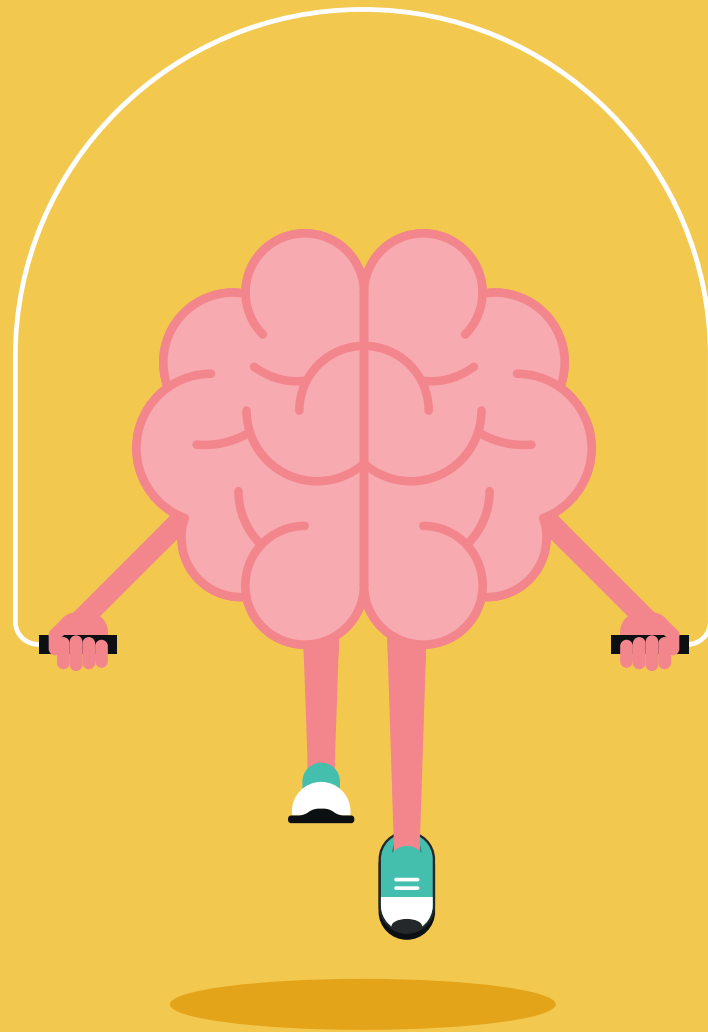


# Brain Gym

A model to help understand  
and regulate emotions



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# Introduction

Life can often throw up challenges and difficult things can happen to us, as children, young people or adults. Sometimes the challenges can feel overwhelming, leaving us feeling stuck, low and despairing. We can be our 'own worst enemy' resorting to self-blame, self-criticism and 'kicking ourselves when we are down'.

Our minds can get stuck ruminating about the past or worrying about the future, making it hard to deal with the challenges we face here and now and stopping ourselves from living life to the full.

Brain Gym is a course that can help you understand the brain better and how it affects the way we think, feel and act. You will learn strategies to calm and reassure yourself when feeling low, anxious or overwhelmed, and ultimately be more in control of your emotions.

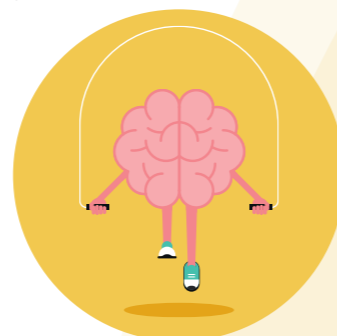
# Understanding yourself

## Focus of the Brain Gym course

The aim of Brain Gym is twofold; firstly, to help you better understand your thoughts and feelings, and secondly to strengthen your ability to manage these more skilfully

We will look at how the brain generates thoughts, feelings and physical sensations, pleasant and unpleasant. We will then explore the role of attention, breathing, imagery, the body, and the relationship we have with ourselves and people around us in fostering good mental health. Brain Gym is designed as a guided self-help course where we will introduce tried and tested practices to bring some perspective and balance to our thinking and dampen overwhelming emotions. These practices form part of an emotion regulation toolkit that can help us respond skilfully to the various challenges life throws at us.

Like anything in life we want to become better at, we need regular practice. An emerging observation from brain science is 'neuro plasticity', meaning that the brain is malleable throughout our life. So, just like we need to do regular weightlifting if we want our muscles to grow and become stronger, for our brain to develop and become more functional, we need to give it a regular workout.



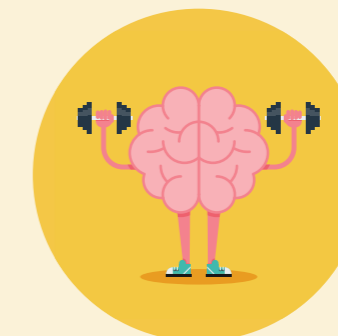
## Emotional Intelligence

Whereas conventional intelligence is thought to be relatively fixed throughout our lifetime, emotional intelligence (the capacity to understand and manage our emotions effectively) can be developed and improved significantly over time. Emotional intelligence helps us to navigate life skilfully

Self-regulation is seen as a central component of emotional intelligence; it helps us manage impulses, engage or disengage attention, and navigate between deliberate or automatic responses. This enables us to keep in control of challenging thoughts and feelings, stay focused on what matters to us, and maintain constructive relationships with people in our life.

Emotions can be hard to understand and harder still to manage. However, without the ability to understand and manage our emotions, our internal and social lives can become pretty chaotic. Sometimes we can be unaware of emotions, or we neglect them or try to numb them by any means possible (alcohol, drugs, food, gambling, sex etc). However, this can be a little bit like putting fuel on the fire.

Emotions are akin to waves in the sea, we may not be able to stop them, but we can learn to ride them skilfully and this is the very essence of emotional intelligence.



# The shaping of our brain

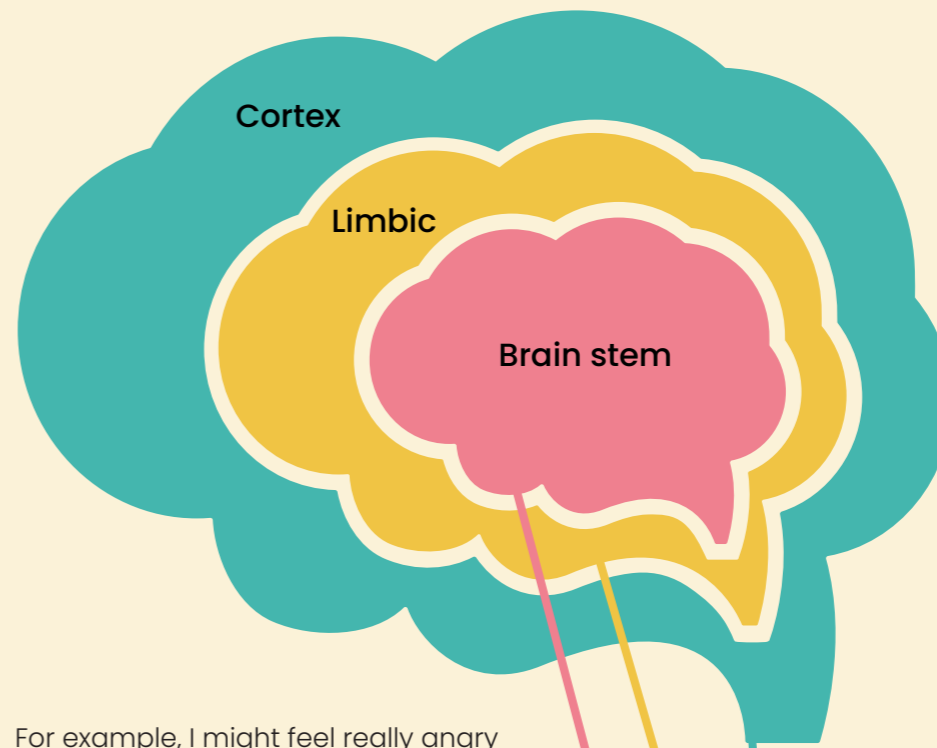
The brain is an extraordinary organ capable of exceptional feats. However, just like a seed needs nutritious soil, sufficient water and sunlight in order to germinate into a healthy plant, human beings need an environment that is physically safe and emotionally supportive in order for our brains to develop fully. Genetics certainly play an important role in how our brains are shaped; however, the quality of our environment plays an equally (and some would say larger) part in how we turn out. The study of the interplay between our genes and environment is called epigenetics. Epigenetic studies show that positive environmental factors (such as supportive relationships) actually 'turn on' good genes, so by making changes to our social environment, we can make changes to how our brain operates.

Whilst it is fair to say that there is much we do not know about the brain and its workings, many theories talk about there being three main parts of the brain that develop from gestation through to the finished product in our early 20s.

The first, and most basic part of our brain is the brain stem; this deals with basic physiological processes like keeping our breathing, heart rate and temperature within a healthy range.

The second part of brain development is the limbic system; this is responsible for sensing and feeling (e.g. I see something threatening and I feel fear).

The final and most sophisticated layer of our brain is the cortex. The cortex allows us to reflect on what we think and feel, and grant permission to, or prevent us from, acting on certain feelings and impulses.



For example, I might feel really angry (limbic system firing up) with my manager for blaming me for something I haven't done, and my urge is to yell at him. However, my cortex is telling me that this isn't very sensible as I risk losing my job, so it prevents me from acting on this urge.

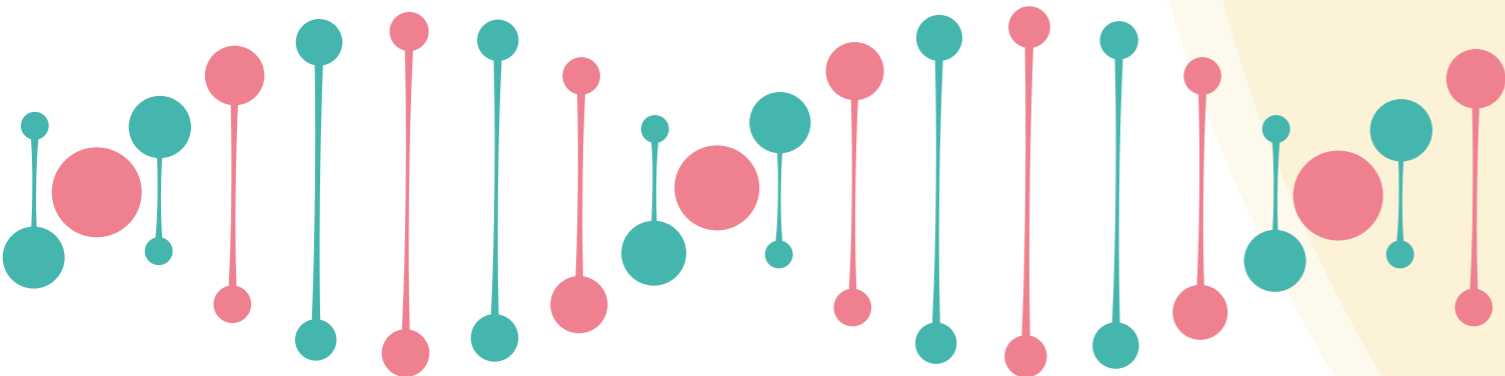
Sometimes we can experience what we call a 'limbic hijack'; the limbic system gets overwhelmed and in effect shuts down the cortex. As the cortex, the part of the brain that speaks up to warn us against the consequences of an inappropriate, self destructive behavior is now effectively gagged, we might not be able to resist this angry impulse, and before we know it, we have yelled at our boss or worse.

In essence it is our cortex that enables us to regulate the wide range of sensations and impulses that we experience at any one given time. An 'offline' or ineffective cortex is like a horse at full gallop without a rider to keep it on its course. By paying close attention to our feelings and learning ways to process and regulate emotions, we take control of the reigns and ensure that we stay in charge of our limbic system.

**Cortex (Wise Mind)**  
Dampens down the limbic system. Emotionally driven impulses to act are evaluated and given permission to go ahead or inhibited.

**Limbic system (Monkey Brain)**  
Seat of our emotions and motivation to do things.

**Brain stem (Reptilian Brain)**  
Most ancient; looks after every single physiological parameter, such as heart rate, breathing, body temperature.





## Fight, flight or freeze

When we feel threatened an automatic physiological response within us, often called 'fight, flight or freeze', is activated. This response has evolved as it increases our chances of survival when in danger.

The fight, flight or freeze response is automatic and involves the activation of our sympathetic nervous system

It diverts blood and oxygen to our large muscle groups, turns off our thinking mind (our cortex) and releases various stress hormones into our blood. The effect of

all this is that our heart beats faster, our breathing speeds up, our pupils dilate and we are ready to fight or run (or sometimes just freeze on the spot). As well as this, all our attention will focus on the threat we have spotted and we won't take in other information.

It is important to stress that this is an automatic response that has evolved to help us survive a threat. It is not a choice or anything conscious that we do. If we have lived through a lot of threatening situations then this system can become overactive and be more easily triggered.

Understanding what is happening when this is triggered can help us to feel less panicked about it and do things to settle us down again. It is not a sign that we are crazy or out of control, but an automatic physiological reaction to believing we are in danger.

## Emotional emergency plan

Whilst the practices in this toolkit will help in the long term, here are some short-term things you can try in an 'emotional emergency'

It can help to write these ideas down on a flash card, or on your phone and carry them with you.

*Posture – try to open up your posture. Go for a slow walk and try naming some of the things you can see around you.*

*Breathing – try to slow and deepen your breathing. This is always a useful practice in everyday life.*

*Affirmation – remind yourself, this moment will pass, these emotions are not permanent.*

## Growing up

As young children, we haven't as yet developed much of a cortex, therefore our ability to regulate feelings and impulses is very limited

As children we need balanced caregivers around us to help us manage our feelings. If we have caregivers who are reliably present and attuned to the difficulties we bring to them as children, their presence and soothing words or touch, quickly and effectively help us to feel better (by dampening down our limbic system). This leaves us feeling safe and calm and we can return to focus fully on whatever is important to us. In effect children can 'borrow' the emotional intelligence (or cortex) of their caregivers to help them manage their feelings when things are difficult.

We call this process **co-regulation**; the child brings their distress to the adult, who in turn offers comfort. If this co-regulation happens consistently over time, the child is likely to grow up to be an adult who can self-regulate in times of difficulties. In essence the input we get from our caregivers stimulates our cortex, and like a muscle, it gets stronger and more effective.

If on the other hand, we don't have a caregiver to turn to when we are distressed, or the caregiver is either inattentive, dismissive or abusive, our distress remains or deepens. Inattentive or dismissive caregivers often have their own troubles and difficulties which impact on their ability to manage their own emotions. These caregivers often struggle to effectively manage their children's distress.

There is no such thing as perfect parenting and moments of inattentiveness or frustration are very unlikely to cause significant harm. What children need is 'good enough' parenting so that they feel safe and loved.

Sadly many children grow up in environments that are neglectful and abusive. For the child this is when tolerable, fleeting stress can become toxic, permanent stress. In this way, we can struggle to learn effective ways to self-regulate as adults. We may develop a belief that negative emotions can't be tolerated or changed and then seek external ways to self-soothe, such as using substances.

If we grew up in an environment where we felt unsettled or unsafe, our limbic system (that perceives and responds to threats) can get over sensitive, contributing to overwhelming feelings, such as anger, fear, jealousy, shame etc., and trigger strong urges and cravings. In combination with a cortex that struggles to effectively dampen these feelings, the consequence can be impulsive and self-defeating thoughts, feelings and actions.

It is important to notice that whilst we are clearly not responsible for the environment that shaped our brain, it is possible to try and understand and manage the difficulties that these experiences have led to. We can then learn to act in ways that minimise harm to ourselves and the people around us.

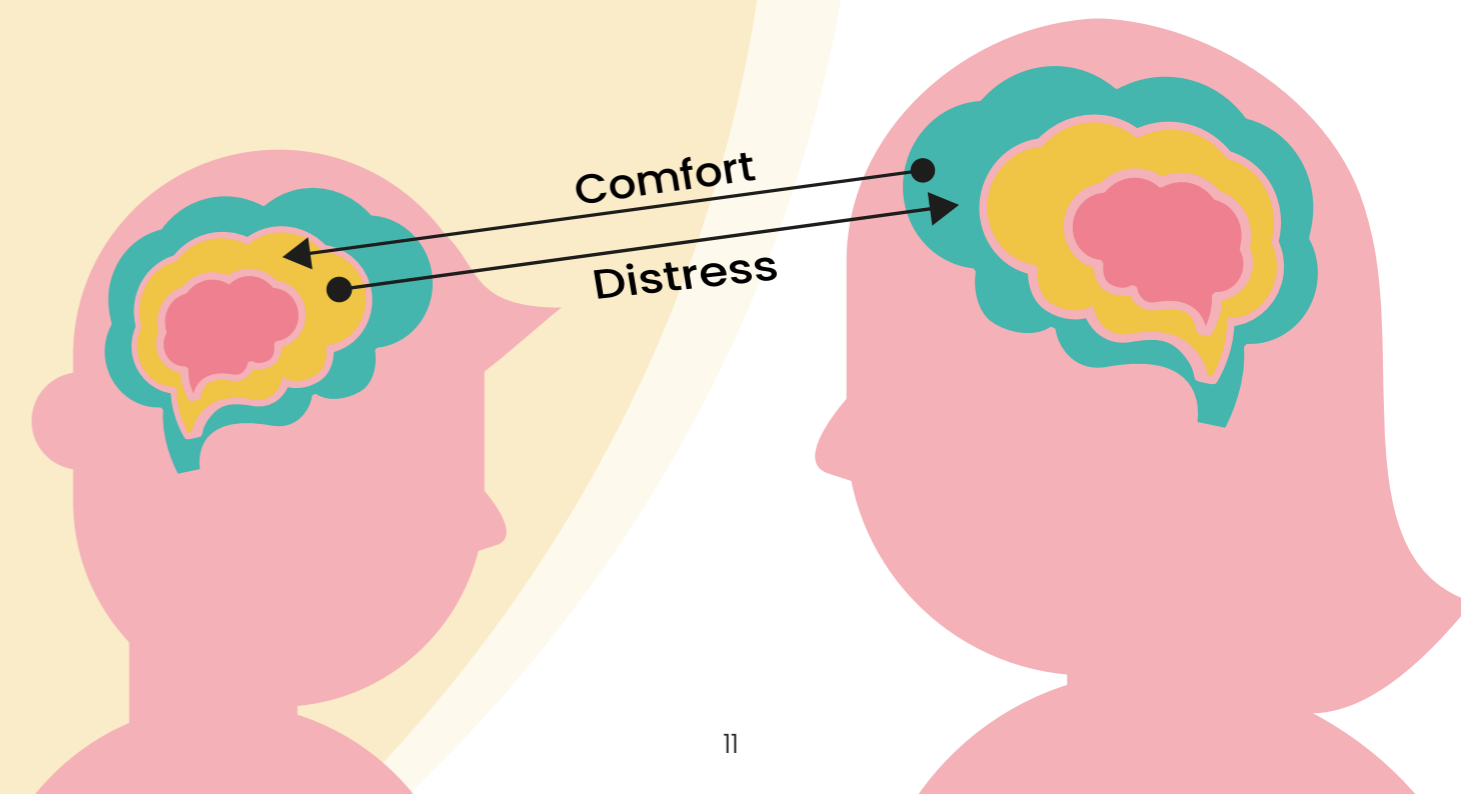
For example, if we are the victim of an unprovoked act of vandalism, such as our car being smashed up, that's clearly not our fault, however, it is possible for us to repair the car so it's roadworthy and in good shape. Now whilst this isn't exactly 'fair' it does leave us with a working car.

The part of our brain that protects us from danger (limbic system/threat response), is also the part of the brain that generates anxiety and makes it hard to relax and enjoy ourselves.

And whilst our cortex allows us to plan for the future and reflect on events in the past, which is key to organizing our lives, we can get stuck ruminating about negative past events or worrying about endless disasters in the future, which can make us overwhelmed and unhappy.

Emotional intelligence (the ability to regulate our emotions and stay within our window of tolerance) can be improved by having some knowledge of the workings of the brain and using this knowledge to keep our minds balanced.

Our brain has evolved different capacities that can sometimes have unwanted consequences



# Window of tolerance

Window of tolerance refers to the optimal zone of arousal for a person to function in everyday life. When we are within our window of tolerance (calm arousal), we have full access to our Cortex, the part of our brain that enables us to think about challenges in a balanced way, make sensible decisions and communicate effectively. When we experience hurt, anxiety, pain and anger, this may bring us close to the edges of our window of tolerance. However, these emotions tend to naturally subside over time, or we may use calming strategies that bring the distress down to a tolerable level.

Similarly, we may feel exhausted, low or shut down, but we may naturally restore our equilibrium once we have rested and recharged, or we may engage in activities or practices that lift our mood and energy.

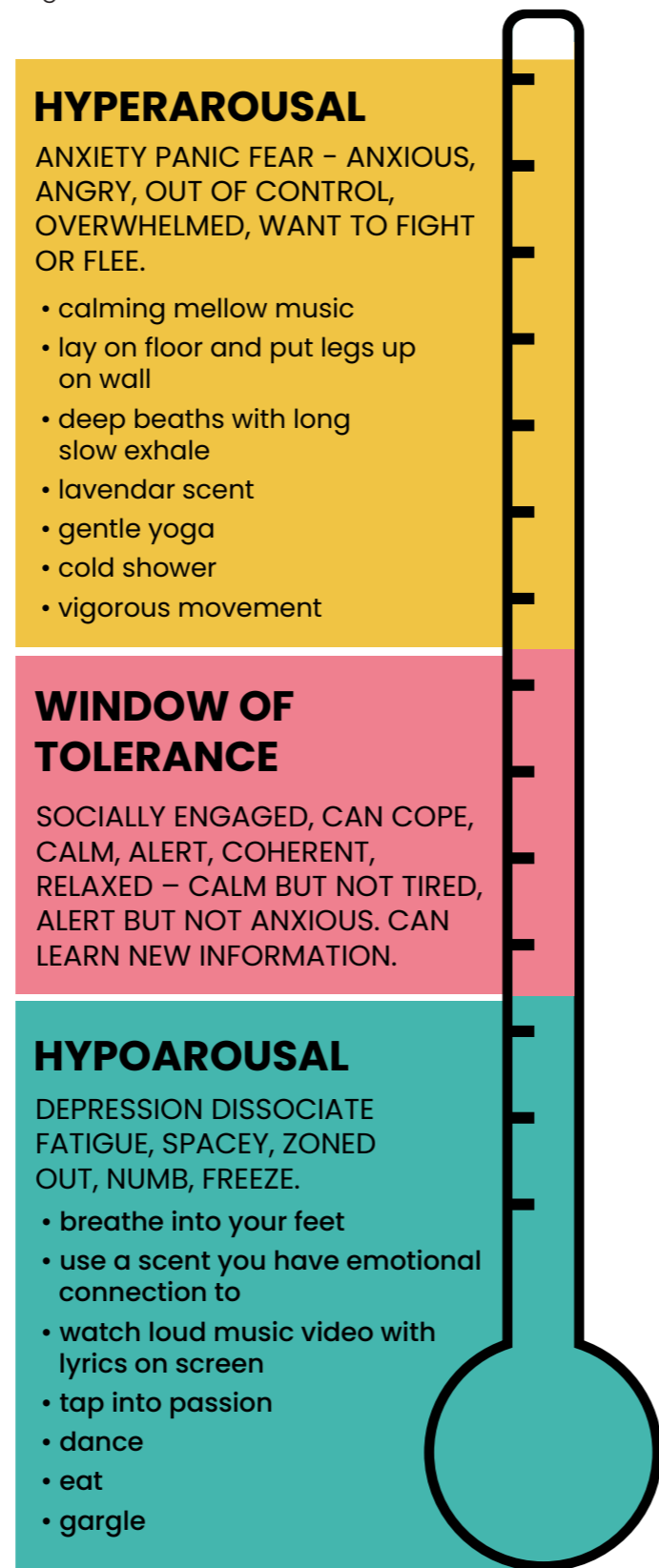
If a person has experienced significant adverse life events, such as trauma, they may have a smaller window of tolerance, so that even seemingly minor stressors can lead to states of hyper arousal (fight-flight) or hypoarousal (freeze).

In a hyper arousal state, we are more likely to over estimate the dangers of a situation and underestimate our ability to cope, sometimes resulting in avoidant or impulsive behaviours that can make the situation worse.

In a hypoarousal state, we may feel unable to think, make decision or act altogether, leaving us feeling out of control and helpless.

**A key aim of Brain Gym is to increase our window of tolerance so that we can deal with challenges more proactively and skilfully.**

We can achieve this by being curious about our emotions, rather than judging or supressing them. This can help us better understand, accept, tolerate, express and regulate emotions.



# Summary

In summary we can see that the environment we grew up in has a big impact on how our brain develops and the habits we learn. If we grew up with lots of threat and danger and without any adults to help us cope with this and feel safe, then our brain becomes 'threat focussed'. Because we haven't learnt how to regulate and manage these feelings of danger we cannot really turn off the threat focus and the world looks like a bit of a minefield.

The good news is that our brain remains 'plastic' throughout our lives. This means it is capable of change and we can learn how to regulate our emotions and sooth the difficult feelings we are struggling with. In what follows we will go through a range of exercises you can try that will give your brain and mind a 'work out' and help it develop some of the emotion regulation skills that help life feel manageable.

We have split these emotion regulation skills into three parts.

**At first**, we will focus on things that help us to dampen down our stress levels.

**Secondly**, we move more towards looking at ways we can re-assess the difficulties we are facing to make them more manageable and importantly reduce feelings of self-blame and guilt.

**Lastly** we will look at strengths and the things that you already do well but might not spend much time thinking about, or even realise are strengths that you have.

In the sections that follow it is fine to make use of those techniques that fit for you and to skip over any that don't. We are all different and things that make perfect sense to one person and work well for them, won't necessarily be helpful to someone else.

# Brain Gym Exercises

**Soothing your 'self'**



**Re-focus**



**Focus on strengths**



## Realistic Expectations



Like any learning process, learning new ideas and skills can be difficult. We may struggle with attention, concentration, memory, energy or motivation. It can be tempting when learning something new to be a little impatient, perhaps expecting too much too soon and set the bar too high.

We then strive towards our target, but fall short and conclude we have failed. This can quickly lead to feelings of hopeless and frustration, and rather than spurring us on to do better next time, we are more likely to become demotivated and give up.

On a neurological level, if we aren't reaching the standards set by others or ourself, we often get a release of the stress hormone cortisol, and an excessive amount of this certainly doesn't help us learn!

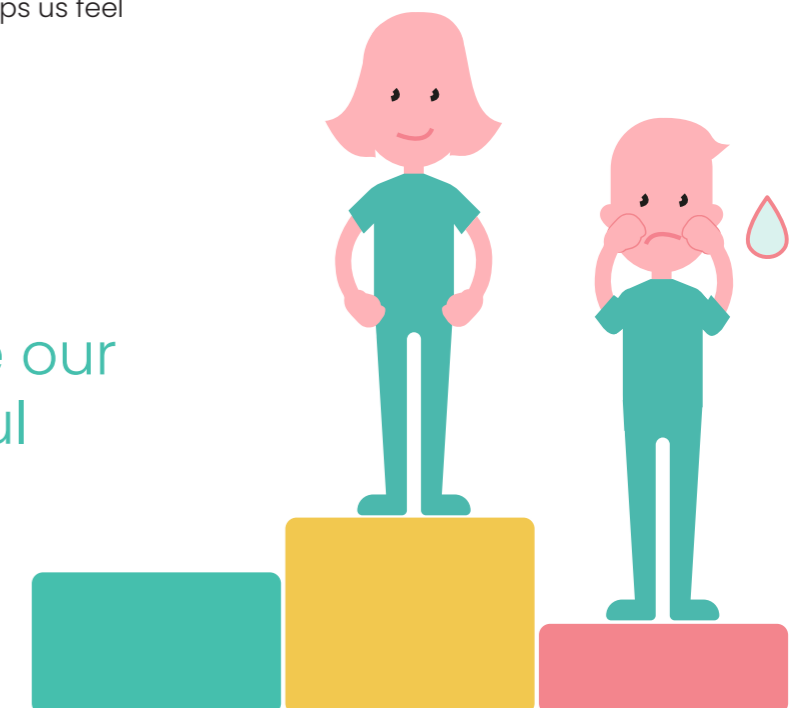
If on the other hand, we set the bar within reach and achieve what we set out to achieve, we get a release of Dopamine, which is the very chemical that helps us feel motivated and energised.

If your goal is to be physically active and get into running, there will be various obstacles you will come up against in keeping up your exercise, that may vary from day to day. For example cold, wet windy weather, how much you have slept, the presence of aches and pains etc.

On a day when there are few obstacles, it may be realistic to set yourself a goal of running a few miles and you get the neurochemical boost of this as well as the dopamine release for reaching your goals.

If the next day, you haven't slept well and feeling more achy, maybe a more realistic goal would be a 1 mile fast walk, and even if the cardiovascular boost might be less than a longer run, you get a dopamine boost and prevent adding more stress-hormones by falling short of your goal.

The concept of dynamic goal setting can be useful to ensure our goals are helpful





## Breathing



Breathing can be a very effective tool in regulating our stress levels. As described previously, when the limbic system in our brain has detected a potential threat, it immediately prepares a fast get away response by pumping oxygen into our big muscle groups.

This is clearly beneficial if we are faced with an immediate physical threat that we need to get away from. However, for most of us the kind of threats that activates this fight-flight-freeze response is of a psycho-social nature (a criticism, or a rejection, real or imagined), and in these instances we need to be able to think in order to generate a helpful answer/response, rather than running away. Therefore, we need to make sure that our cortex, or thinking brain, is fully online, and available to us.

### Here is an exercise that helps you develop a soothing rhythm of breathing:

One of the most effective ways of doing this is to slow and deepen our breathing.

Sit comfortably and take slow deep breaths. To ensure your breaths are deep you should be able to see your stomach rising and falling as you breath.

Now Start to create a gap between each of your breaths. Breath in slowly and hold your breath for a short time, then breath out and again hold your breath for a short time. In this way you can create four equal parts to your breathing. Breathing in (1), waiting (2), breathing out (3) and again waiting (4) before breathing in again etc.



## Meditation



Meditation has been around for thousands of years and can be a good way to start to build a healthy 'inside' life. Whilst our lives can be complicated and difficult it is important to remember to focus on the positive things that it is possible for us to be and feel.

Sit comfortably with your hands palm up on your lap. Breathe deeply and slowly as in the breathing exercise. Spend a couple of minutes getting used to this slow breathing.

Now take your right hand and place it on the centre of your stomach. Say to yourself "I am peace". See if you can feel the silence and peace of this moment. Spend a few moments with the sensation of peace within you.

Now move your hand to the centre of your chest. Say to yourself "I am love", "I love and respect myself". As you breathe see if you can feel this love within you. Spend a few moments with the sensation of love within you.

Now place your right hand on the top of your head, palm down. Say to yourself "I am free". Put your hand back on your lap and spend a few moments concentrating on this sense of freedom within you.

Now see if you can concentrate on the area above your head (above your mind) without thinking. When you are ready you can open your eyes.

Try to take these feelings with you into your day.



## Body



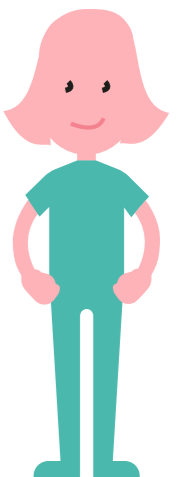
You may have noticed that your mood and body posture are somehow connected.

When you feel confident and energetic, you may have a more upright, open body posture, head up high and comfortably able to make eye contact.

However, if your mood is low, and you feel vulnerable, ashamed or anxious, you may have noticed that your body seems to shrink and close off, with your head turning down and avoiding eye contact. Some studies have shown that this 'low power pose' can increase cortisol and reduce testosterone. This is important as increased cortisol makes us more stress reactive and reduced testosterone makes us feel less in control.

An upright and open body posture can conversely reduce our cortisol level and increase testosterone, focusing our mind and giving us the confidence to deal with challenges more proactively and skillfully.

People often pay more attention to how we communicate through our facial expression and body posture, than what we say. Studies show that when we present with an open and upright posture people are more likely to ascribe positive qualities to us and engage with us in a positive manner.



## Thought suppression



We have a natural tendency to turn away from and suppress unpleasant thoughts and feelings. Intuitively, that response makes sense, in that we seemingly protect ourselves from discomfort. However, what we know is that the energy we put into pushing something away from us often backfires. The following exercise illustrates this point:

Close your eyes for about a minute. During that time, try your best not to think about the word 'pink elephant'. When the minute is up think about what happened to the pink elephant, did you think about it or not?

This experience is based on a study in Cognitive Psychology where participants were asked to read a list of words and phrases, one of them was 'pink elephant'. Both groups were told to read the list of words, but one group was instructed not to think about the word pink elephant. The participants who were told not to think about pink elephants, reported thinking

about this much more than the other participants.

Several studies since have demonstrated that suppressing thoughts tend to have the opposite effect.

Whilst we will find it very difficult not to think about 'pink elephants' or other unwanted images, what we can do is shift our focus of attention. In the next section we'll look at this in more detail.



## Attention

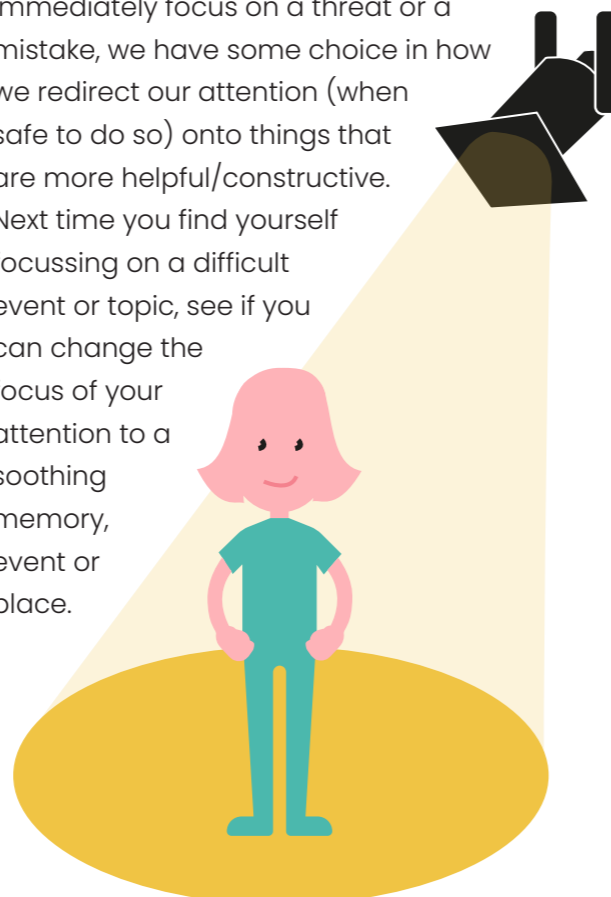


We can think of attention like a spotlight; whatever is under the spotlight gets illuminated and magnified. It appears that we have evolved a negativity bias when it comes to our attention and memory.

The neuroscientist Nick Hanson described this very aptly;

*'the brain is like teflon for positive information and velcro for negative information'*

It can seem unfair and unhelpful that negative information can dominate our mind to such an extent. However, this is linked with survival; our mind will prioritise information about risks and mistakes, as ignoring this could pose a threat to our survival. Although our attention might immediately focus on a threat or a mistake, we have some choice in how we redirect our attention (when safe to do so) onto things that are more helpful/constructive. Next time you find yourself focussing on a difficult event or topic, see if you can change the focus of your attention to a soothing memory, event or place.



## Power of imagery



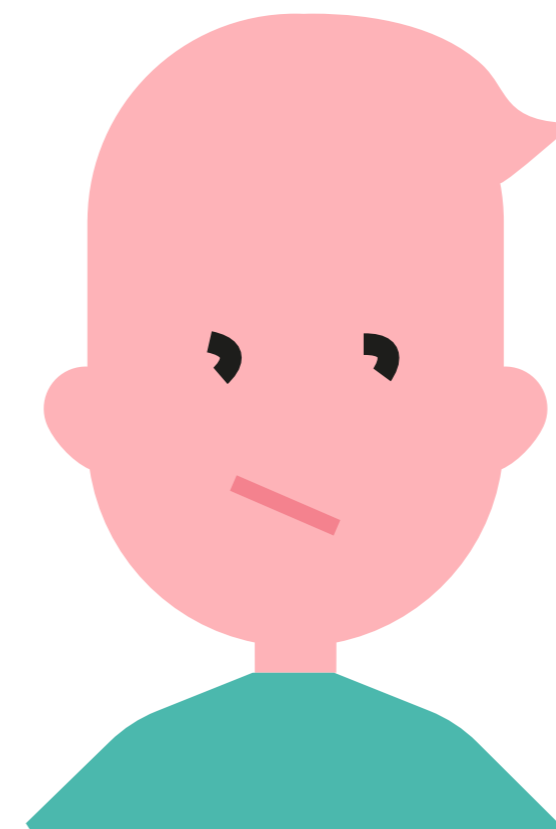
Our brain has an incredible capacity to create images of our external world. In fact these images can be so powerful that simply imagining an event, can be almost as impactful as experiencing it in the present moment.

Some people who have lived through traumatic events may experience distressing memories in the form of flashbacks or nightmares. Simply remembering these events, activates the limbic system in our brain, activating the fight, flight and freeze response and flushing our body with stress hormones. It feels like re-experiencing rather than simply remembering the trauma.

Equally distressing can be imagining a future event going horribly wrong, which in a similar way will activate the fight, flight and freeze mode, leaving us in a heightened state of distress.

We can harness the power of imagination and generate or activate positive images and memories that can give rise to feelings of safety, confidence and hope

If we bring to mind an image of our favourite meal, we may start salivating as we 'trick' the brain into believing we are about to consume food. In a similar way, we can activate our neuro circuitry to release hormones that can have a calming effect on us.



## Safe Place Imagery



The aim of this practice is to create a place in your mind that you can escape to when things are difficult. The first step is to create this place, so use your imagination freely in creating your ideal safe place.

Find somewhere you can sit comfortably, without too much noise or disruption. Get into a comfortable position (upright, open and relaxed), close your eyes and settle into a relaxing rhythm of breathing.

### Think of a place where you feel safe and comfortable

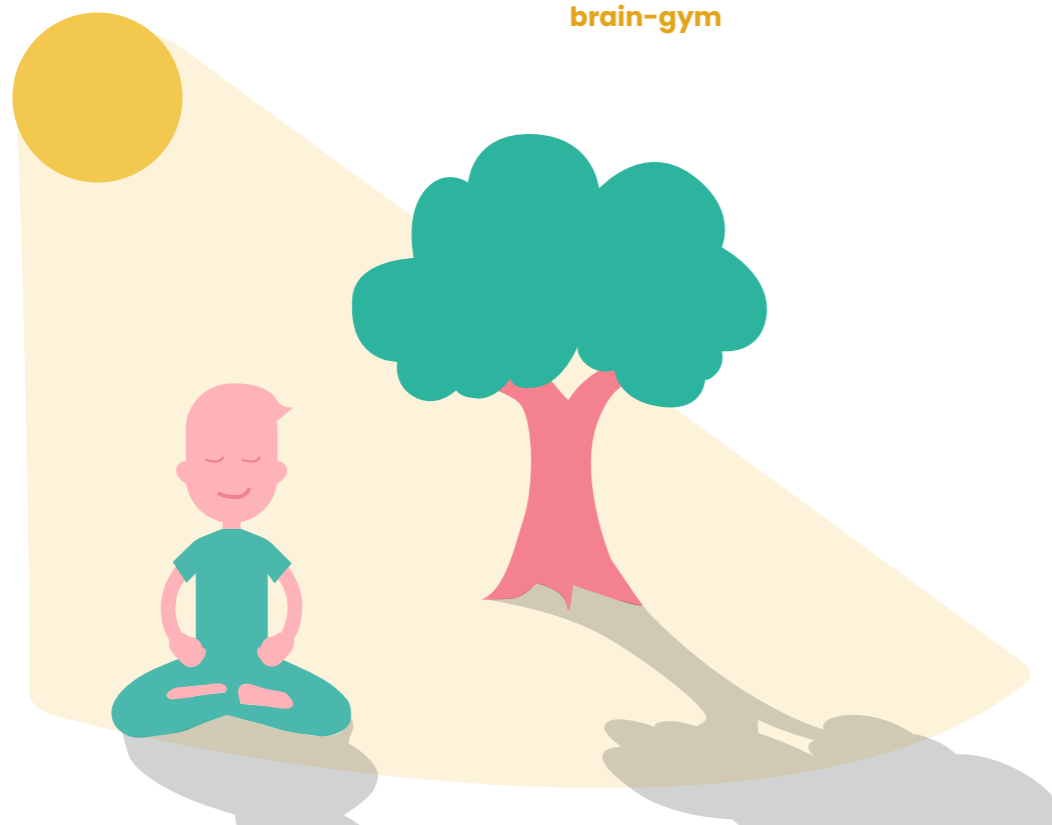
It could be anywhere you like, the beach, woodlands, in the mountains or in a house or cabin. Take a good look around you in that place, notice the colours and shapes, what else can you see?

Now notice the sounds around you, or perhaps the silence. Sounds far away and nearer to you. Those that are more noticeable and those that are more subtle.

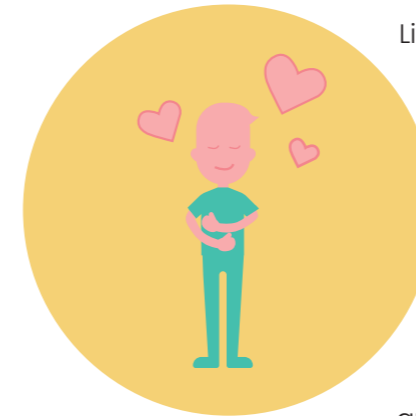
Then think about the smells you notice there. Next focus on your skin sensations, the ground underneath you, temperature, the movement of air.

Pay attention to the pleasant physical sensations in your body whilst you enjoy your safe place.

**Download a recording of a guided safe place imagery practice at the following website: [www.reallifepsychology.org/brain-gym](http://www.reallifepsychology.org/brain-gym)**



## Self Compassion



Life can be very challenging and at times feel a bit like an obstacle course. Everyone's journey through life is unique and the relative fortune and misfortune

is certainly not evenly shared out. However, we will all face losses and disappointments, and despite our best efforts and intentions, we will make mistakes and bad decisions.

### How we respond to these difficulties makes a big difference to how much we suffer

The Buddhist parable of the second arrow can help us make sense of suffering and how to manage it.

In this parable it is said that when we suffer misfortune two arrows can strike us. The first of them is the misfortune itself, but the second 'arrow' is our reaction to what has happened, the thoughts and feelings that go on within us. Interestingly within Buddhist philosophy the second arrow is often described as the more dangerous one.

So, if I fall over and really hurt myself, do I blame myself, calling myself an idiot? Or, do I metaphorically give myself a hand up, acknowledging the pain I'm feeling and trying to soothe and comfort myself?

A common observation is that we tend to be more understanding, forgiving and

helpful in response to others' mistakes than we are towards ourselves when we make the same mistakes.

Most of us have experienced the distress of being blamed for something that isn't our fault, criticised or put down. We experience these comments and responses as an attack, and our threat system in the brain lights up in a very similar way to these verbal threats as it does in response to a physical threat.

However, research demonstrates that when we launch a verbal self-attack, the effect is the same on the brain, activating the fight, flight and freeze mode. It is certainly helpful to acknowledge and take responsibility for mistakes that we make, however, excessive self-criticism and self-punishment doesn't help us learn from mistakes, nor does it motivate us to apologise or make amends.

Self-compassion is not about evading responsibility or 'letting ourselves off the hook', but developing a kinder, more supportive relationship with ourselves to help us deal with challenges we face in a skilful way. Sometimes a self-compassionate act requires real courage and discipline, such as giving up reliance on drugs or alcohol to deal with difficult emotions.

**Notice your internal monologue. When you are going through a difficult time, maybe after you've made a mistake or a bad decision, make a note of what you are saying to yourself. Is it fair/unfair/, helpful/unhelpful?, Kind/unkind? Enabling/Disabling?**

## The Compassionate Companion



This is another imagery practice that can be very helpful, particularly if you are going through a particularly tough time or struggling with self-blame and self-criticism.

The idea here is to create an imaginary person who has the compassionate qualities you value. Try not to pick a real person as all humans are fallible, but you can use various compassionate qualities from people you know or have heard about.

Once you have created your compassionate companion and written down their traits or attributes, imagine being in the company of the compassionate companion, paying attention to what it feels like in your mind and body to have someone given you their full attention. Someone who deeply cares about your wellbeing.

**Try filling out the form below to create a compassionate companion.**

How would you like your ideal caring, compassionate companion to look/ appear – visual qualities?

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How would you like your ideal caring, compassionate companion to sound, e.g. tone of voice?

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What other sensory qualities can you give to it?

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How would you like your ideal caring, compassionate companion to relate to you?

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How would like to relate to your ideal caring, compassionate companion?

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## Avoidance



In the same way as we tend to push away and distract from negative thoughts and feelings, we can also get into a pattern of avoiding situations that give rise to this discomfort. The more anxious we feel, the stronger the urge to avoid what is making us anxious. At the time, it may seem like the only possible option, however, by continuously avoiding situations we fear, we tend to confirm our belief that the challenges we face are unsurmountable and that we haven't got what it takes to deal with these situations successfully. We may experience that our world shrinks and there are fewer and fewer things we feel confident or comfortable doing. At this point, life can seem pretty gloomy and we may struggle to find a reason to get up in the morning.

The urge to retreat when we are feeling anxious is certainly not unique to humans. Rangers and farmers observed that Bison and domestic cattle that grazed on the vast Rocky Mountain plains in the US had a very different way of responding to a regular storm phenomenon in the area. As the storm travelled from West to East, the Bisons charged into the storm, thereby spending less time in the eye of the storm. In contrast, the domestic cattle, huddled together and anxiously moved away from the storm, but consequently were caught up in the storm for longer periods and were more affected by it.

We can all benefit from taking a lesson from the Bison in facing our fears head on. We might experience that our negative assumptions don't materialise and that we cope that little bit better than we had predicted.

Try this:

Write a list of things you would like to do, but avoid doing out of fear of not being able to manage. List these activities in order of difficulty, starting with the least difficult first.

For example, you may be struggling with social anxiety and you would like to build up your confidence to one day being able to go to a gig with friends. Step 1 might be to go to the local shop on your own when it's quiet, step 2 might be to visit the same place at a busier time. Step 3 may be a visit to a café on your own at a quiet time and step 4 might be to go when its busier.

See if you can identify what's your number 10 and number 1 and populate the steps in-between. If you break your goals into manageable chunks, you might find that as you are progressing through the steps, your anxiety lessens, your confidence grows and step 10 might feel within reach. Remember even the smallest steps are progress and will help you to feel less anxious over time.



## Belief Systems



As young beings we try to make sense of the world around us. This process of meaning making gives rise to what we call core beliefs; deeply held ideas about ourselves, others and the world.



### We use our beliefs to understand and navigate this world, through rules and strategies for living

For example, if we have developed a core belief that crossing a road can be dangerous, we automatically look right and left and ensure the road is clear before we make a swift crossing.

We are particularly impressionable early in life and the words and actions of people in authority, eg, parents, teachers, a close friend, the popular boy or girl in school, shape our core beliefs in important ways. Core beliefs are strongly held and once formed they can be hard to change as they are typically maintained by our tendency to focus on information that supports the core belief and ignoring evidence that contradicts it.

If a parent keeps telling us we are stupid when we were young, this may translate into a strong core belief that persists into adulthood, despite plenty of evidence that we actually are rather capable. We may

acknowledge the evidence that we are capable, yet we don't feel capable because of our fixed core belief.

Often core beliefs develop over time, but they can also change as a result of an isolated incidence. For example, we may conclude from our early life that we are safe and in control and live in a safe world. However, if one day we are

the victim on a random, unprovoked attack, immediately, we feel vulnerable and see the world as unsafe and something we need to hide from.

If a young child experiences physical abuse growing up, they may reasonably develop a belief that they are vulnerable, that others can't be trusted and the world is unsafe. In fact, whilst these things are happening these beliefs are true, which is why they are formed.

Such experiences and the beliefs they cause can give rise to necessary, protective strategies, such as hypervigilance (always looking for danger) and keeping people at arm's length.

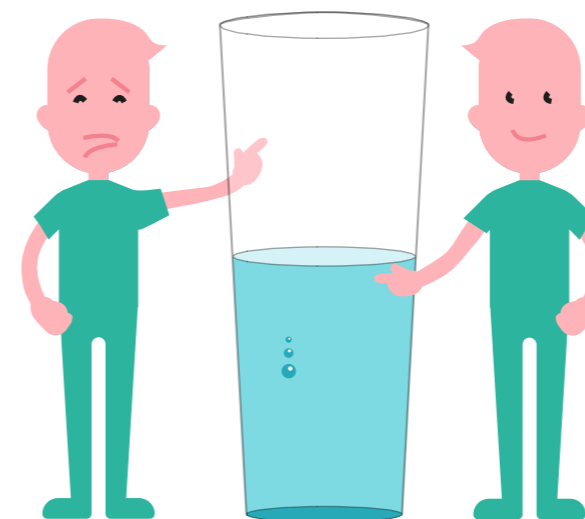
However, once this young child grows up into an adult who can now defend themselves, and may live in a safe environment, these beliefs and strategies may no longer be protective, but act as a barrier to living life fully. In this way, the self-protective beliefs we developed in childhood become self-limiting beliefs in adulthood.

### The three P's of Pessimism; Personalisation, Permanence and Pervasiveness can play an important role in how we are affected by the difficulties we experience

**Personalisation** is thinking that the problem is only due to our own fault or defect, instead of considering other factors that may have played a role in the problem occurring.

**Permanence** is thinking that a bad situation will last forever, that bad things will always happen and good things never happen.

**Pervasiveness** is thinking a mistake or bad situation applies across all areas of your life. For example, "I failed this exam, I fail at everything I do".



Common negative core beliefs about ourselves include, being unsafe/vulnerable, not being in control, being incapable, not feeling worthy and unlikeable/unloveable. People often develop beliefs that others are judgmental, unkind, uncaring, untrustworthy and we may see the world as unsafe, unpredictable or unfair. We may also develop belief systems about negative thoughts and feelings, which lead us to feel unable to control them.

We tend to act as if our core beliefs are factual and we rarely question the truthfulness and usefulness of these beliefs. However, doing a thorough review of our core beliefs can be helpful as we may be guided by out of date, untrue and limiting core beliefs that give rise to negative thoughts and feelings and unhelpful behaviours and stop us living life fully.

Write a list of beliefs you have developed about:

- Yourself
- The World
- People around you
- Any negative thoughts and feelings

Then think about whether these beliefs are accurate, reflective of your current self and situation, enabling or limiting.

## Perspective taking



Imagine you are walking through town and a good friend walks straight past you, without acknowledging you. What is going through your mind? How do you feel (emotionally and bodily)?

What do you think you might do next? Think about how you might think, feel and act if you made the following conclusion from this situation:

- 1) They didn't see me
- 2) They saw me and simply didn't feel like saying hi
- 3) They were going through a particularly tough time and couldn't face talking to anyone

Often, we make an assumption about a situation or person, e.g. 'he doesn't like me', 'I'm going to mess this up'. If these assumptions are left unchallenged, they often convert into 'facts'.

However, noticing that certain negative thoughts and assumption cause us distress, can remind us to take a step back and questions these thoughts.

Is what I'm thinking/saying to myself true (any real evidence for this?), is it helpful (will it help me deal with the situation more skillfully)? Is it kind? (Would I say this to someone I care about)

Have a look at the list of thinking styles on the next page and see which applies to you. Are there particular situations where these thought patterns are more common for you?

How do these thoughts make you feel? And act?

### All or nothing thinking

Sometimes called 'black and white thinking'  
*"If I'm not perfect I have failed"* *"Either I do it right or not at all"*



### Blowing things out of proportion

(catastrophising), or inappropriately shrinking something to make it seem less important



### Only paying attention to certain types of evidence.

Noticing our failures but not seeing our successes



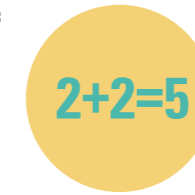
### I feel embarrassed so I must be an idiot.

Assuming that because we feel a certain way what we think must be true.



### There are two key types of jumping to conclusion:

Mind reading: imagining we know what others are thinking  
 Fortune telling: predicting the future



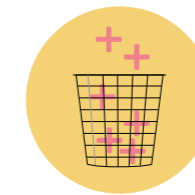
### Over generalising

*"everything is always rubbish"* *"nothing good ever happens"*  
 Seeing a pattern based upon a single event, or being overly broad in the conclusions we draw



### Disqualifying the positive

Discounting the good things that have happened or that you have done for some reason or another  
 That doesn't count



### Using critical words like 'should', 'must', or 'ought' can make us feel guilty, or like we have already failed

If we apply 'shoulds' to other people the result is often frustration



### Assigning labels to ourselves or other people

*"I'm a loser"*  
*"I'm completely useless"*  
*"They're such an idiot"*



### Personalisation

Blaming yourself or taking responsibility for something that wasn't completely your fault. Conversely, blaming other people for something that was your fault.



## Thought Balancing



This is a commonly used exercise to help re-evaluate how we are looking at things. Try using it if you find yourself feeling low or anxious about something that has happened in your day.

	Example	
<b>Trigger</b> (what situation gave rise to what I'm thinking/feeling right now)	I failed my math's exam	
<b>Unhelpful/distressing thought</b>	I'm stupid, I always mess things up I'll be kicked out of College I'll never get a job	
<b>Feeling</b> (emotionally and bodily)	Upset Anxious Angry Deflated Tense	
<b>Helpful/kind thought</b>	It's not true I always mess things up. I've been doing ok in College this year. Maths isn't my strongest subject and I was ill the week leading up to the exam so could revise as much as I had planned.  This result is unlikely to have a bearing on my overall grades in College or job prospects	
<b>Feeling</b> (emotionally and bodily)	A bit frustrated but not angry and feeling a bit more hopeful I can bounce back from this.  Less tense	

<b>Trigger</b> (what situation gave rise to what I'm thinking/feeling right now)		
<b>Unhelpful/distressing thought</b>		
<b>Feeling</b> (emotionally and bodily)		
<b>Helpful/kind thought</b>		
<b>Feeling</b> (emotionally and bodily)		

## Building resilience



You may have had repeated experiences of failure in life, that can contribute to low confidence and self-efficacy (perceived control over our behaviour and social environment)

This in turn may lead you to avoiding challenges and opportunities for learning and growing, as you may expect, or fear, another failure.

In order to build our confidence, motivation and commitment to learning, it's important to develop positive beliefs about mastery and control. It may be that you struggle to give up substances, stay in a relationship, attend health appointments etc., but chances are there are some things you do well and consistently, despite many obstacles.

We can also have a tendency to pay more attention to the things we can't do rather than what we can do. Imagine someone takes their dog out for a walk twice a day, come rain and shine. They may not necessarily see this as an act of resilience, but in order to persist with this activity, they need to overcome various challenges.

We may be faced with cold, icy or wet weather on occasions, maybe aches or pains some days, or social anxiety and low mood. It can be helpful to identify

the strategies that help us overcome these barriers.

Perhaps I've got myself some warm, rain proof clothes that I have ready when the weather is bad.

I may remind myself that a warm shower and some stretches help ease my aches, and focusing on calming my breathing and brining to mind the smiley dogwalker I always see on my walk helped me feel a little more relaxed.

I may also remind myself that the initial anxiety I feel setting off on my walk, is soon replaced with a sense of achievement and joy seeing the wagging tail of my dog!

We can develop our resilience by applying the strategies we know work for the things we do consistently and apply them to an area of my life where we struggle to stay committed.



List the obstacles you face in committing to your chosen activity and apply your resilient strategies and see if this helps you improve your resilience in this area.

## Gratitude



As we have seen, we are very good at focusing in on and remembering negatives, and sometimes an isolated mistakes can ruin an entire day or week. This can affect our mood and motivation and contribute to shaping a pessimistic view of ourself and our surroundings.

A gratitude practice is a good way to help appreciate and remember positive experiences, however, fleeting or trivial they way seem. Sometimes there may be obvious positives in our day, other times it may feel like looking for a needle in a haystack. There are no hard and fast rules to doing a gratitude practice. The idea is simply to spend a little bit of time, perhaps towards the end of the day, to reflect on positives. It may be a positive comment or feedback from a friend, appreciate the warmth of the sun on an otherwise cold, bleak day. Something funny or enlightening you read or heard about. Sometimes, this includes reframing of a difficult experience; rather than focusing in on a mistake, shift the focus to what you learnt from a mistake, perhaps you responded to this in a creative, skilful manner.

### Try this:

Think about a recent day that was difficult for you. First, focus in on negative or difficult aspect of the day and pay attention to how it affects your mood and body. Second, try to focus on anything positive that day and linger with those experiences, notice if you notice a shift in how your mood and body feels.

## Online relationships



Nowadays we can easily spend an ever increasing amount of time on various social media platforms

Clearly there are numerous advantages to being able to connect in this way, however the evidence around social media as a way to connect with others is mixed. Overall evidence indicates that spending extended periods of time on social media might be bad for our mental health.

It appears that the hormones that facilitate good mood (serotonin), motivation (dopamine) and trust and bonding (oxytocin) aren't released in the same way when we meet through a screen. Further to this one clear risk identified is from platforms with more of a focus on imagery, such as instagram and Pinterest - where filters and perceived perfection are the 'norm'.

When we are in a bad place, we are more likely to make unfair and unfavorable comparisons with others, comparing our inside experience to the representations of people's lives posted online. We zoom in on and magnify our perceived inadequacies and compare this to the digitally enhanced photos and inflated profiles on social media, leaving us feeling inadequate and low.

Clearly, social media is here to stay and it brings with it lots of benefits, so the solution may not be to get rid of it altogether. Rather, we perhaps need to ensure that we have time and energy to cultivate relationships face to face and not rely entirely on the virtual world.



## Relationships



Relationships are key to wellbeing, and they can be the biggest source of comfort or trauma. Interpersonal trauma tends to cause more severe and longer lasting distress than accidents and natural disasters.

If we are lucky to have people we can rely on in times of adversity, not only do we recover from psychological trauma quicker, but also our physical recovery is speeded up.

## As mammals we are hardwired to connect with our caregivers

This quote from evolutionary psychology illustrates; 'Bees have evolved to live in a hive and humans have evolved to live in a tribe'

We learn to relate to others by observing how people in our tribe relate to each other and how our primary care givers relate to us.



These relational experiences translate into an inner working model of relationships we call attachment styles. If our caregivers offer protection, comfort and age appropriate autonomy, we are likely to develop what we call a 'secure attachment style'.

Adults with secure attachment styles tend to feel safe and comfortable sharing feelings with others and able to lean on others in difficult times, but they also have a high degree of self-contentment and self-reliance.

If our caregivers on the other hand don't offer sufficient protection or comfort, and are dismissive, critical or violent in response to us reaching out for support, we are likely to develop either an insecure-anxious attachment style or an insecure avoidant attachment style.

Someone who is anxiously attached, will often cling on to their partner, fearing that they will leave them. This may result in feeling suffocated and then withdrawal, confirming the belief that people don't stay.

A person with an insecure-avoidant attachment style, will often keep others' at arms length, and insist on doing everything themselves, resulting in more fleeting and platonic relationships, leaving the person feeling alone and uncared for.

If we have developed either an insecure-anxious or insecure-avoidant attachment style, it doesn't mean we can't develop good, intimate relationships. If we are aware of our attachment style and the challenges this might bring in developing a close connection, we can learn different ways of communicating and relating to others, and as such our attachment style might change over time.

Whether we see ourselves as a natural introvert or extrovert, we all need relationships in order to feel good and function well. Our relationships can then become a source of comfort and strength.



## An Experiment

An experiment conducted in the US in the 1970's called 'Rat Park' illustrates the power of relationships;

In this experiment some rats were placed in a cage on their own, with access to two water supplies; one containing pure water, the other containing water laced with either cocaine or heroin.

In a second larger cage, known as rat park, many rats were placed together with lots to do and where they were free to roam, play and socialize as they wished.

In rat park there were also two water supplies, again one with pure water and one mixed with either cocaine or heroin.

The rather remarkable finding was that the rats placed in rat park preferred the plain water, and even when they did drink from the drug laced bottle, they did so intermittently and never overdosed. However, the rats placed in cages on their own preferred the drug laced water, often repeatedly drinking it until they overdosed and died.

In this experiment a positive social community beat the addictive pull of drugs.



# Conclusions

## Summary

An integral part of being human is having a brain that is busy sensing and interpreting what's going on around us, generating a near constant stream of thoughts and feelings, some pleasant, others unpleasant

Our inner threat system is working 24/7 to identify and respond to any threats to our survival. These notifications of potential threats will cause momentary stress or anxiety, but a balanced brain is quick to identify false alarms and reassure us we are safe and well. An oversensitive threat system, maybe as a result of past traumas or stressors, struggles to discern between real and false alarm, leaving us in a heightened state of stress

If we struggle to turn off the threat system ourselves, we may resort to substances or activities to temporarily shut the alarm off. However, this is likely to only offer temporary relief, as the stress and anxiety will resurface once we are no longer engaged in the activity.

Although we aren't able to shut off negative thoughts and feelings altogether, we can practice strategies that help balance our thoughts and calm our emotions, which in turn enable us to feel more in control and make better decisions

## Relationships are key to wellbeing

Being able to trust, open up to and lean on others in times of difficulties can help us through adversity. The quality of our relationship with ourselves is paramount to good mental health, and whether we act as a bully or friend to ourselves when the going gets tough may determine whether we sink or swim.



## Evaluation

There is a saying that goes 'what we measure, we improve' and this has some backing in the psychotherapy outcome research literature. Measuring our progress or lack of it can help us reflect on what is helpful or not about our intervention, and seeing progress can motivate us to keep going and commit to self-care practises.

The scale below is a composite of various scales that are often used to measure psychological wellbeing and distress in different ways. It is not a validated scale but simply something we have put together to help you track how things are going. So we hope it can be a useful tool to track how you are doing or compare before, during and after the work on the Brain Gym manual.

1) Almost never    2) Not very often    3) Sometimes    4) Often    5) Almost always

		1	2	3	4	5
1.	When I'm low, I think I'm the only one who struggles like this					
2.	I really go to town on myself when I make a mistake					
3.	I try to be gentle with myself when I make a mistake or mess things up					
4.	I struggle to feel much enjoyment					
5.	I struggle with feelings of depression and hopelessness					
6.	Feeling you are letting everyone down, including yourself					
7.	Feeling uneasy and uncomfortable					
8.	Constant worrying					
9.	I struggle to relax					
10.	I can change the way I think about a situation and feel differently as a result					
11.	When I'm dealing with a challenging situation, I think about it a way that makes me feel calm and in control					
12.	When I am down, I make sure I keep my negative feelings to myself					

**Self Compassion:** 1-3

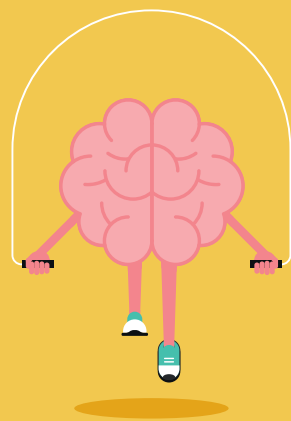
**Depression:** 4-6

**Anxiety:** 7-9

**Emotion Regulation:** 10-12

**Reverse scores:** 3, 10 and 11. To reverse score items; 1=5, 2=4, 3=3, 4=2, 5=1.

**Max Score:** 60. Higher scores indicate greater level of distress and greater difficulty regulating distress.



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