Your brain's alarm system

Why you cannot "just think straight" when you feel under threat.

Three parts of the brain do most of the work when we feel under threat. Knowing how they talk to each other explains a lot about anxiety, anger and trauma reactions.

The alarm
The amygdala. Fast and crude. It scans for danger all the time, and would rather be wrong a hundred times than miss one real threat.

The thinking brain
The prefrontal cortex. Slower and smarter. It weighs things up, makes plans, and can tell the alarm to stand down.

The memory keeper
The hippocampus. It files memories with a time and a place, so the brain knows "that was then, this is now".

What happens when the alarm goes off

Something happens	A noise, a look, a thought, a body sensation
↓	
The alarm fires	In a fraction of a second, before you have had time to think
↓	
The body gets ready	Heart, breathing and muscles prepare to fight, run or freeze
↓	
The thinking brain catches up	"Is this really dangerous?" If not, it settles the alarm.

When the alarm is very loud, the thinking brain goes quiet. That is why, in a panic or a rage, you cannot reason your way out, find the right words, or remember what you planned to do. Nothing is wrong with you. The system is working as designed, at the wrong moment.

A smoke alarm, not a fire

A smoke alarm cannot tell burnt toast from a house fire. It only knows "smoke". After a long stretch of stress, or after trauma, the brain's alarm can be set too sensitive and go off at toast. The feeling of danger is real. The danger often is not.

The alarm can be retrained

- **Settle the body first.** A slow breath out and grounding quieten the alarm enough for the thinking brain to come back.
- **Then think.** Once you are steadier, questions like "What is most likely?" start to work.
- **Teach it through experience.** The alarm learns from what happens, not from being told. Facing a feared situation and finding that you are safe is what resets it.
- **Look after the basics.** Poor sleep, too much caffeine and alcohol all make the alarm jumpier.

This is a simplified picture. The brain works as a network, and each of these areas does many other jobs as well.

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