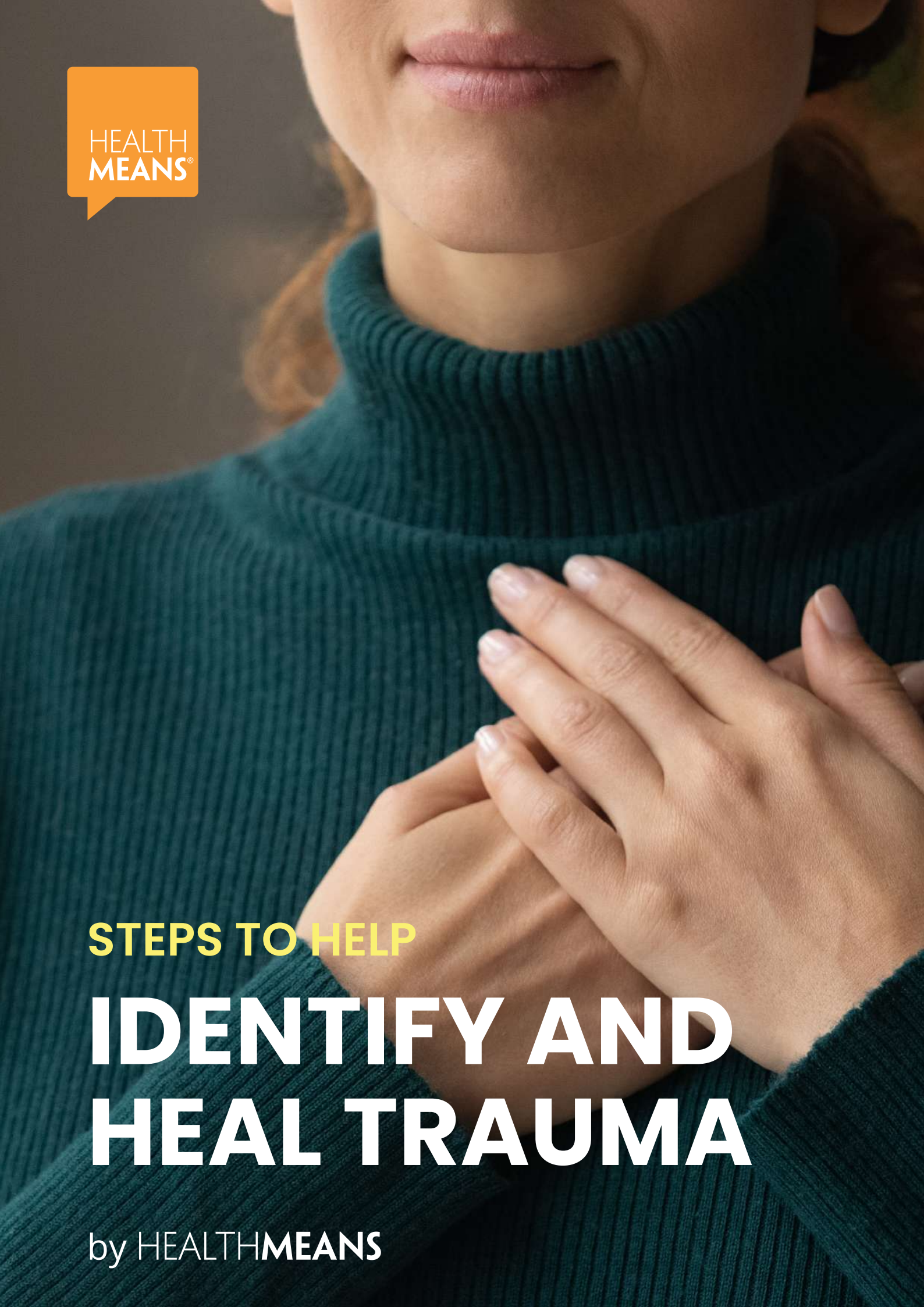




HEALTH
MEANS®

STEPS TO HELP

IDENTIFY AND HEAL TRAUMA

by HEALTHMEANS

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INTRODUCTION

TRAUMA HAS PLAYED A FORMATIVE ROLE IN ALMOST EVERY PERSON'S LIFE. IN THIS EBOOK, WE'LL BROADLY EXPLORE:

- Types of trauma
- Trauma responses
- The physiology of trauma and some of its systemic effects
- How to support yourself after a traumatic experience



WHAT IS TRAUMA?

Trauma comes in many different forms. Sometimes traumatic events are direct, such as mental and emotional abuse or a completely unexpected dismissal from a rewarding job. Sometimes trauma is indirect, and while these examples may be harder to pinpoint and acknowledge, they are still profoundly impactful. We may witness a stranger having a heart attack, for instance. Or notice that we are affected by something more than sadness while supporting a friend dying of a terminal illness.

So, what is trauma, exactly? *Physiologically*, trauma is relatively straightforward — tissue is injured, and physical harm occurs. The nervous and immune systems respond to the injury, and the body begins the process of stabilization and repair [1].

But psychological trauma isn't as obvious. Neuroimaging studies report physical changes in the brains of people with post-traumatic stress disorder, as well as other biological indicators we'll discuss later in this eBook. However, it's not easy to see the fear, shock, denial or various other emotions that often occur after a scary or dangerous experience [2].

TRAUMA IS OUR EXPERIENCE OF AND RESPONSE TO THESE EXPERIENCES. NORMAL, IMMEDIATE RESPONSES INCLUDE:

- Fiercely standing our ground (fight)
- The desire to run as far away as possible (flight)
- An inability to move or respond (freeze)
- Blacking out or fainting (flop/faint)
- Quick adaptation to the situation in order to survive (*fawn*)

Coined by the collective works of Walter Cannon and William Rivers, these reactions are known as the “defense cascade.” Commonly, we know them as fight, flight, freeze, faint/flop and fawn. And, just as in physical trauma, these psychological responses are primarily regulated by the nervous system.

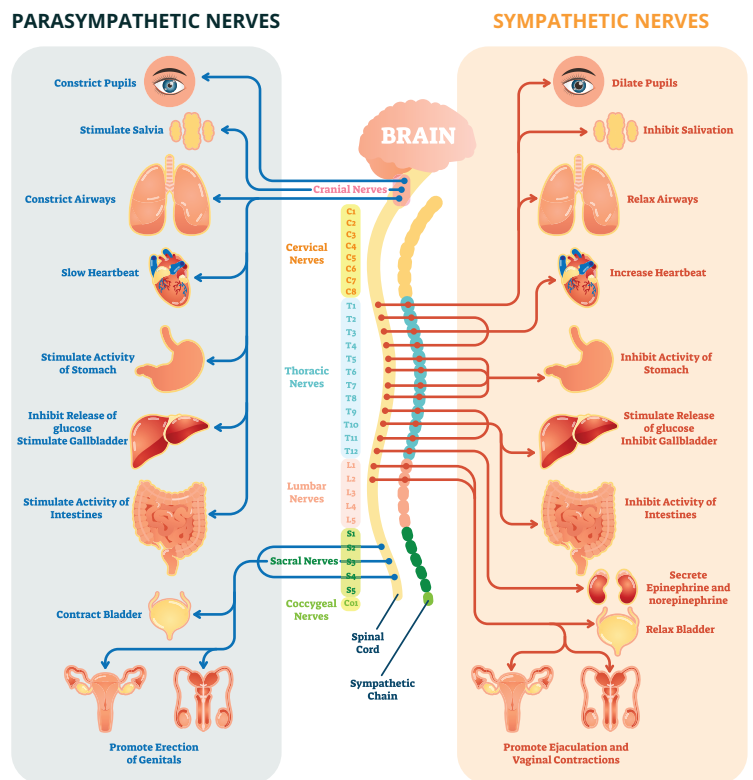
During physical or psychological injury, the autonomic, or automatic, part of our nervous system reacts to keep us safe. These reactions happen whether or not the traumatic event is truly physically detrimental. Our perception of harm is enough — if we believe ourselves to be in a dangerous situation, our autonomic nervous system responds [3].

The interactions between the brain and body, specifically between the hypothalamus, pituitary and adrenal glands (known as the HPA axis), lead to the production and release of neurotransmitters and hormones that fuel the stress response. Based on the type of response experienced, one of the two branches of the autonomic nervous system dominates. It's most accurate to imagine the branches as operating on a

dimmer switch; they both contribute to all defense cascade responses, but in disproportionate ways. For example, we predominately experience actions of the sympathetic nervous system during the fight and flight responses. Sympathetic action results in the heart racing, stomach-turning and all of our senses on high alert. Our bodies are literally preparing for a run to safety or a physical fight.

The parasympathetic branch of the autonomic nervous system, however, is the main player in the responses of freeze, flop/faint and fawn. Decreased heart rate, breathing rate and body temperature characterize these responses [4].

According to Stephen Porges, PhD, it may even be that a third “branch” of the nervous system facilitates how we respond to trauma. Porges’ Polyvagal Theory proposes that an unexamined function of the tenth cranial nerve, the vagus nerve, plays a major role in our response to trauma and stress. He teaches that we ideally flow through the interwoven categories of “safe,” “mobilized” or “immobilized” based on our moment-to-moment experiences throughout the day. The “mobilized” category corresponds to the fight and flight responses, while “immobilized” corresponds to the freeze and flop responses. The “safe” category is one of calm and contentment — the state we experience when surrounded by those we love and trust or while spending time in nature. According to Porges, chronic stress creates an inflexibility between states — essentially, we become stuck [5, 6].



Amazingly, all of these responses are perfectly logical based on what we know about evolution. Humans are hardwired, primarily via the nervous system, with millions of years of adaptation toward survival. We react to traumatic events in a way that will most likely benefit us and, from an evolutionary perspective, allow us to live long, fruitful, fertile lives.

Within this context, it makes sense that our reactions to trauma vary widely from person to person. We all respond in different ways, **and these different responses are perfectly normal**. Men and women, for instance, probably respond to stressors differently due to reasons that span both nature (born with) and nurture (taught to) [7]. Men tend to fight or flee, while women tend to “tend and befriend,” another way of saying they freeze, faint or fawn.

WHAT HAPPENS AFTER A TRAUMATIC EVENT IS OVER?

The prolonged effects of trauma vary as much as the immediate responses. Historically, post-traumatic symptoms have been known by many names: hysteria, dissociation, shell shock, traumatic neurosis, post-traumatic stress disorder (PTSD), complex traumatic stress disorder and developmental trauma disorder [8]. Some people cope with trauma through action and expressive emotions, while others are reflective and withdrawn. Children's responses are often different from adult's. Beginning to wet the bed after learning to use the toilet or suddenly being unable to talk are characteristic responses in young children. Teenagers may feel guilt or display uncharacteristically destructive behaviors [9].

And some people have no noticeable repercussions and quickly rebound from a traumatic event! Again, as with our initial response, it is entirely normal for aftereffects to differ from person to person. It's also helpful to remember that reactions to trauma can occur soon after the initial event has passed or many years later.

INITIAL REACTIONS TO TRAUMA CAN INCLUDE:

- Sadness
- Confusion
- Anxiety
- Numbness
- Exhaustion
- Physical and/or mental agitation
- Shaking
- Trouble concentrating

DELAYED REACTIONS TO TRAUMA CAN INCLUDE:

- Sleep disorders
- Nightmares
- Fatigue
- Depression
- Fear of recurrence
- Avoidance of emotions
- Flashbacks
- Lowered resistance to colds and infections [10]

WAYS TO HEAL

Reactions to trauma can be physical as well as emotional and mental. Headaches, becoming jumpy or easily startled, suddenly experiencing a racing heart and sweating, and stomach pain or digestive issues are common [11]. In her pioneering book, *The Balance Within: The Science Connecting Health and Emotions*, Esther M. Sternberg, MD, [12] illuminates the very physical connections between our thoughts, feelings and physicality that occur on a cellular and molecular level. The nervous system and immune system are inextricably linked. We see the evidence of this in the physical reactions to psychological trauma that many people experience.

Unsurprisingly, the way we choose to obtain help is also highly individual. It was once believed that all trauma survivors needed to talk about their experiences and express associated emotions. However, newer research reveals that each individual has their own style of coping. Just as with every other aspect of trauma, appropriate support is distinct to the person seeking it [8,13].

So, how can we support ourselves through trauma, and beyond? In the next section, we'll explore ways to address trauma on our own and with the help of a professional. Remember, every traumatic event and every person experiencing it are unique. The ways you choose to help yourself, your family and your community are valid and worthwhile, even if what you choose is to not act in the moment! Normalization of varied trauma responses is an integral part of healing from traumatic experiences.



SUPPORT

THINGS YOU CAN DO TO HELP YOURSELF NOW

SAY WHAT YOU NEED

Or, rather, do your best to communicate what you need both in the moments after a traumatic event and in the days to come. Please be aware that this may prove more difficult than expected. But an easy method to try is simply to state what feels good and what feels bad.

“Do you want some water?” “Yes, that feels good.”

“Do you want to talk about your experience?”

“No, that feels bad.”

It can be that simple.

This suggestion is vital — after a traumatic event, it is not your responsibility to take care of others or their needs. It’s time to take care of yourself. Saying what you need is the first step in getting what you need.

On a professional level, the Substance Abuse and Mental Health Services (SAMHSA) model of trauma recognition and treatment actively involves patient feedback. In fact, patient feedback directs the care plan, a distinct shift from historic treatment dictated solely by the clinician. Trauma-informed clinical care is changing to accommodate “say what you need” [14].



GO OUTSIDE

It's cliché at this point to say that nature heals, but it's also backed by science. From hospital gardens shown to increase healing time after surgery [15] to improvements in the immune, cardiovascular, respiratory and nervous systems thanks to "forest bathing," nature provides many benefits to our health. People living in green spaces feel more sense of purpose in their lives and have less anxiety and depression [16]. Soldiers with PTSD who engaged in nature-based therapy for ten weeks said they felt a sense of refuge, greater safety, calmness and increased well-being [17].

So, even if you're not an "outdoorsy" person, make it a point to go outside in a more rural setting over the weekend. Take your bike to the botanical gardens in your area and spend the day exploring. Volunteer one day per week at a local farm. Or go to the park and kick the soccer ball with your kids.



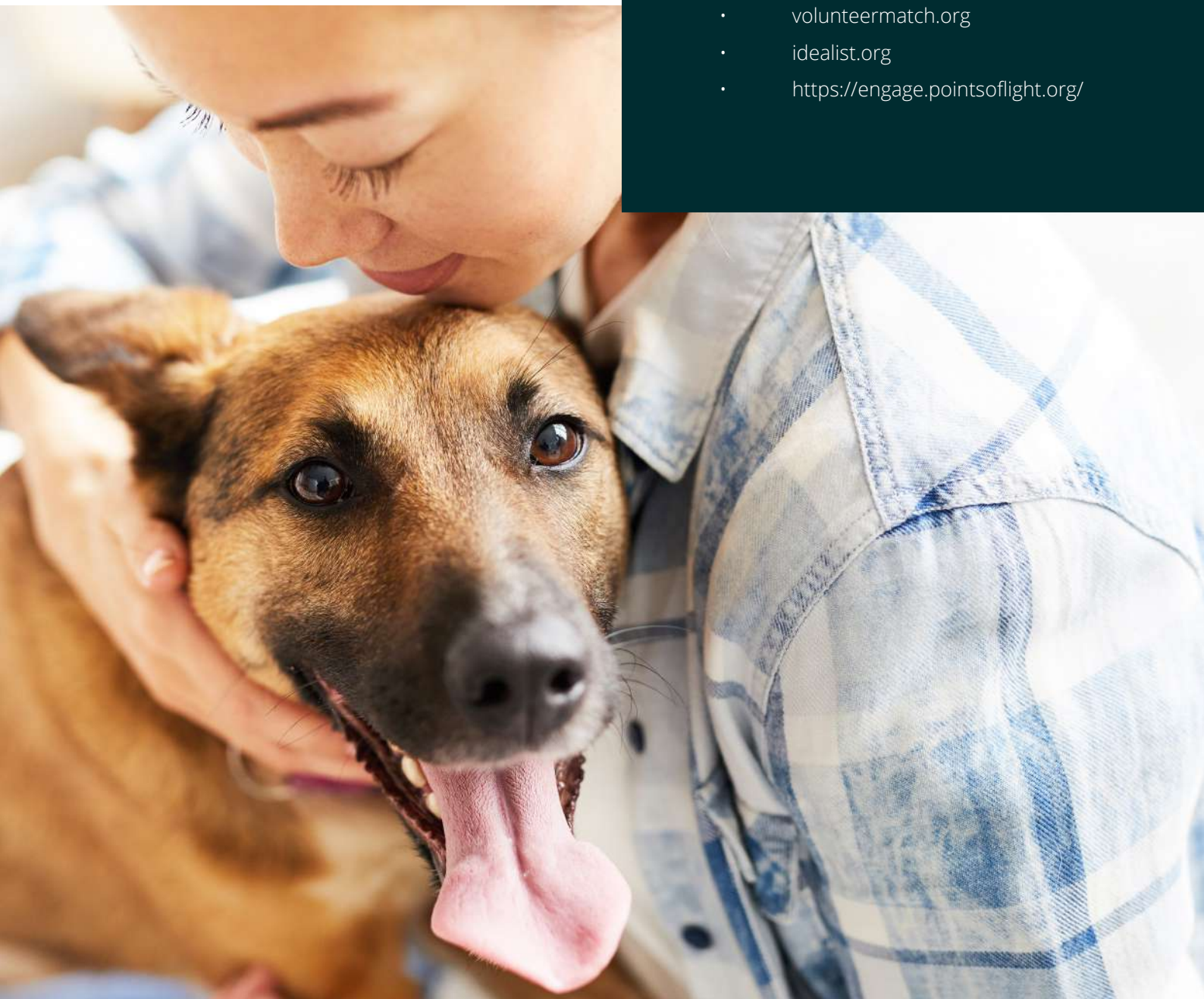
VOLUNTEER

Sometimes helping others can help us navigate our own experiences. Volunteering is one way to work with trauma, and the benefits are many. Studies of those who volunteer show lower mortality rates, better mental health outcomes, improvements in well-being, self-esteem, health and happiness. Veterans who volunteered for six months experienced fewer symptoms of PTSD and depression and an increase in perceived social support [18].

If spending time near other people doesn't feel good to you right now, consider volunteering at an animal shelter.

You may be familiar with places near you to volunteer, but if not, these websites can help:

- volunteermatch.org
- idealist.org
- <https://engage.pointsoflight.org/>



PRACTICE YOGA AND STRETCHING

Over the past few years, yoga has picked up many connotations. To help navigate trauma, we'd like to use the term yoga in a foundational form — as a way to breathe deeply, stretch the body and connect with self. Many trauma-informed scholars, teachers and writers have advocated yoga as a way to heal from trauma. Jon Kabat-Zinn, PhD, whose Mindfulness-Based Stress Reduction (MBSR) techniques we'll discuss later in this eBook, promotes yoga as a way to simply notice and feel what the body is experiencing in a curious, self-paced way. He states, "Your body will teach you what you need" [19].

There are many different styles of yoga, and ultimately the right choice is the one that feels best to your body. Experiment with classes that correspond to your level of physical ability to find the right fit for you. Vinyasa yoga tends to be more upbeat and intensive, with many poses linked together in a sequence, while hatha yoga offers a slower pace with repetition of single poses. Yin yoga is a style that primarily helps the body relax through passive positions.

Trauma-sensitive yoga is a highly specialized form of yoga that takes into account the common needs of people who have experienced trauma. The Trauma Center Trauma-Sensitive Yoga Program, for instance, trains yoga instructors to be aware of their instruction style. Instructors limit movement throughout the class so participants can easily know where they are located in the room, instruct slowly enough so participants have time with their bodies, dress conservatively, and allow participant feedback and experimentation. Physical assists from instructors are approached with a great deal of care — verbal assists are encouraged, while physically touching participants is reserved for long-term classes where instructors are familiar with participant's individual triggers and needs.



Attention is given to every aspect of the class: the asanas (or movements), the arrangement of the room, and even the language used to instruct participants. These are essential details for people with trauma *triggered by their own bodies*. With such a practice, they may begin to feel that their body can again become a safe space [20].

DANCE

Even if you're not 100% confident in your dance moves, try it out to your favorite music. There is a surprising amount of research on the benefits of dance on PTSD. Participants in dance-related studies report more self-confidence, a greater sense of well-being and stress reduction. One such study found that dance contributed to a 25% decrease in stress as well as long-term benefits for the veterans taking a dance class [21].

You can, of course, dance at home by yourself, and this might be a great first step if you feel a bit hesitant. Or consider joining an informal dance group, such as 5Rhythms, or Ecstatic Dance. A sense of community and belonging are common side effects of dancing with others.





GARDEN

Technically called “therapeutic horticulture,” you can interpret this solution as a verb or noun! As we explored earlier, being in nature has profound positive benefits on our feelings of well-being. But gardens, and gardening specifically, have been shown to support our emotional, social, vocational, physical and spiritual health. Physical activity combined with exposure to the outdoors and sunlight is proven to lessen the effects of a traumatic experience. Even if you’re in an urban environment, use windowsill planters or houseplants as garden therapy and plant a few of your favorite flowers or succulents [22].



BREATHE

Breathing is the only autonomic function we can control. In this way, it's our "in" to the automatic workings of the nervous system. Sometimes, due to trauma, the nervous system may be in a state of hyperarousal. This simply means that the nervous system is overactive, as some part of us believes that we may still be in danger. Hyperarousal can occur from memories, an everyday occurrence at our home or in our job, or even smells that can act as traumatic triggers [23]. Hyperarousal is a primary symptom in those with PTSD and can contribute to many of the common symptoms such as sleeplessness, anxiety, anger, or becoming easily scared or startled [24].

According to Dr. Bessel van der Kolk, MD, author of the New York Times bestselling book *The Body Keeps the Score*, traumatic overactivity eventually leads to a protective response in the brain. Because we can't functionally live in a consistent state of overwhelm, we adapt by numbing the brain-body connection. But the numbing adaptation doesn't just affect our negative feelings — it numbs our feelings of pleasure and connection too.

Connection to the breath is incredibly important in Dr. van der Kolk's clinical work. In fact, it's his first point of treatment with every patient. He calls it "living within the rib cage," i.e., breathing deeply. On his website, he offers an affordable course titled "An Introduction To Activating Your Neural Pathway: A Breathing Exercise" [25].

As we concentrate on our breath and begin to regulate it, we also start to see beneficial changes in the nervous system. Research finds reductions in PTSD scores and startle rates, lessened anxiety and lowered respiration rate associated with mindful breathing [26]. Researchers believe that this is partly due to the bidirectional link between respiration and emotion, as well as the autonomic regulation gained by slow, deep breathing, called sympathovagal balance [27].

So do we just breathe? Yes, by and large, that is the idea! But we breathe with intention. We pay attention to our breaths in and out and the pace at which we're breathing. A simple exercise to try is to lie quietly in a warm, comfortable place, with the left hand on the heart and the right hand on the belly. Simply feel the right hand rise up and down while you gently breathe more deeply "into" your hand. There are also many apps that help us become more mindful of our breath, such as Stop, Breathe & Think and MyLife.



LISTEN TO MUSIC (AND SING ALONG)

There is a whole field of research called neuromusicology, and fortunately, you do not need to be an expert to gain the amazing benefits that music has to offer! When we listen to music we love, we experience profound neurological, immunological and psychological effects. Think of the defining chord or note, the highest high point in your favorite song. How do you feel? The goosebumps, the shivers, the hair standing on end — those are the physical manifestations of healing, stress-reducing chemicals released in response to the sounds you're hearing.

Music can support us aurally, as we listen; physically, as we sing or feel the vibrations it produces; socially, as it brings us together with other people; and personally, as it evokes intimate feelings or memories deep within us [28].

Music has a long history in the context of trauma. It's been used to foster resilience and healing during times of violence and oppression, such as during slavery in the southern United States or during apartheid in South Africa. During funeral rites, music offers comfort. It creates cohesion in times of distress, in part by activating brain structures involved in emotional processing, reward and pleasure [29]. Survivors of the Sept. 11 attacks on the World Trade Center in New York participated in over 7000 music therapy programs designed to improve coping mechanisms, reduce stress and process the trauma [30].

So consider joining a community choir. Listen to your favorite songs while you cook dinner. Or make a playlist of music that encourages feelings of joy and exuberance, or deep love and grief if you feel the need to process these emotions. The beauty of music is that it can help us feel some of our deepest emotions in a powerful, intimate way.

EAT

Food can be an incredibly therapeutic part of our lives. Sometimes we forget the feelings of love, pleasure, and familial or cultural connection that can come from what is a seemingly simple meal. There have been some links established between nutrients and trauma, such as increased fiber and lower odds of PTSD [31], or the importance of B vitamins, choline and omega-3 fatty acids in neuro-logical health [32].

But the idea of this recommendation follows a different line of thought. We are encouraging you to make a meal that is warm, delicious and nourishing, not only to your body but also your heart. Most of us have such a meal: one that reminds us of someone we love or simply puts us in a good mood. Take time to cook one of these recipes and connect to the deeper part of you that needs feeding on multiple levels.



CONNECT

The effects of trauma sometimes lead us to isolate ourselves. The recommendation to connect is an encouragement to push against that urge and connect with people who feel safe and loving to you — family, friends and community members. While we don't advise acting in direct opposition to your need for solitude, we do know that social support is psychological support. Our bonds with others protect us from developing PTSD after a traumatic event and help us recover if we are experiencing PTSD. Social support seems to decrease the severity of negative psychological effects in people recovering from the most severe adverse childhood experiences [33]. In fact, one of the main recommendations of Porges' Polyvagal Theory work is to be around people you like in order to "exercise" the safe nervous system state. Bottom line: Our friends are a big deal.

We understand finding social connections can sometimes be challenging. One way to approach this is by joining a group based on activities you enjoy. Do you love to cook? Take a cooking class. Do you love science? Enroll in a course at your local community college. Or simply be around other humans. Walking in a park on a sunny day is sometimes enough to say hello and feel a connection to those around you.

KEEP YOUR ROUTINE

There are times when trauma profoundly affects us. In these moments, it feels like day-to-day survival is our main focus, and routines fall away. Even if you're not typically a regimented person, there is wisdom in doing your best to maintain as many daily habits as possible, such as those for meals, exercise, sleep and work. Simply focusing on basic hygiene practices like tooth and hair brushing is beneficial in that it creates a sense of structure, organization and achievement. Our control over the small activities of life creates predictability, something sorely needed when other parts of our lives feel out of control.

Make a realistic (read: small steps) list of what you'd like to accomplish in a day, and notice the feeling of accomplishment as you complete each task. Make sure you include one or two things you're really looking forward to, such as watching a favorite TV episode or calling a friend.



REDUCE ALCOHOL AND DRUG USE

Larger quantities or more frequent use of alcohol or drugs may be tempting while dealing with the feelings that arise after a traumatic experience. But PTSD and substance use disorders often occur together. Depending on the amount or frequency of your substance use, consider a specific reduction goal, such as only three drinks per week and only on the weekend. Do you believe that your reliance on alcohol or drugs has become habitual and hard to stop? It might be appropriate for you to set a goal of total abstinence, perhaps with the help of a professional or a support group, such as Alcoholics Anonymous [34, 35].

An important detail in this suggestion is to talk to a trusted friend. While it is incredibly normal to rely on alcohol or drugs more heavily after a psychologically impactful experience, talking to someone about your increase in substance use can help you get back on track to coping in healthier ways.

EXERCISE

You don't have to turn into a gym rat, but getting your heart rate up more frequently will help buffer the effects of post-traumatic stress. One group of studies found that aerobic exercise, such as walking, jogging or anything that gently increases heart rate (based on your fitness level), positively impacts symptoms of PTSD. How? Exercise has a positive, widespread influence on every bodily function, including physiology, which influences our response to stress, cognitive function, neuroplasticity, the hypothalamic-pituitary-adrenal axis (the HPA axis discussed earlier in the eBook), and immune response [36].

Some of our favorite aerobic activities are walking, biking, playing frisbee, canoeing, paddleboarding, dog walking, house cleaning to good music, beachcombing, bowling, hiking, swimming and chasing the kids around the yard.

LAUGH

We don't want to sound cliché, but laughter truly is the best medicine. And we have the science to prove it! The science of humor is only about 30 years old, but we do understand some ways that humor benefits us both physically and psychologically. It helps with pain relief, improves positive emotions, strengthens immune function, helps us manage stress, and even improves and strengthens social interactions. For PTSD specifically, humor helps with coping and can reduce anxiety and emotional numbness [37].

Sometimes, when dealing with stress around trauma, we may feel that it's not ok to laugh, that it's somehow not appropriate based on what we've experienced. But we give you permission to experience the joy and release of humor. Research-based evidence shows that it helps those with traumatic emotions feel better.



WORK WITH A PROFESSIONAL

You may notice that the main focus of this eBook is on ways to work with trauma without a professional. That's intentional — we want you to have as much access as possible to proven steps that you can easily try on your own.

But sometimes, we need the help of a professional, and thankfully, there are multiple trauma therapies available. This section will be a brief review of a few of these therapies, along with a list of all the professional trauma services we could source.

A note on working with a mental health professional: we view it as working with any other professional when we need assistance. Did the timing belt on your car snap? Time to call a mechanic. Need to get your teeth cleaned? Best to go to the dentist. Unfortunately, mental health stigma still exists, but considering it in this context clarifies what mental health assistance really is: getting professional help when we need it.



EMDR

EDMR stands for eye movement desensitization and reprocessing. It is a form of psychotherapy (talk therapy) designed by psychologist Francine Shapiro, PhD, in the 1980s as a way to work through troubling memories from traumatic events. During the treatment, the therapist directs the patient in lateral eye movements, hand-tapping, or provides audio stimulation while the patient briefly focuses on a traumatic experience. It is believed that these actions access the traumatic memory network and allow some patients to benefit from trauma resolution more quickly than traditional psychotherapy [38].

BRAINSPOTTING

In 2003, EMDR-trained psychotherapist David Grand, PhD, discovered that specific locations in a patient's visual field helped them access unprocessed trauma deep in the brain. Described as a combination of hypnotherapy and EMDR, brainspotting is effective for people who have experienced a traumatic event with or without PTSD [39].

MBSR

Mindfulness-based stress reduction is a form of stress management therapy designed by Jon Kabat-Zinn, PhD [19]. It was initially intended to help people with chronic pain and illness. However, it is now used to help people with many life challenges, including trauma and PTSD. An MBSR course spans eight weeks, with two to three-hour group sessions completed once per week. An all-day retreat session occurs after the sixth week. Sessions include mindfulness exercises such as the body scan, sitting meditations and gentle yoga, all with one simple goal: being aware of what is. Participants are also invited to share their experiences during the sessions [40].



TRE

Tension and Trauma Release Exercises, or TRE, is a series of movements that urge the natural reflex mechanism of shaking or vibrating, leading to the release of muscular tension, calming effects on the nervous system and resolution of trauma. Developed by David Berceli, PhD, TRE allows physical trauma release without “revisiting the story” of the traumatic experience. TRE’s physical “focus” is the psoas muscle, which connects the lumbar vertebrae to the pelvis [41].

OTHER PROFESSIONALLY-LED FORMS OF SUPPORT INCLUDE:

- Emotional Polarity Technique
- Trauma-informed acupuncture
- Trauma-informed yoga
- Trauma-informed breathwork
- Neurofeedback
- Thought Field Therapy
- Neuro-linguistic programming
- Craniosacral therapy
- Somatic Experiencing
- Non-regression hypnotherapy

Search for trauma-informed professionals in your area to see what is available.

Ultimately, every step of a traumatic experience is unique, from our initial response to the ways we find support. Do your best to listen to your own internal knowing of what works and what doesn’t to find the most effective recovery and release methods.



A woman with grey hair, wearing a white long-sleeved shirt, is smiling and looking down at a small white butterfly with yellow markings on its wings. She is holding the butterfly gently in her open palm. The background is a blurred outdoor scene with green foliage and some reddish-brown leaves. A dark teal rectangular box is overlaid on the top right of the image, containing the text "HERE'S TO HEALTH." in white, bold, sans-serif capital letters.

**HERE'S
TO HEALTH.**

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