

## **Why Stress Interferes With Rational Judgment**

When stress hits hard, people often react poorly, whether it be an unpredictable act that seems to be a weird response or when there's no response at all – the “deer in the headlights” syndrome. Either way, there are scientific explanations that can help us realize we're not crazy or dysfunctional after all.

### **Signal Overload**

As stress triggers the fight-or-flight response, the body is flooded with adrenaline, which speeds up the heart rate, breathing rate and raises blood pressure – meaning the body kicks into full gear. At the same time, the brain is also bombarded with an excess of sensory information and neural messages.

This activity occurs so rapidly that the brain simply cannot process so many signals all at once. This is the point of confusion where some people's emotional distress overrides clear thinking and reacts with some illogical, inexplicable response to which people later say, “What were you thinking?” Well the point is they weren't thinking, they were reacting out of desperation.

So the next time you get caught in a signal overload situation (emotional crisis, scene of an accident, etc.) the first thing to do is to slowdown, take some deep breaths and allow your mind to clear, otherwise your reaction is probably going to wind up creating a new problem.

### **The Learned Helpless Syndrome**

At other times, our emotions can overwhelm our rational judgment in a situation where choices seemed more limited than they really are. This psychological situation comes about when too many rules or conditions suddenly change, provoking the “deer in the headlights” syndrome.

Researchers have created a simulation of this situation in laboratory experiments using mice. First, they provide the mice with an escape route to avoid receiving a mild electric shock after a tone is sounded. Then they cross up the mice by sounding the tone and blocking the escape route. As this continues to occur and the mice are receiving shock after shock, when the escape route is finally unblocked, the highly stressed mice stop trying to run away and simply freeze when they hear the sound tone, even though they once knew how to run away.

Now before you react by thinking humans are far smarter than mice, realize that humans also face far more complex situations. So the basic premise remains the same (learned helplessness), when too many rules or conditions change, your ability to rationally think and problem-solve eludes you and you freeze, unable to perceive a solution.

### **Our Brain is Wired for Improvisation, Not Repetition**

A recent study at Stanford University, published in *Neuron*, detailed researchers using monkeys trained to perform just two simple tasks – reaching and touching two colored spots, one slowly and the other quickly. After thousands of repetitions, researchers monitoring the monkeys brains discovered the reason why the monkeys rarely reached with the exact same speed for either spot was because their brains showed small changes in neural activity as each movement was mentally executed. The researchers came to the conclusion that these changes arise from an evolutionary basis that the brain was not designed to do the same action over and over. Rather, the nervous system was designed to be flexible, which makes sense from a survival perspective. If creatures were totally predictable, they were easier prey.

So the next time you wonder why you can't perform a repetitious process precisely the same way each time, remember it's not your lack of concentration – that's just how your brain works.