

How does the SSP work?

Thus far, SSP-focused research demonstrates significant improvements in a broad population of patients, precisely because this protocol deals directly with the autonomic nervous system (ANS). When your ANS is stuck in a state of chronic defense and survival, it's difficult to change your thoughts, feelings, and behaviors. Your ANS controls many automatic functions of your body that you need to survive, such as breathing, heart rate, and digestion, and also affects your physical, emotional, and social wellbeing. It sends and receives information between the brain and body, helping you respond to changes in your internal and external environment.

Your ANS is influenced by a nerve that is hugely important to your overall wellbeing: the vagus nerve. The vagus nerve is the longest cranial nerve in the body, stretching from the brainstem all the way down to the stomach and extending to multiple organs. The vagus nerve influences your emotional and physiological states. It has two branches. The first branch is called ventral vagal, as it primarily runs down the front of your body. A healthy vagus nerve sends signals to strengthen digestive and social functions when you perceive a safe situation; the ventral vagal pathway (your social engagement system) is activated when you feel safe and connected to others. The second branch is called dorsal vagal, as it runs down the back of the body, and it supports instinctive withdrawal and shutdown functions when you perceive a life-threatening situation. Finally, your body can also have “fight or flight” response to a perceived threat, which is governed by your body’s sympathetic nervous system.

Most of the time, you want ventral vagal to be your dominant state. But the fight/flight and freeze/shutdown states are helpful, unconscious survival responses. For example, sympathetic nervous system activity will help you benefit from a good shot of adrenaline to do well in sports, to feel the juices flowing in an exam, to give an important speech, and during all forms of play. The fight/flight and freeze/shutdown states are only a problem if they are activated when they shouldn't be. If the nervous system is not operating in a healthy manner, you may experience dysfunction in multiple areas of life. You might go inappropriately into a fight/flight or freeze/shutdown response when you're having a conversation with your boss at work, or meeting someone new at a party. This often results from chronic stress or trauma (eg, a difficult birth, emotional or physical neglect, abuse, bullying, medical trauma, ear infections, or accidents). Your thought patterns are changed by stress and trauma, and so are your bodies. Until recently, there was little hope of rehabilitating the bodily responses to stress and trauma, but the SSP is offers a way to physiologically heal. You can to re-train your nervous system to react in the right way, at the right time, to the right stimulus.

Your nervous system unconsciously scans your environment and your body for cues of threat or cues of safety. This is called *neuroception*. These cues come through your vision, hearing, smell, touch and even taste. You are hard-wired to perceive certain signals as safe, such as the sound of a mother talking to her baby, a smile, eye contact, and touch. But if these signals were also associated with pain or fear in your past, then the brain may re-classify them as ‘not safe’. Signals that are normally neutral, such as animals, smells, or colors, can become unconscious danger signals if they become associated with painful events. Once this starts to happen, you end up in a vicious circle. You unconsciously perceive these ‘danger signals’, your body reacts to them, and then you start to fear your own reactions. This fear increases your level of sympathetic or dorsal activation too.

Your brain begins to be on high alert all the time, looking for threats, and downplaying the safety signals. This high alert extends particularly to the ears. The brain on alert for danger sends signals to the little muscles that control the ear drums, saying, ‘The world is pretty unsafe. Could you please be listening out for danger signals for me?’ In response, the ear muscles relax and slacken off the ear drum. This allows the drum to detect low or high-pitched sounds more easily (think yelling, growling, barking, gunshots, screaming.) Once your ears are listening out for low/high pitches, they don’t hear the mid-range frequencies as well; you perceive threats more readily than cues of safety, which reinforces the signaling of danger. You miss the safety signals that should calm you down, like singing, people talking in a pleasant voice, or birds chirping. You may still hear them somewhat, but their meaning is lost on you. And the more time your ears spend in this slack, low pitch-perceiving state, the weaker your middle ear muscles become.

Most people find music uplifting, calming or moving. Listening to music improves mood, performance, and several measures of health. The Safe and Sound Protocol harnesses these inherent functions of music and takes them to the next level. You play the music with over-ear headphones in a quiet environment, which means your ears have nothing else to listen to. The music is specially filtered to emphasize the mid-range frequencies that cue your body to feel safe and soothed. Mid-range frequencies are those associated with the human voice, which activates our social engagement system and cues us to feel safe and connected. Exercising the middle-ear muscles through this filtered music helps your nervous system to come out of the fight, flight, or freeze response. This breaks the vicious feedback loop where your ears are most attuned to frequencies associated with being unsafe, which activates your fight/flight/freeze response.

The effect is both immediate and cumulative. While listening, the brain is being calmed. This changes the signals it sends to the ears about what to listen out for. In addition, your ears are getting exercise in the art of listening to mid-range frequencies. The music is carefully volume-controlled so that the volume gets suddenly softer after periods of normal volume. This sudden drop in volume causes the ear muscles to strain to hear it better. That straining on and off is like push-ups for your ear muscles – you can often feel that as a slight pulling sensation down your ear canal as you listen to the program. Over the course of the five hours of filtered music, the brain sends calmer signals to the ears, encouraging better perception of mid-range frequencies from your environment.

When your nervous system is frequently in fight, flight, or freeze mode, you feel stressed, defensive, unsafe, disconnected, irritable, reactive, or anxious. When you can you shift out of the defensive state, you are free to rest, feel close and connected to others, and enjoy life. Your daily interactions with others will start to do what they are meant to do: help to regulate and soothe your nervous system. This starts a positive feedback loop where social interaction helps you to be in the ventral vagal state. That reinforces how good you feel, which puts you in ventral vagal more often. Sympathetic and dorsal states are triggered less and less often, and as a result your mood, anxiety, digestion, and other symptoms can improve.

The SSP is based in polyvagal theory, which explains that your nervous system has three main pathways to respond to unconscious perceptions of safety or threat with physiological changes that also affect your thoughts and emotions. These three pathways/states include:

Ventral: Ventral vagal state results from your unconscious perception of safety around you. You have a sense of possibility. You feel relaxed, you smile, you engage, talk, and laugh. You can “rest and digest.” You feel safe and are free to connect with yourself, others, and the world. You are open and curious. You are able to listen, respond, and be attuned to the people around you. You feel comfortable to be yourself with others. You can feel a wide range of emotions. You can co-regulate and self-regulate. You can tune into the moment and tune out distractions. You are resourced and resourceful. You can reach out for, and offer, support. You are hopeful and compassionate, flexible and resilient.

Sympathetic: Your unconscious perception has decided that you are in danger, and you need to stay activated in fight or flight mode. You are living in an unsafe world with unsafe people. You feel anxious, uneasy, jittery, hypervigilant, on edge, or wound up. Often this will be accompanied by physical symptoms like digestive issues, sleep problems, and a fast heart rate. Shallow rapid breathing and racing thoughts can follow. You have panic attacks. You may have symptoms labeled as ADHD, anxiety, or a sleep disorder. It’s difficult to take a deep breath and your body feels tense. It’s harder to hear and comprehend conversations. Your internal and external world feels overwhelming. You feel aggressive or avoidant, separated from yourself and others. It’s harder to focus, to be present, or to be still.

Dorsal: Dorsal vagal state results from the unconscious perception of extreme threat. You feel shutdown, withdrawn, disconnected, exhausted, trapped, immobilized, depressed, dissociated, or numb. You may feel despair. You don’t feel present. It’s hard to identify anything you’re feeling, and things can be fuzzy or foggy. Sometimes you are unable to speak up even if you want to. Some people feel a lack of nerve flow to their face if they are trying to communicate when they are ‘a bit dorsal’. Dorsal responses can be short moments or long-standing patterns, such as chronic depression. You feel drained, untethered, floating, alone, lost, unreachable. You’re disconnected from your body, your environment, and other people.