



In 2017 I was asked to present a TEDx talk about change and resilience. You can view it on the TEDx YouTube channel by searching for 'Change Resilience' or 'Lehan Stemmet'. The title of the talk was 'Change, your brain and resilience'. I titled it deliberately to also mean 'change your brain and resilience'. The talk starts off with explaining a bit about how our brains work. This is important as many of us, including me, have been taught over the years that our brain stops developing as we get older. However, this assumption has been challenged over the last couple of years and more recent research results have shown that our brains keep developing and reshaping itself. As research tools and techniques become more robust and open up opportunities for new ways to analyze how our brains work it becomes more interesting to see how for example learning happens in the brain.

For many years, even while I was still studying courses in biochemistry and physiological psychology many years ago, I questioned the notion that our brains stop developing simply because it makes no sense if it does - how else would we be able to learn new things or change our behaviour? Logically, then, despite any of the new research tools and techniques, it is reasonably obvious that your brain simply cannot be a static piece of tissue. These days researchers talk about synaptic and neuroplasticity. Synaptic plasticity refers to the connections between your neurons changing and neuroplasticity refers to your neurons changing, etc. You have approximately 85 -100 billions neurons in your brain, depending on which estimates you refer to. Nevertheless, 85 or 100 billion neurons are a lot of neurons either way. Some researchers have estimated that your neurons, when placed end-to-end, can go around the earth 4 times. What is in your head alone can go around our planet FOUR times. Even more impressive is that every neuron can connect to between 10000 and 15000 other neurons depending on your age, in general. Some estimations suggest that the number of possible connections in our brains are more than the number of atoms in the universe. The younger you are the more neurons can connect to every neuron. That makes sense - because we need to learn so much when we are younger and as we get older wisdom and habitual trends tend to kick in and become ingrained. This means you are more likely able to make expert decisions as you get older because your brain has shaped itself around those experience-based decisions based on experience.

That last point is an important one. As mentioned, your brain seems to develop pathways based on experience or experiences and this leads to more automatic decision making as well as cognitive, behavioural and emotional responses. Being aware of this is important. Our bodies are pretty good at two things, one of them is conserving energy and the other one is protecting us from danger. Your brain

will likely be shaped around some of those survival techniques and therefore we sometimes respond in a way which seems irrational, but reactive and based on what appears to be instinct. The good news is that you are able to rewire your brain. There are several simple things you can do to change the wiring in your brain and one effective way to, for example, change negative habits is to force yourself to change your usual behaviour. Positive behaviour is good for neuroplasticity and therefore reshaping your brain. Many studies have also confirmed how, for example, moderate exercise is good for preventing Dementia in older people. Behavioural change is a powerful way to reshape your brain.

As I said in my TEDx talk, you can always wait until you feel better, think better or find yourself in a better mood, but you could be waiting a long time. In my experience as well as the experience of many resilient people I have spoken to over the years getting up and getting your blood pumping is incredibly useful. It changes the homeostatic and allostatic state your body is in. Homeostasis is about balance in your body and allostasis is usually about preparing your body for something it needs to do. Moderate exercise also helps to metabolise some of the hormones your body produces when you are under emotional pressure. In another podcast we'll talk more about the differences between stress and pressure as well as the hormones your body produces when it is under pressure.

Many years ago I developed a simple exercise routine to do wherever I am travelling. I travelled a lot and didn't want to ever make the excuse that I couldn't exercise because I didn't have access to a gym, a local gym contract or access to gym equipment. I have been following this simple exercise routine for many years, decades actually. When I get up in the morning I do not feel at my best, like most people, but I force myself into behaving differently and positively by following this exercise routine. It does three things for me. It changes my negative state very quickly; I feel like I have accomplished something and I keep fit! It doesn't even take long and I can either do a couple of minutes non-stop in the morning, afternoon or evening... or I could do a few repetitions every time I get a chance during the day. It doesn't take long, and the benefits outweigh the challenge of setting aside time to do it. Stop making excuses. I've been there and done that - it doesn't work and doesn't change the fact that you need to take action.

Think about some of the negative behaviours you need to change and how you might replace it with some more positive behaviours... and then, importantly, do it and do it consistently. It could be a new exercise routine or it could be something as easy as buying healthier snacks like raisins, berries, etc to snack on instead of confectionary when you do your grocery shopping. That is all about behaving differently despite what you think or feel. If you have physical or other health challenges, please check with your local health providers what types of activities you could do to get some sort of physical activity routine going. It is important for your psychological and physical health. You are not only doing this for yourself, but for everyone who is a part of your life, now or in the future. You have a contribution to make and you need to take care of yourself to make that contribution. Go for it. Make a list of behaviours you would like to change to start rewiring your brain. Be realistic, be patient and be committed.



Information, resources and services accessed via the Deal With It (DWI Limited) and related platforms do not replace professional medical, psychological or related services. Please do get in touch with your local providers to ensure you do receive any assistance you may need.