

How the Fight-or-Flight Response Affects Emotional Health

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Lions and Tigers and Bears, Oh My!

Imagine you are walking through a forest alone and hear the the rustling of leaves and the ominous crack of a branch behind you. You freeze, listening hard to figure out what is back there. You turn slowly and see a bear staring at you, ready to attack. Your heart is racing and you are rigid with fear. You have three choices: stay frozen, run, or turn and fight.



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Since researcher Walter Cannon identified what he called “fight-or-flight” behaviors in humans in 1929, we have recognized that people have a primal response to fear, just as all animals do. We now know that “fight-or-flight” is an inaccurate description, although a useful alliterative shorthand.

The fear responses are generally considered:

1. Arrest and Avoid (vigilance, scan for trouble, avoid the danger if possible)
2. Flight (submission or retreat)
4. Fight (dominance or attack)
5. Freeze (immobility, paralyzed in fear, “scared stiff”)
6. Fold/Faint (tonic immobility, helplessness, “panic attacks,” or dissociation once captured)

When humans detect a threat, the signals go to various parts of the brain, which triggers the adrenal glands to release hormones such as epinephrine (adrenaline). The body instantly responds with increased blood flow, heart rate, breathing, and sweating, all preparing the body to quickly retreat or attack. This process happens at a biochemical level that we are unaware of, yet is so powerful it allows us to instantly jump out of the way of a runaway car.

These hormonal responses also heighten the emotions. When you feel threatened, your emotions are on high alert and can feel overwhelming. If you have ever been in a car accident, you know the sensation of your heart pounding and palms getting clammy afterward. You may have been quick to anger – did you want to yell at the other driver even if the accident was your fault? (This is the fight response.) Later, you may have felt shaky and tearful and wanted to leave the scene (flight). After stressful situations, such as arguments or crying, we often feel exhausted (fold response). You may not have realized you were at the mercy of a primal survival reaction.

What does the “fight-or-flight” response have to do with health?

In modern society we now use our fear response to react almost entirely to emotional threats, rather than physical threats. We tend to respond to imagined danger, rather than real danger. And that imagined danger tends to center on our relationships with others, especially if we feel we are at risk for social exclusion.

People are social animals who have an inborn desire to be around other people, to be approved of by others, and to get along with others. When we feel victimized, rejected, criticized, judged or shamed, this can make us feel this connection to others is at risk and can trigger the fight-or-flight response.

Fear can lead us to see only the negative and can distort our ability to think clearly and rationally. The “emotional brain” is very powerful and is designed to overpower our “thinking brain.” This leads us to react unthinkingly to perceived threats unless we learn to manage our emotional responses through skills such as mindfulness.

Chronic fear can change physiology throughout the body. The fear response is generally self-regulating, ready to respond to a potential threat and then back down once the threat is lifted. When someone is constantly experiencing emotional stress, such as a fear of judgment or rejection, the stress response system never gets turned off and the person never relaxes.

However, our bodies and minds are not designed to stay in an “alert” mode for an extended period of time. Leaving the stress response on continuously creates a potentially life-threatening condition for the body. The body is flooded with excess hormones which raise blood pressure and elevate blood sugar levels. Eventually this creates a host of physical problems, such as diabetes, heart disease, stroke, rheumatoid arthritis, chronic inflammation, digestive problems, cancer and other illnesses. In addition, it can lead to psychological problems related to anxiety, agitation, anger, ADHD, learning difficulties, depression, panic attacks, PTSD, sleep disturbances, permanent memory loss, phobias, OCD, and other so-called “mental disorders.”

Chronic stress depletes hormones called endorphins and dopamine, which can affect our ability to experience pleasure, prevent pain and maintain good mood. Fear causes chronically high levels of a chemical called cortisol in the body, that reduced the volume of a part of the brain (hippocampus) and can contribute to depression. Minor setbacks can feel like major obstacles and experiences of both pain and misery are heightened. Previously enjoyed activities will no longer provide pleasure.

Stress can even cause permanent changes to our brain. Patients with long-term depression can develop “pseudo-dementia,” which can mimic Alzheimer’s Disease or other types of cognitive decline.

So there are lots of good reasons to learn to get your “fight-or-flight” responses under control!

Understand Your Brain

The human brain is tremendously complex, but here are some quick points:

- The “emotional” or “fight-or-flight” capabilities of the brain develop before birth
- The “thinking” or cognitive capabilities develop slowly until age 25
- Experiences we have as children directly affect how our brains develop
- Acute traumas (sexual molestation, rape, accidents) or chronic traumas (harsh or rejecting parents, witnessing domestic violence, dealing with alcoholic parents, dealing with anxious or depressed parents) cause a child’s brain to develop a “superhighway” of connections in the emotional brain to trigger the threat system.
- Early trauma causes the threat system to be “sensitized” so that small threats cause an overreaction. The brain’s capacity to regulate mood, social interactions and abstract thinking are weakened. Over time the “thinking” regions of the brain get weaker.
- This means a traumatized child can grow up into an adult who sees much of the world as threatening but does not have the thinking brain to tell him this is not true.

Overproduction of a hormone called cortisol in children who are exposed to stress has now been shown to cause brain damage. Brain scans of children who have experienced significant trauma or long-term stress show black holes of inactivity in the brain especially in the areas of thinking, memory, impulse control and the emotions. Other research shows that in anxious children a part of their brain called the hippocampus actually shrinks. This brain structure is important in memory processing and emotional reactions. With these brain changes, children become overactive, impulsive, anxious, angry, hyper-sensitive and behave inappropriately. These are common symptoms of Attention Deficit/Hyperactivity Disorder (ADHD) and Oppositional Defiant Disorder. These children, however, are not truly “mentally ill”. They are reacting as they have been programmed to react by nature.

Were You Traumatized as a Child?

What causes fear in a child that can last into adulthood? A long list of acute and chronic traumas. Did you grow up:

- living with parents who were judgmental and harsh not warm and accepting
- living with parents who ignored you, rejected you or did not respond to your emotions or were inconsistent and irrational when disciplining
- living with parents who were depressed, anxious, narcissistic or self-absorbed
- living in a chaotic household with lots of yelling and arguing
- frequent moves
- witnessing or experiencing physical or verbal abuse
- experiencing emotional neglect
- witnessing or experiencing sexual abuse
- witnessing or experiencing domestic violence
- loss of either or both parents due to divorce, abandonment or death
- inconsistent involvement by parents
- foster care or adoption
- exposure to substance abusing caregivers
- living in a crime-ridden neighborhood
- poverty and insecurity
- exposure to crime or family member in jail
- family member with mental illness
- exposure to excessive violence in media
- accidents, natural disasters, fires
- witnessing suicide or murder

Fearful responses learned in childhood are especially powerful, because they couple the sense of terror with a sense of helplessness, leading a person to believe he or she is unable to respond to emotionally frightening situations. This sense of powerlessness can continue into adulthood, also resulting in depression, anxiety and panic attacks.

Children are also caught in a double bind: If they are being abused or neglected by a caregiver, then the person they should go to for comfort is the very person who is threatening or harming them. They have no one to turn to for comfort and safety. Even emotional neglect can cause this response, so if your parents were cold or distant or self-absorbed, you may have been traumatized in this way.

Peter A. Levine, PhD, has written extensively on the effects of trauma on humans, including in his excellent book, *In An Unspoken Voice: How the Body Releases Trauma and Restores Goodness*: “The younger, the more developmentally immature or insecurely attached the victim is, the more likely it is that he or she will respond to stress, threat and danger with paralysis rather than active struggle. People who lack solid early attachment bonding to a primary caregiver, and therefore lack a foundation of safety, are much more vulnerable to being victimized and traumatized and are more likely to develop the entrenched symptoms of shame, dissociation and depression.” (p. 60)

Childhood traumas, even just judgmental parents, can lead a person to have:

- feelings that one is powerless to protect oneself
- feelings that the world and relationships are frightening and unsafe
- feelings that caregivers were not there to protect you

The result can be:

- a high need for reassurance and connection to others coupled with a fear of trusting others, which can be confusing and emotionally draining
- low self-worth coupled with a strong need for external approval
- hyper-vigilance for any signs of being rejected
- feeling overly needy for acceptance and approval
- high levels of perfectionism and self-criticism
- difficulty handling criticism, shame and embarrassment
- lashing out in anger and blame of others or “lashing in” in self-blame
- isolating and avoiding social contact

A sense of dependence and insecurity can lead to feeling helpless and at the mercy of others. Couple this with feelings of inadequacy and it is a perfect recipe for being chronically fearful.

SELF-WORTH AND REJECTION

For many people, it does not take a full-blown trauma, such as abuse, to develop the “superhighway” of connections in the emotional brain. Parents and our culture may inadvertently teach a child that she is not worthy of love and acceptance.

Children need to feel accepted, loved and protected physically and emotionally by parents. Harsh, critical parents who focus only on enforcing compliance with behaviors inadvertently teach a child that she is not worthy of love and acceptance. Without secure attachment to a caregiver, children often grow up with impaired emotional development. They may develop insecurities, shame and fears that they will not be approved of by others.

She may then learn to be very self-blaming, perfectionistic and self-critical as a way of trying to earn that approval.

If a person learns to be very self-critical, these constant messages of shame (“I’m not worthy”) can make a person hyper-vigilant or on guard for signs of being rejected by others.

This internal negative thoughts about the self can trigger the fear response in the brain and body. So self-rejection can lead to the same response in our body and brain as the fear of being stalked by a bear.

The resulting feelings of shame can be acted out as anger (rage at others) or depression (rage at the self) or perfectionism and anxiety.

Psychotherapy can help you understand any of these emotional reactions you are having based on your childhood experiences and give you the tools to move forward in a way that is emotionally healthy, fulfilling, and relaxed.

THE SOLUTION!

Improve your mindfulness through:

- therapy that focuses on emotional exploration, self-awareness and self-compassion
- mindfulness or insight (vipassana) meditation
- self-calming skills
- improved body awareness and physical calming through yoga and exercise
- journaling about your feelings, beliefs and thoughts
- being out in nature with exercise, gardening, etc.
- slowing down and de-stressing your life
- learn to develop thoughts of gratitude.

Mindfulness allows one to disengage from instantly being overwhelmed by emotions such as fear. It allows us to pause, consider a response and choose thoughtfully. This disengages the “emotional brain” and engages the “thinking brain,” so we can access our pro-social emotions, such as caring, kindness, compassion and empathy.

In this way one can learn to be kind and compassionate to oneself — the key to reducing anxiety and depression.

Ask for my handouts on mindfulness meditation and compassionate self-acceptance if you are interested.