

Flexible Attention: the sine qua non of health

It may seem incredible to believe that so many problems can be alleviated by changing attention style, but it is true. There is an innate and robust normalizing mechanism in the human body, accessed and operated by how we pay attention. Things clients never imagined were caused or exacerbated by stress were resolved with neurofeedback training. And this resolution comes about because narrow-objective focus is an emergency mode of attention.

When we narrow focus we engage our flight-or-fight response, which tamps down some physiological systems that aren't needed for an emergency – immune and digestive functions, for example, get put on the back burner – and ramps up others that are needed, such as muscle tone, quickness of mind and heart and respiratory rates. That's why stress can lead to digestive problems such as acid-reflux disease and irritable bowel syndrome. Facial pallor is associated with emergency because blood is being shunted away from the skin – that's why stress can lead to dermatological problems. That's the mechanism for pallor, but when stress causes acne it's because high cortisol blood levels cause additional oil secretion, which blocks pores. Also, rashes can be caused by stress when it triggers autoimmune reactions with skin as the target organ.

Large muscles become more highly toned during an emergency, preparing us for an attack or an escape, and so chronic narrow-focus causes chronic muscle pain. Emergencies slow introspection and induce externally oriented, narrow attention, scanning the environment. And because blood flow is reduced in the frontal lobes of the brain during the stress response, executive functions such as thinking become reactive rather than penetrating and deductive; as a result, one's ability to exercise good judgment and pay appropriate and effective attention is hampered. This explains, in part, why there is such an epidemic of attention deficit disorder and attention-deficit/hyperactivity disorder.

The human body triggers a complex cascade of hundreds of stress chemicals that invade and fortify every organ and muscle of the body. The problem comes when no release of stress follows this surge of preparation; held unabated, the stress response changes our physiology. Stress is only a negative if it is unrelenting, prolonged, and accumulating.

Open focus is a normalizing process, a way of reversing the strains of stress; it allows all systems to return to homeostasis. Stress causes functional, rather than structural, problems; but if it is left to accumulate long enough, its effects can become structural: For example, the brain's hippocampus is reduced in volume in people with untreated depression. As we move into open focus attention the entire central nervous system starts to move out of emergency mode and recover from stress. The sympathetic autonomic nervous system, which engages fight or flight, quiets and the parasympathetic autonomic nervous system increases its dominance. Blood flow increases again into the many parts of the body where it had been diminished, bringing them back online, healing them, and improving their function. Different parts of the brain are stimulated by changed blood flow, and neural patterns in the brain shift. Thinking becomes less strategic and more reasoned. There is a less generalized fearfulness and anxiety. It becomes easier to sustain attention. Sleep comes more easily. Muscles – from our eye and face muscles to the heart, lungs, and large peripheral muscle groups – enjoy increased blood flow and become more relaxed and less tense.

We can learn to do this in every situation –opening our focus through neurofeedback training gives us unparalleled skills and tools to encounter the world in an attentionally flexible way and to effectively manage our reality. Accumulated stress dissolves when one is in open focus attention, and recovery is able to take place continuously as new stress occurs. It becomes second nature to dissolve pain and unwanted experience.