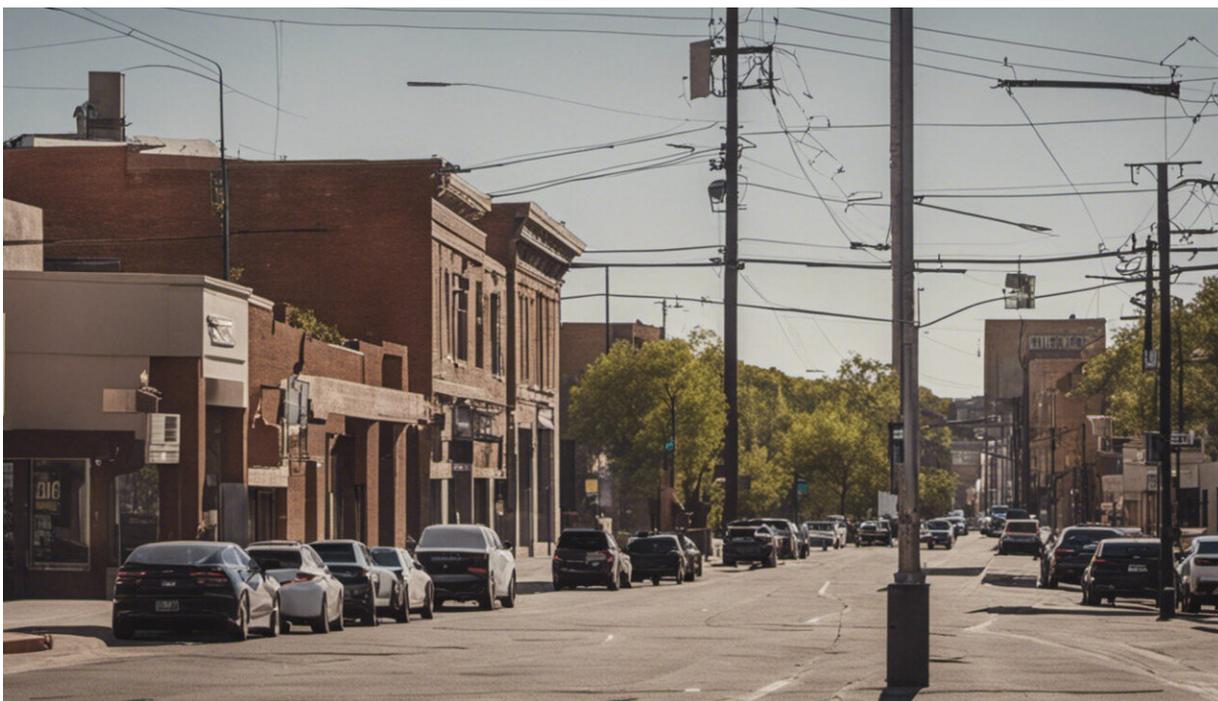


A neuroscience-based action plan to deal with stress after mass shootings

August 12 2019, by Laurel Mellin



Credit: AI-generated image ([disclaimer](#))

After the mass murders in El Paso and Dayton, discussions about improving mental health and strengthening gun control laws may be comforting.

Neither affords a plan, however, to address the [stress](#) that comes with

these events to the ordinary person. We live in a violent society, with the U.S. [rate of deaths from gun violence](#) four times higher than the rates in war-torn countries like Syria and Yemen. The violence in our society can be [exacerbated by stress](#), and these incidents can cause a new wave of fear to spread across the country.

Updating how we see stress

From a neuroscience perspective, our response to [daily stress](#) is a function of brain circuits. Throughout life, episodes of severe stress in childhood or later in life can cause the [encoding of faulty circuits](#) in the brain that amplify and prolong stress, activating the fight-of-flight response when there are no actual threats.

Once encoded, these circuits can be replayed for a lifetime. When they are activated, the [neocortex](#), or the part of the brain that gives us conscious control over our responses to life essentially goes "offline." This diminishes our capacity for personal self-control, as a part of the brain called the [amygdala](#) takes charge. The more primitive part of the brain, or what some call the reptilian brain, becomes dominant, with its reflexive responses, and extremes of emotions, thoughts and behaviors.

Most of our circuits that regulate our responses to life are highly effective and self-correcting, or homeostatic. When the circuits are activated, we can shut them off by going for a walk or taking a hot bath. In contrast, the more extreme and ineffective circuits, called allostatic, have no shut-off valves. They [trigger us](#) to be in stress overload and be extremely stressed, often to the point we develop health issues or cannot function well for hours or even days. When you feel overwhelmed, lost, numb, depressed or in a panic, that is usually caused by the activation of one of these toxic stress circuits.

New approaches to stress overload

[As a researcher](#) who has studied stress for almost 40 years, I believe there are a number of techniques based on [neuroscience](#) that can provide needed relief as we heal from the horror of these mass shootings.

A brain-based action plan to deal with our stress includes more than the typical advice of restful sleep, daily exercise, and eating healthy. When faulty circuits are activated, the neocortex functions poorly, so we cannot think our way to engaging in healthy habits. NYU researchers have shown that our traditional [cognitive skills fail the stress test](#). They are effective when stress is low, but cannot stop the activation of faulty circuits in the brain that block unhealthy behaviors when we really need them, in moments of toxic stress.

I suggest these steps to recover from highly stressful experiences based on my work:

1. Stop pretending you are not stressed. Understand that because of how the brain works, you may not be functioning optimally. The El Paso and Dayton mass shootings may have triggered more stress overload than you might perceive.
2. Accept responsibility for your stress. You did not encode this stress into your brain, but you are the only one who can choose to release it.
3. Expand your repertoire of [emotional skills](#). [Emotional expression](#) is faster in reducing toxic stress than cognitive methods, thus keeping the neocortex online, available for good decision-making. Also, by using emotional tools when we are stressed, we can begin to rewire circuits that cause stress overload into effective circuits that promote resilience and well-being. Researchers at NYU have shown that only in stressful times are these faulty circuits [unlocked and open to rewiring and](#)

[improvement](#).

4. Share your feelings with others who will not interrupt you or give you unasked-for advice. In other words, vent to a loving relative, friend or therapist. All the while, stay present to your own feelings.
5. Explore whether a deep emotional connection within, time for [contemplation or meditation](#) can ease your stress. Distracting yourself, even by doing something healthy like exercising, may not have the same beneficial impact on the circuits that cause over-reactions as emotional connection.
6. Use brain-based stress tools. I believe, based on my research and [treatment](#) of people who have experienced trauma, that the next generation of coping techniques, or [emotional brain training](#), can combat toxic stress. By using the tools to switch off the faulty circuits, the [brain](#) learns to be more resilient, so we can be wiser and more effective at taking additional needed steps to make our nation safer and better.

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