

The Stress Cycle

For some individuals, life is a relaxing merry-go-round with smooth ups and downs. For others, life can feel like a twisting, turning roller coaster that never ends. There are minor stressors and major stressors. The body does not always differentiate between happy excitement and fright. Even the mildest stress has an impact on the way your body functions.

The peripheral nerves send signals to the receptors in the brain. Stimuli can be received by the senses: vision, smell, taste, touch, feel, and sound. The alarm can also be sounded by our “perception” in situations where there is no true physical threat. It can be as simple as girding up for an encounter with a person you detest or going into a situation where you know there will be conflict. It can be ramped up when you have to force yourself to confront someone.

The neurons in the brain receive a series of electrical signals called action potentials. The action potentials are evaluated and either passed down the neural network or dismissed. If the action potential is considered actionable intelligence, norepinephrine is released: increasing the heart rate, triggering the release of glucose from energy stores, increasing blood flow to skeletal muscle, and increasing the brain's oxygen supply. There is a drop in blood pressure. Blood vessels in the arms and legs dilate. The respiratory rate increases. The pupils dilate. Muscles tense then relax when the stress has passed.

Meanwhile the midbrain alerts the thalamus there is trouble, triggering the hypothalamus to release corticotropin releasing hormones. CRH races to the pituitary gland which in turn releases ACTH (adrenocorticotrophic hormones). ACTH races to the adrenal glands which in turn secrete cortisol. The hypothalamus gets feedback on the level of cortisol being released.

Prolonged stress adds wear and tear to the system. Tissues can be damaged. Receptors can be dulled when flooded, even reabsorbed into the cells to protect them from the toxic level of circulating hormones and neurotransmitters. The adrenal glands can struggle to produce enough cortisol over time.

When cortisol and epinephrine are released, the liver produces more glucose. If you don't use the extra glucose, the body is usually able to reabsorb it. Insulin is the key that unlocks the cell receptors so that glucose can be stored for future use. A toxic level of blood sugar can wear down the receptors and wear out the beta cells in the Isles of Langerhans in the pancreas that produce insulin. Stress can encourage you to eat more carbohydrates to provide more glucose.

A sedentary lifestyle keeps you from burning the extra stored glucose. Consuming excessive carbs in one sitting forces an increased manufacture of insulin. Fasting causes the liver and muscles to produce glucose to keep you going. This feast and famine process adds undue stress to the system.

Stress affects digestion and bowel motility and intestinal absorption of nutrients. It can lead to diarrhea or constipation.

When muscles tension is prolonged, it can lead to fiber or signal damage. It can cause chronic pain and prolonged inactivity leads to muscle atrophy.

Chronic stress can affect testosterone, sperm production and maturation, and lead to erectile dysfunction or impotence. It can affect menstruation in women, exacerbating fluid retention, bloating, and mood, and reduce sexual arousal.

The genes you inherit are affected by the levels of stress experienced by your ancestors, grandparents, and parents. Your body may be preprogrammed with a hypersensitive trigger to stress. You may make lower or higher levels of cortisol. Your immune system can affect the stress cycle at any given point in the process based on exposures. Your chemistry is affected by the levels of stress during the prenatal stay in the womb. As a child, your chemistry is affected by the stress in your environment. If you have a stressed or weak system to begin with, as you mature, your habits, choices, experiences, and environment influences can have a major impact.

LIST OF STRESSORS

These are sorted into general categories. What is moderate for one person could be high for another. Check off the events that apply to you. Construct a timeline. You may find a connection to the onset or worsening of symptoms. Stress plays a significant role in stiff-person syndrome and can act as a trigger for spasms.

Doctors often advise patients to reduce the stress in their lives. So much of what happens on a day to day basis is beyond our control. Make a list of stressors you have right now. Highlight the ones that are truly, 100%, beyond your control. Consult the rest of the list and make plans for reducing the things you can change. It does not have to be overnight. It can be a gradual reshaping.

√ FAMILY	√ School - Continued	√ HEALTH
Emotional triggers	Graduating high school	Doctor appointments
Childhood psychological wounds triggered	Going to college	Tests, procedures, surgeries
Sexual abuse	Exams/failing grades	Dentist appointments
Verbal abuse	Extracurricular activities	Mild personal injury/illness
Emotional Abuse	Conflict with peers at school	Moderate personal injury/illness
Psychological abuse	Conflict with teachers/admin	Serious personal injury/illness
Conflict with parents	Academic problems	Chronic illness
Conflict with siblings	New roommate	Physical disabilities
Conflict within the family	Loss of roommate	New physical limitations
Conflict with spouse	New teacher	Sexual difficulties
Conflict with child	Loss of favorite teacher	Pregnancy and childbirth
Conflict with in-laws	SOCIAL	Miscarriage/abortion
Conflict with extended family	Leaving home	Vehicle accident
Birth of child	Making new friends	Drug or alcohol abuse
Loss of child	Losing old friends	Psychological problems
New pet	Conflict with best friend	Depression
Loss of pet	Conflict with casual friends	Mental illness
Childcare – yours	Conflict with neighbors	Terminal illness
Childcare – others	Conflict among group of friends	Ill or injured spouse
New family member	Conflict with strangers	Ill or injured child
Engagement	Betrayal by a friend	Ill or injured pet
Marriage	Betrayal by an acquaintance	Ill or injured family member
Divorce	Casual dating begin/end	Ill or injured friend
Custody Battle	Jealousy	Living with secrets
Dysfunctional Family	Conflict with romantic partner	Lifestyle changes
Constant fighting	Social outings	Change in diet
Conflicting priorities	Group activities	Change in physical activity level
Increased responsibilities at home	Games / entertainment	Change in schedule
Merging families	Amusement park rides	Change in sleep habits
Moving to a new home	Friends' marriage/divorce	Death of spouse/romantic partner
Moving to a new location	Friends' relationship problems	Death of child
Selling a home	Friend moves away	Death of parent/sibling
Loss of family member due to divorce or breakup	Family member moves away	Death of grandparent or extended family member
Child going to school	Loss of support system	Death of friend
Child leaving home	Loss of social outlet	Funeral planning
Child's marriage/divorce	Birthdays	Hospice
Retirement – self	Weddings	End of life decisions
Retirement – spouse	Anniversaries	FINANCES
Parent moving in with you	Holidays	Limited income / Poverty
Child moving back in with you	Vacations	Debt
Raising grandchildren	Funerals	Unexpected expenses
Other relative moving in with you	Parties	Gambling
SCHOOL	Other social functions	Compulsive spending
Starting school	Reunions	Loss of income
Changing schools		Conflicting financial priorities

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√	FINANCES - CONTINUED	√	CRIME - CONTINUED	√	WORLD EVENTS - CONTINUED
	Major financial setback		Gang activity		Protests –affecting others
	Dealing with scammers/hackers		Falsely accused – self		Rioting affecting you
	Identity theft		Falsely accused – spouse		Rioting affecting spouse/child
	Parents struggling with finances		Falsely accused – child		Rioting affecting family member
	Children struggling with finances		Being sued – self		Rioting affecting friends
	Friends struggling with finances		Being sued – spouse		Rioting affecting others
	Business struggling financially		Being sued – child or family member		Bombings affecting you
	Tax audit		Being sued – business		Bombings affecting spouse/child
	WORK		Convicted of crime – self		Bombings affecting family members
	Starting a new job		Convicted of crime – spouse		Bombings affecting friends
	Losing a job		Convicted of crime – child		Bombings affecting others
	High-stress job		Convicted of crime – family		Acts of terrorism affecting you
	Dangerous work		Convicted of crime – friend		Acts of terrorism affecting spouse
	Spouse with high-stress job		Incarceration – self		Acts of terrorism affecting Child
	Spouse with dangerous work		Incarceration – spouse		Acts of terrorism affecting Family
	Travel for work		Incarceration – child		Acts of terrorism affecting Friends
	Commuting		Incarceration – family member		Acts of terrorism affecting others
	Changing jobs		Incarceration – friend		Disease outbreak affecting you
	New responsibilities at work		Physical altercation/assault – self		Disease outbreak affecting spouse or child
	High-stress environment		Physical altercation/assault spouse or child		Disease outbreak affecting family
	Spouse with high-stress environment		Harassment / Stalking		Disease outbreak affecting friends
	Promotion – Self		Home invasion		Disease outbreak affecting others
	Promotion – Spouse		Vandalism		Famine affecting you
	New Responsibilities – Self		Intimidation		Famine affecting spouse or child
	New Responsibilities – Spouse		Robbery		Famine affecting family
	Conflict with coworkers		Kidnap		Famine affecting friends
	New boss/supervisor		Rape		Famine affecting others
	Conflict with boss/supervisor		Murder		War affecting you
	Conflict with coworkers		WORLD EVENTS		War affecting spouse or child
	Spouse gets new job		Distressing news reports		War affecting family members
	Career change – self		Natural disasters – affecting you, family, or friends		War affecting friends
	Career change – spouse		Natural disasters affecting others		War affecting others
	Starting your own business		Vehicle accidents affecting you		Genocide affecting you
	Closing a business		Vehicle accidents affecting spouse/child/family		Genocide affecting spouse/child
	Public speaking		Vehicle accidents affecting friends		Genocide affecting family
	Dealing with technology		Vehicle accidents affecting others		Genocide affecting friends
	Illegal activity at workplace		Airplane Crash – Self		Genocide affecting others
	CRIME		Airplane crash – spouse/child		
	Traffic violation – self		Airplane crash – family member		
	Traffic violation – spouse		Airplane crash –friend		
	Committed a crime – self		Airplane crash - others		
	Committed a crime – spouse		Protests affecting you		
	Committed a crime –child		Protests affecting spouse/child		
	Committed a crime – family		Protests affecting family members		
	Committed a crime - friend		Protests affecting friends		

