

# The Neuroscience of Resiliency: An Interview with Linda Graham

By [ELISHA GOLDSTEIN, PH.D.](#)

From time to time I'll bring you a leader in the field of Mindfulness who I believe has something to really teach us. [Linda Graham](#), MFT is the author of [Bouncing Back: Rewiring Your Brain for Maximum Resilience and Well-Being](#), where she does an excellent job showing us how mindfulness can help to rewire our brain for greater resilience. Linda has a wealth of experience as a seasoned clinician and also as a mindfulness teacher and practitioner.

Today she'll talk to us about what parts of the brain to bolster for resiliency, a practice to help us do just that and the critical roles of compassion and equanimity.

**Elisha:** What makes someone resilient has been one of the foremost questions of our time. Are there parts of the brain we want to pay attention to when thinking of resiliency?

**Linda:** I consider the pre-frontal cortex the CEO of resilience. The pre-frontal cortex – the part of the frontal lobe of the higher brain just behind the forehead – is commonly known as the center of our executive functioning. It's the structure of the brain that integrates the workings of many other brain structures, cortical (conscious) and sub-cortical (unconscious) so that we can sense and respond to our experience, make decisions, set goals, find the motivation to meet those goals, etc. The pre-frontal cortex is also *the* structure of the brain that supports response flexibility, being able to shift perspectives, discern options, and make wise choices, essential elements of resilience.

Mindfulness and empathy/compassion practices are two of the most powerful agents of brain change known to modern neuroscience, in part because they have been shown to strengthen the functioning of the pre-frontal cortex and related structures. Through mindfulness and compassion, we are better able to attune to the felt sense of our own experience, and the experience of others, and to tolerate, even embrace, those experiences, so that we can step back and reflect on them, then hold them with an allowing and accepting that primes the brain to stay "plastic" - open to learning and change. We develop our capacities to respond to the ups and downs of life with more skill and flexibility.

**Elisha:** Can you share with us one of the practices from your book that can help us wire a more resilient brain?

**Linda:** The brain becomes more resilient any time we steadily cultivate the positive, pro-social emotions like gratitude, kindness, compassion, serenity, awe, delight, love. Twenty years of positive psychology research and twenty years of neuroscience research are converging in their discoveries that, say a daily gratitude practice to keep it simple, antidotes the innate negativity bias of the brain. For our survival our brains are hard-wired to pay more attention to negative and intense experiences than positive and subtle ones. That negativity bias is how we survive as individuals and as a species; we never going to not do that. But when we intentionally and steadily cultivate a practice of gratitude for the people and processes that sustain our life, we expand our perception of our experience back

out of a narrow, contracted, survival mode – fight-flight-freeze-numb out-collapse – to a more expansive, more optimistic perspective, where we can again discern options and possibilities. Resilience is a reliably measurable outcome of cultivating positive emotions such as gratitude.

Neuroscientists can now document in their fMRI scanners the “left shift” that occurs in the brain when people are actively practicing these positive emotions. More neural activity lights up in the left hemisphere of the brain, which has a more “approach” stance toward experience than the right hemisphere, which tends to have an “avoid” withdrawal approach.

In teaching gratitude practice, I have people do a two-minute free-write of remembering people who keep their lives going in the web of life, even if they never meet them personally: the person who picks up your garbage/recycling, who delivers your mail, who staffs the emergency room or the fire station, who repairs the highways, who tests the quality of your drinking water, etc.

*A hundred times every day, I remind myself that my inner and outer life depend on the labors of other people, and that I must exert myself in order to give in the same measure as I have received and am still receiving. – Albert Einstein*

This simple gratitude practice, which you can do at the end of every day, primes your brain to be noticing/acknowledging people in your web of life as you move through your day, and can be used to antidote the negativity bias when challenges and crises arise.

**Elisha:** In your view, what is the role of self-compassion and compassion in mental health?

**Linda:** Mindfulness allows us to see clearly what is happening in the moment, and to see clearly our reaction to what is happening in the moment, so that we can choose to respond differently, more resiliently, to what is happening in the moment. Compassion, particularly self-compassion for ourselves as the experiencer of what is happening in the moment, allows us to tolerate even looking at all. This container of mindful self-compassion is what allows us to safely use powerful techniques such as memory deconsolidation-reconsolidation to rewire even traumatizing memories, recovering mental health and well-being.

**Elisha:** An important practice of mine has been stepping into the experience of equanimity. Can you let us know what this means to you and how it can help us *Bounce Back*?

**Linda:** I see equanimity as the spiritual correlate of the psychological concept of the window of tolerance, the natural physiological baseline of equilibrium in the body-brain when we are calm and relaxed, yet engaged and alert. Mindfulness and compassion practices help the brain expand that window, so that we can activate and de-activate the nervous system in response to stress in ways that help us regulate the very fast, very automatic survival responses of the lower brain and keep the functioning of the higher brain, especially the pre-frontal cortex, “online” so we can navigate the twists and turns of our lives from a centered, grounded, balanced perspective. It’s not that we can avoid the disappointments and disasters inherent in a human life; we meet those adverse events from a grounded and flexible resilience; we bounce back from adversity, even learning valuable lessons from our experiences.

**Elisha:** Thank you Linda for your wisdom.