YOUR BRAIN IS AN ALARM SYSTEM

Why repeated stress can make the nervous system more sensitive

The brain's job is to protect you

Your brain continuously scans for possible danger, often outside conscious awareness. When it detects a threat, it can activate the body's stress response: faster heartbeat, tense muscles, quicker breathing, and heightened attention. This is useful when danger is real. It can feel confusing or exhausting when the alarm activates in a situation that is actually safe.

What happens when the alarm goes off again and again?

With repeated or prolonged stress, particularly when there is little time to recover, the threat-detection system may become more sensitive. The brain can learn to associate ordinary sensations, places, sounds, or interactions with past danger. As a result, the alarm may activate quickly or remain on longer than needed. People sometimes call this a "misfire," but it is more accurate to think of it as a protective alarm responding to a learned cue. This does not necessarily mean the brain or nerves are damaged.

Three brain areas involved

Amygdala: Helps detect emotionally significant or potentially threatening information and can trigger rapid defensive responses.
Hippocampus: Helps organize memory and context—such as recognizing that "this is now, not then."
Prefrontal cortex: Supports attention, decision-making, and evaluating whether a response fits the current situation. Under intense stress, these functions can become harder to access.

How this can show up in your body and daily life

You might notice being easily startled, scanning for danger, irritability, racing or looping thoughts, difficulty concentrating, disrupted sleep, muscle tension, stomach discomfort, or a strong urge to fight, flee, freeze, or appease others. Some people also feel numb, disconnected, or shut down. These responses vary from person to person and can have causes beyond stress or trauma.

The smoke-alarm analogy

Imagine a smoke alarm that has become so sensitive it sounds when toast browns. The alarm is trying to protect you, but its sensitivity no longer matches the situation. Similarly, a stressed nervous system can react to reminders of past threats even when there is no immediate danger. The goal is not to eliminate your alarm—it is to help it become more flexible and accurate.

Ways to help your system recognize safety

1. Orient to the present: Slowly look around and name five neutral or safe things you see.
2. Notice your body: Feel your feet on the floor or the support of a chair; choose sensations that feel tolerable.
3. Lengthen the exhale gently: Try breathing comfortably with a slightly longer exhale, without forcing deep breaths.
4. Reduce overload: Make room for rest, regular meals, movement, connection, and predictable routines.
5. Practice in small steps: Repeated, manageable experiences of safety may help your brain update old threat predictions. Trauma-informed therapy can support this process.

Reflection: Is my alarm responding to now—or to then?

What situations or sensations tend to activate my alarm? _____
What do I notice first in my body? _____
What is one small cue of safety or support I can use today? _____

Remember: Your responses may have helped you survive difficult experiences. With support, practice, and time, your nervous system can learn new patterns. Progress is not always linear.