emotion such as fear, anger, sadness, or joy. If shown photographs of



people expressing different emotions or if they are given a mirror whilst frowning or feeling scared for example, they do not recognize the emotion.

Are you unable to identify emotions? You may have alexithymia. Alexithymia is a mental health condition in which traumatised people are unable to identify their physical sensations as emotion and are unable to experience emotion. The word alexithymia is Greek for not having words for feelings.

Alexithymia impacts the person in terms of emotional awareness of themselves and others. Failure to recognize an emotion creates difficulties in relationships with relating and communicating. It makes socialising problematic and can result in social isolation. Not only does it make appropriate responses to emotions in oneself and others difficult, but it is also difficult for people with alexithymia to consciously create a feeling they wish to experience.

With psychological support, people with alexithymia can improve their emotional awareness by learning to understand and identify the relationship between their bodily sensations and their emotions. Activities such as body awareness exercises can help in feeling physical sensations as the first step in moving towards recognising their relationship to emotions. Consultation with a health professional is recommended.

Relationship of the Interoception System to Mental Health Disorders

As mentioned, emotion is part of the interoception sensory system. Interoception signals are composed of processes from reflexes, drives, urges, feelings, cognitive and emotional experiences. Research has found interoception plays an essential role in emotional experiences, decision making, self-regulation and consciousness. *Dysregulation in interoception has been identified as a factor in mental disorders such as anxiety, depression, substance addictions and eating disorders.* There is increasing interest in interoception due to its relationship with physical health, mental health, emotional functioning, and social connection.

People with dysregulation of the interoception system fail to receive and/or accurately identify and respond to internal body signals. This makes it difficult for them to respond to their bodily needs. If their needs are not met, the person may feel increasingly uncomfortable and more intense signals from the inner body may be sent. This may show up as increased pain, higher blood pressure, or a stronger itch. A quicker response time to these physical signals prevents a build-up of continued messaging demanding an appropriate response. In the case of emotions, a build-up of unexpressed emotions can be avoided and is desirable. Intense emotions can cause the individual to be unable to process information, make sound choices and respond appropriately.

Have you ever felt really upset or really angry and not known what you needed to soothe yourself? This delay in knowing what sensory stimulation to feed the body prolongs discomfort and suffering. Being aware of how the body is feeling and the emotion generated then providing intentional sensory regulation through a sensory stimulus can ease this.

Incorporating Sensory Regulation into Your Day

The second step in achieving emotion regulation in depression through sensory regulation:

Steps to regaining your life and your personal identity as a fully functioning, capable, resilient, joyful person:

adopt a sensory approach in your daily lifestyle for sensory and emotion regulation.

Step 1: Raise your body awareness.

Step 2: Connect your body sensations with your emotions.

How to connect your body sensations with your emotions:

- After feeling an emotional or physical response, focus on your body and observe sensations you may be feeling. For example:
 - What is your breathing like? Are your breaths short, quick, shallow? Maybe your breathing is slow and heavy?
 - Can you hear your heart pounding in your ears or does your heart rate feel quicker than usual? Note any changes to your heart rate.
 - Are you sweating for no apparent reason?
 - Do you feel agitated?
 - Are you more aware of one of your senses? For example, is your sense of smell heightened, are your eyes darting in all directions taking in a lot of visual information, are you picking up more sound cues than usual, or maybe you are feeling hyper-sensitive to physical touch?
 - Do you feel hot or cold?
 - Do you feel like you need a hug? Or are you rubbing your arms with your hands?
 - Are you rocking yourself?
 - Are you talking to yourself?
 - Do you feel like you want to lash out and strike something or someone?
- Ask yourself:
 - How do these sensations make you feel?
 - Have you felt this way before?
 - Can you identify the emotion?
- Reflect on how you want to act in response to this emotion:
 - What physical reaction does your body want to do? For example, slam the phone down or hug someone?
 - How have you reacted in the past when you have experienced this emotion?
 - How did that reaction make you feel?



- How would you like to feel?
- How can you generate this feeling?

Sensory regulation can be used after the emotion is experienced to help calm or arouse your nervous system as needed and regulate your emotions to a better feeling.

- Use a sensory stimulus to self-regulate your emotions:
 - What sensory experience can you give your body to calm you if you are feeling anxious, frustrated, stressed, nervous, or angry?
 - What sensory stimulation can you give your body to make it feel more alert if you are feeling sad, low, teary, unmotivated, or unenergized?
 - If you use a sensory input to self-regulate, how did it make you feel physically and emotionally?
- Journal on each of these questions in relation to your bodily sensations and emotions to start making connections between:
 - how your body feels your different emotions e.g. joy, frustration, humour, anger
 - how you typically react and how you would like to feel
 - the types of sensory stimulations you can use to self-regulate your emotions.

Being able to identify the emotion you are experiencing through the sensations you are experiencing helps you to process the emotion and manage the feeling you wish to create.

Body awareness supports a quicker, more targeted, and meaningful response to emotions you may wish to shift.

ⁱ Kendra Cherry, The James-Lange Theory of Emotion Updated October 2022

ⁱⁱ A. Jean Ayres, PhD, Sensory Integration and the Child Western Psychological Services USA 1979 p31 and p76

ⁱⁱⁱ Peter A. Levine, PhD, In an Unspoken Voice North Atlantic Books USA 2010 p323

^{iv} Bessel Van Der Kolk, The Body Keeps the Score Penguin Books UK 2014

^v Peter A. Levine, PhD, In an Unspoken Voice North Atlantic Books USA 2010 p324-5

^{vi} Peter A. Levine, PhD, In an Unspoken Voice North Atlantic Books USA 2010 p324-6

