A Brain Hack to Break the Coronavirus Anxiety Cycle
By Judson A. Brewer, M.D.  March 13, 2020

Uncertainty about coronavirus spreads anxiety through social contagion. Here’s a way to minimize that.

Stocking up on large amounts of toilet paper when you see others doing so is an example of social contagion. Credit...NurPhoto, via Getty Images

Anxiety is a strange beast.

As a psychiatrist, I have learned that anxiety and its close cousin, panic, are both born from fear. As a behavioral neuroscientist, I know that fear’s main evolutionary function is helping us survive. In fact, fear is the oldest survival mechanism we have. Fear helps us learn to avoid dangerous situations in the future through a process called negative reinforcement.

For example, if we step out into a busy street, turn our head and see a car coming right at us, we instinctively jump back onto the safety of the sidewalk. Evolution made this really simple for us. So simple that we only need three elements in situations like this to learn: an environmental cue, a behavior and a result. In this case, walking up to a busy street cues us to look both ways before crossing. The result of not getting killed helps us remember to repeat the action again in the future.

Sometime in the last million years, humans evolved a new layer on top of our more primitive survival brain, called the prefrontal cortex. Involved in creativity and planning, the prefrontal cortex helps us think and plan for the future. It predicts what will happen in the future based on past experience. If information is lacking, our prefrontal cortex lays out different scenarios about what might happen, and guesses which will be most likely. It does this by running simulations based on previous events that are most similar.

Enter anxiety.

Defined as “a feeling of worry, nervousness or unease, typically about an imminent event or something with an uncertain outcome,” anxiety comes up when our prefrontal cortexes don’t have enough information to accurately predict the future. We see this right now with coronavirus.

Scientists are racing to study the characteristics of the coronavirus so that we can know precisely how contagious and deadly it is — and act accordingly. Uncertainty abounds.

Without accurate information, it is easy for our brains to spin stories of fear and dread.
In addition to being fueled by uncertainty, anxiety is also contagious. In psychology, the spread of emotion from one person to another is aptly termed social contagion. Our own anxiety can be cued or triggered simply by talking to someone else who is anxious. Their fearful words are like a sneeze landing directly on our brain, emotionally infecting our prefrontal cortex, and sending it out of control as it worries about everything from whether our family members will get sick to how our jobs will be affected.

Wall Street is a great example of social contagion: we watch the stock market spike and crash, the stock indexes being a thermometer for how feverish our collective anxiety is at the moment. Wall Street even has something known as the Fear Index, or VIX, which outstripped the 2008 financial crisis this week.

When we can’t control our anxiety, that emotional fever spikes into panic. Panic is defined as “sudden uncontrollable fear or anxiety, often causing wildly unthinking behavior.” Overwhelmed by uncertainty and fear of the future, the rational parts of our brains go offline. Logically, we know that we don’t need a six-month supply of toilet paper, but when we see someone’s cart piled high, their anxiety infects us, and we go into survival mode.

So how do we not panic? Too many times, I’ve seen my anxious clinic patients try to suppress or think themselves out of anxiety. Unfortunately, both willpower and reasoning rely on the prefrontal cortex, which isn’t available at these critical moments. Instead, I start by teaching them how their brains work, so that they can see how uncertainty weakens the brain’s ability to deal with stress, priming it for anxiety when fear hits.

But this is only the first step.

To hack our brains and break the anxiety cycle, we need to become aware of two things: that we are getting anxious or panicking and what the result is. This helps us see if our behavior is actually helping us survive, or in fact moving us in the opposite direction — panic can lead to impulsive behaviors that are dangerous; anxiety is both acutely mentally and physically weakening and a slow burn that has more long-term health consequences.

Once we are aware of how unrewarding anxiety is, we can then deliberately bring in the “bigger better offer.” Since our brains will choose more rewarding behaviors simply because they feel better, we can practice replacing old habitual behaviors — such as worry — with those that are naturally more rewarding.

For example, if we notice that we have a habit of touching our face, we can be on the lookout for when we act that behavior out. For example:

- If we are starting to worry: “Oh no, I touched my face, maybe I’ll get sick!”
- Instead of panicking, take a deep breath and ask: “When was the last time I cleaned my hands?”
- Think. “Oh, right! I just washed my hands.”

Just by taking a moment to pause and ask the question, we give our prefrontal cortex a chance to come back online and do what it does best: Think.

Here, we can leverage certainty: If we’ve just washed our hands, and haven’t been out in public, the likelihood that we’re going to get sick is pretty low.
The more we can see the positive feeling and effects of good hygiene and compare them to the negative feeling of uncertainty or getting caught in anxiety, the more our brains naturally move toward the former, because it feels better.

How do I know this works? My lab has studied these mechanisms for decades. We’ve recently found that simple awareness training (delivered through an app) can reduce anxiety by 57 percent (in a study with anxious physicians) to 63 percent (in a study with people with generalized anxiety disorder) in two to three months.

Understanding these simple learning mechanisms will help all of us “keep calm and carry on” (which is how London dealt with the uncertainty of constant air raids in World War II) instead of getting caught in anxiety or panic in the coming days, and whenever we face uncertainty.

When our prefrontal cortex comes back online, we can compare anxiety to what it feels like to be calm. To our brains, it’s a no-brainer. It simply takes a little practice so that the bigger, better offers become new habits.

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