

If *stress is a killer*, what can we do to escape from the day-to-day anxiety we all face?

Basic Science

Prolonged stress takes a toll on the body as it excessively activates the sympathetic nervous system. This leads to the release of stress hormones like cortisol, resulting in rapid and shallow breathing, an increased heart rate, and a decrease in Heart Rate Variability (HRV). When the fight-or-flight response is excessively triggered, it becomes physiologically challenging to concentrate, meditate, relax, or sleep. Both the body and mind send signals indicating a sense of unsafety, perceiving a constant threat and urging the need to escape danger rather than focus on restful activities or work. This state of heightened arousal leaves you sleep-deprived, restless, easily distracted, and in a perpetual state of hyperactivity.

Comforting Touch

There exists a profound biological connection between our sense of touch and our emotional well-being. Everyday gestures like a gentle touch, a loving hug, or petting a pet have a deeper impact than we might realize. Touch is a potent sense that can influence our emotions. From an evolutionary perspective, touch is a crucial means by which mammals communicate safety and comfort to one another.

Various forms of touch, such as vibration, electricity, heat, or cold, can bring about measurable biological changes in how we feel.

Scientific studies have shown that varying frequencies of vibration can have a calming effect, increasing our parasympathetic tone as indicated by measures like heart rate variability (HRV). Different frequencies & vibrations can be more invigorating, raising our heart rate and activating sympathetic activity.

Note: the SUND app has 7 vibrational patterns with 100 different speeds for each.

The Biology of Touch

When we engage in touch, the touch receptors in our skin send signals to the brain, which then branches off into two pathways. One pathway leads to the somatosensory cortex, responsible for processing tactile qualities such as softness, roughness, speed, temperature, and more. The other pathway connects to the emotional cortex, where touch becomes associated with specific emotions.

Touch also activates the vagus nerve, which plays a role in regulating our nervous system. When the vagus nerve is stimulated, our body's stress response is dampened, resulting in a decrease in heart rate and blood pressure. In simpler terms, increased vagal activity acts as a brake on the body's stress response. The vagus nerve, a cranial nerve with sensory and motor functions, explains why a warm bear hug from a loved one can have a transformative effect on a challenging day or why cuddling with a furry friend acts as an antidote to stress. Touch also triggers the release of oxytocin, often referred to as the "feel-good hormone," which is associated with positive emotions and is released during intimate moments like sex. Consequently, touch is undeniably beneficial for our well-being, and the term "skin hunger" has gained recognition for good reason.

Signaling Safety

Gentle acoustic vibrations communicate a message of safety to your nervous system through its interaction with your hands, abdomen, or chest. This message triggers a response in your body similar to what you would experience during comforting activities like getting a light massage, fond childhood memories, or the hug of a loved one. The subtle, gentle vibrations emitted from the smartSLEEVE stimulate the parasympathetic nervous system, shifting your body out of the fight-or-flight response and into a state of rest-and-digest.

As your nervous system is rebalanced, you naturally enter a state of relaxation and calmness. This shift is reflected in your biometrics, such as HRV, which begins to improve. Consistent use of SUND strengthens and enhances your nervous system's resilience, enabling you to access a state of tranquility more effortlessly.

Positive Memories

The smartSLEEVE takes the power of touch & vibration one step further. During childhood the first relationship we develop outside of family isn't with a teacher or a babysitter, but with a special plush-stuffed animal. They provide comfort, companionship, and make agreeable partners. They are the perfect audience, attentive and encouraging. Through these relationships, we first learn how to care for someone outside of ourselves, how to empathize, and how to share.

In conclusion, comfortable childhood memories can immediately be felt from the super-soft plush smartSLEEVE along with the gentle vibrations that positively effect our sense of Touch.