

# Physical Impact of Trauma

## Brain Architecture

Shrinkage in prefrontal cortex, corpus callosum, and hippocampus. Enlarged and more reactive amygdala. **Resolution:** safe and stable nurturing relationships, walk in nature, touch, exercise



## Neural Pathways

Need to 'rewire' our brain from old thought patterns and habits of mind, conscious, and unconscious. **Resolution:** neurofeedback, meditation/ mindful action, positive self-talk



## Hormones

Prolonged high cortisol and ghrelin creates greater reactivity to stress. Long term damage to cells, structures of the body, and other hormone glands (thyroid). **Resolution:** oxytocin ("the love hormone")



## Toxin Elimination

Intestines and kidneys less able to eliminate toxins (slow gut or unbalanced flora). **Resolution:** salt baths, sauna



## Nervous System

Supercharged sympathetic nervous system. Parasympathetic nervous system not engaged to bring back into balance. **Resolution:** yoga, breathing, or other physical/emotional regulation



## Immune System

Resistance to cortisol or lower cortisol creates unchecked inflammation. Cause of many diseases: asthma, arthritis, etc.) **Resolution:** meditation/mindful action, walking in nature, diet, rest



## Brain Waves

Predomination of wrong brain waves in wrong part of the brain leads to anxiety, unable to concentrate, and seizures. **Resolution:** neurofeedback



## Neurotransmitters

Vulnerable to addiction because dopamine transmitters/receptors not developed or damaged. Reduces motivation & focus, creates fatigue. Low serotonin causes depression.



## Cellular Change

Shortens telomeres which prematurely ages and reduces reproduction of cells & can cause cancer. **Resolution:** social support

Epigenetics turns genes on or off in adaptation to dangerous environments. Effect can last generations. **Resolution:** Safer environment (perception of)

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