The Brain & Stress:

Today, we will be learning about the limbic system and prefrontal cortex, which are both very important parts of the brain. A handy way of modeling the brain is using your arm. Your wrist is your neck, and your hand is your brain. Now, hold your hand palm facing up and fold your thumb into your palm. This, as well as your palm, is the innermost part of your brain: the limbic system. It can also be called your "lizard brain," because this part of our brain is very similar to the corresponding part in a lizard's brain. The lizard brain is the brain's alarm system - it reacts to your surroundings, and triggers the fight, flight, or freeze response. Within the limbic system are two main components: the amygdala and hippocampus. The amygdala is the one that reacts, that sends the fight, flight, or freeze response to your body. The hippocampus is the part of the lizard brain that stores memories.

Curl your other four fingers over your thumb. The middle two fingers are your your prefrontal cortex - the part of your brain behind the forehead in reality. This part of your brain makes decisions and judgements, and lizards do not have this part. The prefrontal cortex is the part of the brain that makes us human.

However, when you are stressed or under pressure, your prefrontal cortex - which is the rational part of your brain - goes on powersave mode. Your lizard brain kicks in, and your judgement is impaired. The lizard brain was used to keep you alive back when we were living in the wild, but now that we are living in such different conditions and experiencing so many new sensations, our lizard brain can be activated when no real threat is there. The lizard brain lets you experience intense emotion, and when your stress response is triggered, you tend to see everything as a threat.

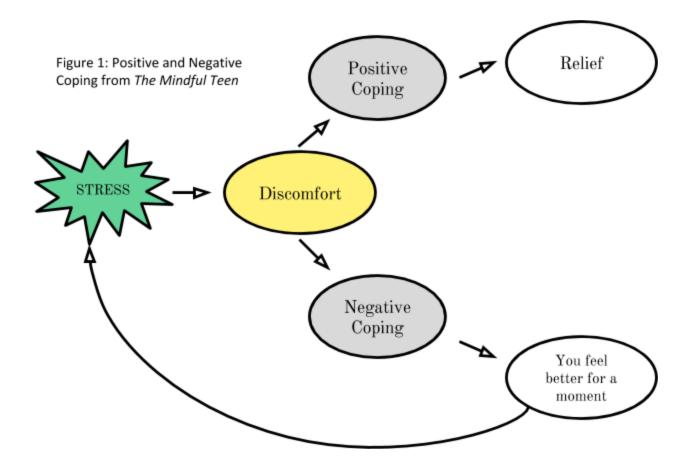
Your lizard brain can overpower your prefrontal cortex sometimes, and that's when you make bad decisions. That's when people describe you as rash, or impulsive. Have you ever done something that you regretted soon after? That's when your lizard brain was in control, and your prefrontal cortex was pushed aside. Remove your four fingers off the palm and thumb. This is when your limbic system and prefrontal cortex are disconnected, and you "flip out," so to speak. You might yell at someone, or break something, or do something else that you wouldn't normally do.

This is when mindfulness comes in. Mindfulness allows you to take a step back and analyze the situation from an outsider's perspective; from your perspective when you aren't all riled up. You can help your prefrontal cortex get back in control, and react to the situation in a better way.

Stress can be good, however, in some situations. It can be a motivator, can get you to finish assignments, or perform better. But too much of it is bad for you. Having a lot of stress for a long time can cause depression, or other mental health issues. You can also get physical problems, such as headaches, stomach pains, or difficulty sleeping.

And when your brain takes on a lot of repetitive stress, the hippocampus - your memory storage - goes through a lot of wear and tear. You begin to see everything as a threat, and it's hard to make new memories. That's why it's so important to control your stress.

When you're stressed out, you usually try to get rid of it. And there are usually two ways people go around it: they try out positive coping strategies, or negative coping strategies. The primary difference between the two is that negative coping strategies usually only give relief for a moment, while positive coping strategies provide long-term relief. When you use negative coping strategies, you go back to being stressed almost immediately afterwards.



Positive coping, however, can provide healthy, long-term ways to cope with stress, that can be used repeatedly. Such as mindfulness. I know I already go off somewhere to cool down, but that's usually *after* I reacted badly to the situation. Mindfulness has helped me to realize early on that I'm stressed out, and so I can go cool off before I harm myself or others. You don't need to let stress control you. You can control your own stress.