

The Science of Fight or Flight

When we're in 'fight or flight' it's impossible to have successful relationships with other people or to learn new things.

Beginning in the 1990's sports and military psychologists examined the performance limiting effects of 'undesirable emotions' like fear and anxiety. They looked at a fundamental question: Is the fear that you feel in combat the same fear that you feel when taking a test or avoiding a bully? Surprisingly, the answer is yes.

The most important role of the brain is to keep us safe, at all costs. The autonomic nervous system (ANS) has two branches (sympathetic and parasympathetic) that play an important role to balance and regulate the body's energy flow, monitoring threats to our safety and initiating a response.

The sympathetic nervous system (SNS) responds immediately to any perceived threat and is responsible for arousal. The SNS increases respiration and blood flow to muscles that speed our escape from danger, activating the 'fight or flight' response. During 'fight or flight' the body tenses, speeds up, and becomes very alert to deal with any potential threat.

Nonessential systems shut down to allow more energy for emergency functions. Digestion and immune systems shut down and peripheral vision and hearing are reduced. In addition, the circulatory system shunts blood away from the body's surface. There is a mechanical shutdown of blood flow just before the capillaries, allowing the arteries and body core to hold up to twice as much blood, causing the face to go white. (This redirected blood flow prevents initial major blood loss during trauma.)

During 'fight or flight' blood drains from the prefrontal cortex, so there's no rational thought. This makes it virtually impossible to learn new things, focus on small tasks, or engage with other people as the lower parts of the brain are focused on survival and escape. When in a state of high arousal it's impossible to have successful relationships with other people or to learn new things. Many people go through each day in a state of 'fight or flight,' frozen with anxiety, existing with less than their whole brain. Unable to be fully present, learning and social development become virtually impossible.

The PNS is active when the brain perceives we are safe. It has a self-preservative, healing function which conserves energy. The PNS helps us to "calm and connect" as it lowers blood pressure, slows respiration, and improves immune function, digestion, and wound recovery.

When the PNS is engaged, we have access to our whole brain. This includes the frontal lobes and prefrontal cortex, responsible for planning, evaluation, and conscious thought. These parts of our brain make us uniquely human, providing access to rational thought, focus, imagination, executive functioning, socialization and language.

There are many self-regulation programs that ask people to pay attention to, and modify their behavior. Unfortunately, this kind of ‘top down’ approach is not effective when a person is anxiously in ‘fight or flight’ and conscious, rational thought and language are not available. We can’t just tell people to calm down and behave when they can’t even hear us.

MeMoves uses a visceral ‘bottom up’ approach to calm the lower brain and activate the PNS. There is no speech or language in the program; no directions, expectations, or instructions. The program actively uses the body to calm the nervous system and shut down the ‘fight or flight’ response. It activates the PNS, changing the body’s physiology and synchronizing the nervous system and brain by moving as it soothes with soft, reassuring, rhythmic tones and music. Once calm, the whole brain can now organize, regulate, empathize, and learn.