

## Quick Neuro Physiology Facts that Inform the PRN Framework

The Resilience Toolkit is informed by the science of stress and resilience. It recognizes that as human beings we share an evolutionary history that has equipped us with a common neuro physiological response when faced with a threat. Knowing some crucial neuro scientific facts can help us to calm the threat response so that during times of stress we can stay emotionally regulated and function to the best of our ability. The following key points are important to consider:

1. All human beings are equipped with a stress/threat response that was not built to be activated over long periods of time. It is designed to give us short bursts of energy to get us to safety after which the nervous system re-regulates to its usual physiological state. A highly activated stress response over extended periods of time begins to have negative physical and emotional impacts on people. Furthermore, the more the stress response is activated the more sensitive it becomes meaning it is triggered more easily. It is important to note that we can purposefully regulate our nervous system in the midst of stress by engaging in strategies that are grounding and calming.
2. Human beings have evolved with the capacity to think and imagine. This is helpful because it allows us to problem solve and be creative. However it can be harmful in that we can get caught in “what if”, “catastrophizing” or “blaming, shaming and complaining” types of thinking. When this occurs it also activates our stress response. The brain does not recognize whether a threat is real or imagined and so it will activate the stress response just in case. Exposure to lots of negative inputs like an over-abundance of inaccurate news is also a contributor. We do not have control over the threats that are present out in the world, however we can recognize when we get excessively caught in negative thinking. With this awareness comes choice, a choice to limit our negative inputs and switch focus. We will need to do this again and again because of the negativity bias.
3. The negativity bias states that we are wired to notice, and even get stuck on, the negative far more easily than the positive. Quite literally all our optimistic ancestors were eaten by the saber tooth tigers of the past and we were left with the gene pool of the pessimists. If our ancestors did not focus on the negative, and react quickly, they would not have survived. This means that today, tens of thousands of years later, we are still wired up this way. Evolution is a slow process. In fact, we will register a negative instantaneously and we actually have to focus on a positive for 20 seconds for it to register anywhere near as significantly as a negative does immediately. Of course, our environment is very different today from that of our ancestors and we no longer face the same dangers. We therefore need to really work on focusing or absorbing the positive through noticing what’s right, recognizing the good, paying attention to acts of kindness in order to rewire the brain.
4. The higher evolved thinking parts of the brain also have a role in regulating the stress response. If the threat is imminent, or if our stress hormones have elevated significantly, what can happen is that we disconnect from this thinking part of the brain and move purely into a less conscious, reactive mode. This is sometimes referred to as an amygdala hijack. The amygdala is the part of the brain that senses danger and activates the stress response in the body. You may wonder

why your thinking part of the brain alludes you during times of crisis when you actually really need it. Well it makes sense if we look at it from an evolutionary perspective because when we were faced with the saber tooth tiger we did not want to stand there planning out what to do, we wanted to react quickly to get to safety. In today's environment we no longer have the same kind of immediate dangers and therefore it can be problematic when we get hijacked into reactive mode because that is often when we say and do things that we may regret later. Recognizing when we are becoming more stressed as soon as possible can help us to actively choose to engage the thinking brain and use strategies that regulate the nervous system.

5. As human beings we are interdependent and interconnected. In fact our emotions and neuro physiology resonates with each other. It means we can quite literally catch each other's emotions. Heart rates and breaths rates will also become similar to those that are around us. This had an evolutionary purpose because if someone at the front of the group noticed a threat the whole group needed to become aware quickly and react in order to get to safety. Hence, we can either amp each other up or calm each other down. Purposefully regulating our own emotions and nervous system, using the PRN framework, not only calms us but others around us as well.

The PRN framework is designed to help us to **Pause** in order to notice our current state which helps us stay present and connected to the higher thinking brain. **Reset** reminds us to utilize a strategy to regulate the nervous system into a more steady, grounded state. **Nourish** helps us acknowledge that we have done something good for ourselves, and others, and to really absorb the benefit of engaging in this micro practice. Doing this numerous times a day helps us to develop a new way of working or a habit, if you will, that fosters resilience. The science of neuroplasticity states that when we engage in an activity, "small and often", we develop new neuro networks in the brain. This helps to rewire the brain away from the negativity bias and an over activation of the stress response thus fostering a nervous system that reflects a greater sense of calm and connection.