

**Dear You,**

I love being in your head because it's magnificent and because I'm the centre of attention up here. We're going to be together forever, you and I, so here are some things you should know about me.

**First, some basic info.**

I'm made up of about 85-100 billion very small building blocks called neurons, which are brain cells. If you were to count them one by one, it would take around 3000 years. It would also take a lot of patience and a distraction-free zone because it would be dreadful to lose count at like, 84 billion.

I'm kind of complicated, but fabulous. There are lots of different parts to me - a thinking part, a listening part, a memory part, a feelings part, and many more. Being able to do something well depends on the connections between neurons inside the different parts and between the different parts. You can actually design me to be the best brain for you. Brains can change, and you're the superstar who can change me.

**The secret to making your brain the very best brain for you.**

Every time you think, feel or do something, the messages travel along the neurons that are connected to that thought, feeling or action. This forms a pathway in the brain. Whenever you do that action, feel that feeling, or think that thought, the messages travel along the same pathway. Whenever you do something over and over, that pathway becomes stronger and stronger. The stronger the pathway, the stronger that part of your brain, and the easier that behaviour, thought or feeling will be.

Here's an example. When you first learn to ride a bike, you wobble and fall - a lot. That's because the 'riding a bike' pathways in your brain aren't very strong yet. The more you ride, the stronger the pathways get, so the easier the 'this is how you ride a bike' messages travel around to the parts they need to travel to. Over time, the pathways gets stronger and you become a genius on the bike. Nice.

This can also happen in ways that aren't so great for you. If you keep doing something that's bad for you, like eating loads of sugary treats, or yelling every time you get angry, the 'I need sugar,' pathways, or the 'I'm going to yell' pathways in the brain will become very strong and will drive you to keep craving sugar or yelling.

You have enormous power to develop amazing skills and qualities and to get better at the things you want to be good at.

**Whatever you do a lot of now, you'll be great at.**

During childhood and adolescence, your brain is primed to learn things well. This is why it's easier for kids to learn a language than it is for adults - because the brains of kids and teens are wired to learn, with plenty of neurons ready to organise themselves into strong, beautiful pathways.

**Use it or lose it.**

There is only a limited amount of space up here in your skull, so to be the most effective, most powerful, best brain for you, I keep the pathways you use a lot, and fade the ones you don't use as much. This makes sure there's enough space and brain energy to build the pathways that are important for you - which are the ones you use a lot.

For example, if you learn a foreign language, the 'learning a language' pathways will strengthen and develop quicker and stronger than they would in adulthood. If you don't learn a language, these pathways will fade away, to leave room for the pathways you want to use more. It doesn't mean you'll never be able to learn a foreign language - absolutely you'll be able to! It just means that it won't be as easy to do as it is during childhood and adolescence.

**Your thoughts can change your brain too - so make them good ones.**

Thoughts can release brain chemicals (neurotransmitters) and electrical impulses that can also create pathways in your brain. These pathways will influence your feelings and behaviour. This is why it's so important that your thoughts are healthy, positive and strong. When you think brave thoughts, 'I can do that', or 'whatever happens I'll be okay,' those thoughts form a pathway. The more you think those thoughts, the more real they'll feel. Brave thoughts ('I can do this') lead to brave behaviour. Calm thoughts ('Breathe in ... Breathe out ...') lead to calm behaviour. Anxious thoughts ('what if something bad happens?') lead to anxious behaviour. Remember, thoughts, feelings and behaviours don't need to match. You can feel anxious and think brave, or feel anxious and do brave.

## **But how do the messages travel between neurons?**

This is why I love being your brain. You're a thinker, and that's an excellent question. Messages travel from one end of the neuron to the other end with electrical impulses. Your brain creates enough electrical impulses to power up a small light bulb - so don't let anyone tell you that you aren't powerful! Once the message (the electrical impulse) gets to the end of the neuron, it has to jump to the next neuron. Neurons don't touch - there's a teeny space between them. The message jumps across the gap to the next neuron by chemical messengers called neurotransmitters. Having the right balance of neurotransmitters is important because it can affect your mood, how well you sleep, how well you learn and remember, how stressed or anxious you feel, your motivation - so many things.

## **I know what you're thinking ... 'So how can I get the right balance of neurotransmitters?'**

There are four powerful ways to make sure your neurotransmitters are at healthy levels.

### **1. Eat well. Healthy, nutritious food makes me (and you) excellent.**

Being a brain is busy work, so you need to fuel me up with good food - oily fish (salmon, tuna - tinned is fine), eggs, blueberries, chia seeds, cabbage, avocado, soy. Don't scrunch up your face. They're delicious. If they don't taste that delicious to you, it's because the pathways aren't there yet. It can take about seven tries of a new food to be okay with it. So let's make a deal. Try the foods at least 7 times. If that sounds gross, try licking it a few times, then seven times when you chew and swallow. This will help to strengthen the 'this food is okay' pathways, and the food won't taste so disgusting.

### **2. Get your body moving.**

I don't have legs. You know that right? So I need you to move. Exercise increases the neurotransmitters that help you feel happier, less stressed, less anxious, and the ones that help you focus, learn and remember, and think positive thoughts. Scientists have found that a neurotransmitter called GABA can help people to stop thinking negative thoughts that make them worried, sad or anxious. We all have those thoughts from time to time, but you want to be able to stop them when they've overstayed their welcome. Exercise helps to get GABA to healthy levels so it can help manage anxiety and negative thinking. Exercise is a brain booster. I love it.

### **3. Get plenty of peaceful zzz's.**

I do some of my best work while you're sleeping. I help you deal with your emotional 'stuff', I help you understand what you've learned, and I strengthen your memories. It's also when I can get creative because I'm not having to take care of other things that keep me busy when you're awake, like walking, talking, listening, balancing.

### **4. Do mindfulness. Brains love it like a favourite thing.**

Brains love mindfulness - probably even more than we love pictures of furry baby animals. Mindfulness helps brains to be calmer, braver and stronger which helps you to be calmer, braver and stronger. Here's how it works. Mindfulness strengthens the pathway between your thinking brain (the prefrontal cortex) and the feeling brain (especially the amygdala), making it easier to calm big feelings. Mindfulness can also improve concentration, learning, mood and sleep. Over time, it can help you to feel less stressed and anxious, happier, kinder, more able to focus and more in control of your feelings. There are a lot of awesome apps that can guide you through mindfulness. Try for at least 10 minutes a day. It will help you to be more of a legend than you already are.

### **I have a thinking part and a feeling part.**

The thinking part, the prefrontal cortex, is at the front of the brain. Let's call it the thinking brain. It's responsible for thinking things through, paying attention, solving problems, making good decisions, calming big feelings, learning and much more. The feelings part is more towards the back. Let's call this the 'feeling brain'.

When something happens that's good for you (like succeeding at something difficult; trying something new and challenging; doing something brave; exercise; spending time with people who feel good to be around), the brain releases chemicals (dopamine) that help you feel good. Dopamine is the '*that feels good, let's get more*' chemical. It's job is to drive you to seek more of the things that are good for you.

On the other hand, when the brain identifies something that might be a threat (and not being allowed to do something you really want to do might count as threats), your brain surges your body with chemicals so you can fight the threat or flee the threat. This is the handywork of the amygdala - an important part of your feeling brain. The amygdala is like your own fierce warrior, there to protect you. When you're feeling big feelings like anxiety, anger or sadness, it's

likely that your amygdala thinks that there is something it might need to protect you from and is sending messages to the other parts of the brain to act a certain way. This might be to fight the danger (maybe by yelling, screaming, arguing, fighting, or saying 'stop!' or 'no!') or to flee the danger (perhaps by running away or ignoring, hiding, or lying to get out of trouble).

**Brains are smart, and yours is magnificent, but all brains can read things wrong sometimes.**

Let's get something straight - there are no bad feelings. All feelings deserve to be there, but sometimes what you do with your feelings can land you in trouble. The feeling brain and the thinking brain need to work well together, but it doesn't always happen this way. When feelings are big, the feeling brain can overwhelm the thinking brain and send it 'offline' for a while. This is the work of the amygdala - that fierce warrior part of your brain. If you actually are in danger, having your amygdala take control can be a great thing. If there is a wild animal coming at you for example, your amygdala doesn't want you to think too long about whether the animal is lost, hungry, angry, or how it got its fur looking so fab. It just wants you to get safe, so it sends the thinking brain offline until the 'danger' has passed.

Here's the problem. Amygdalas are do-ers, not thinkers, so they'll act first and think later. They can be a little overprotective and can take control even when there's nothing to protect you from. An example of this is when you're not allowed to do something you really want to do. Your amygdala might hear that as a threat and send the thinking brain offline. When this happens, you might not think clearly about the consequences of what you're doing, or whether your response is necessary. If your response is to, say, yell or scream (fight) or lie (a type of flee), that can mean trouble.

None of this means you can blame your brain when things go wrong. If your brain gets into trouble, you'll get into trouble, so you have to be the boss of your brain. Feel your feels, but be smart about it. Things will always work out better when your 'feeling brain' and your 'thinking brain' are able to send strong messages to each other. To do that, you need to keep your thinking brain strong. Mindfulness and slowing down ('Stop and Think') to think of the consequences are ways to do this. If you feel as though your amygdala is taking over and your thinking brain is about to tap out, strong, slow, deep breaths and mindful clouds will help to keep it online.

## **Mindful clouds.**

Get comfy and imagine your thoughts and feelings are forming into little clouds in front of your head. Let them float around gently and when you're ready, blow them away. As you blow the cloud away, feel some of that angry energy or sad energy leaving you. Keep doing this as different thoughts and feelings appear. It's okay if the same ones keep coming back. Just watch them in front of you, let them float around, then blow them gently away.

## **Breathe. In. Out. Lovely.**

Strong, steady breathing is like a lullaby for your brain. Breathe out to get rid of all the air, then in for 3, hold for one, out for 3. Do this a few times to bring your thinking brain back online so you can calm your big feelings, make good decisions and be awesome. It doesn't mean your big feelings won't be there anymore. You might still feel sad, angry or anxious, but you'll be more able to respond in a way that is strong, brave and better for you. A brain in high emotion is a very busy brain, so it might struggle to remember strong, deep breathing if that isn't something you've done a lot of. It's important to practice when you're calm, so the pathways can strengthen. Here are a couple of ways to practice.

Hot cocoa breathing: Imagine you're holding a cup of hot cocoa. Breathe out, then smell the warm, chocolatey smell for 3, hold it for one, then blow it cool for 3.

Figure 8 breathing: Imagine drawing a sideways figure 8 on your arm, your leg or anywhere that feels lovely. Breathe out, then as you draw the first belly of the 8, breathe in for 3, when you get to the middle of the 8 hold it for one, then as you trace the second belly of the 8 breathe out for 3.

## **The Social Brain.**

People feel safer, stronger and wiser in groups because it's how we look after each other and share information. I'm constantly on the lookout for information about who feels good to be around, who doesn't, what people might be thinking of you. I don't always get it right. Like I said, I'm super smart, but I can read things wrong sometimes. When this information is positive, it feels good - great actually. When it's negative, as it is when people are excluded, rejected, humiliated or bullied, the information gets sent through the same pathways as physical pain. This is because pain motivates us to act, and when something feels dangerous, like being excluded, rejected or bullied, the brain sends out

messages to get us to act - to either look for support or to avoid the threat. It's really important to think about the impact you might be having on the brains of people around you. You're really powerful - we all are - and kind kids are the coolest kids of all.

### **I learn best if you take small breaks.**

I LOVE learning, so when you expose me to new things or face a challenge (a good one not a daft one), I reward you with feel-good brain chemicals. I'm designed to be curious and to snap to attention when things change, so I do my best learning when you take small breaks. While we're talking about learning, your sight, hearing, speaking and movement have their own memory banks. If you're learning something, the more different ways you can learn it the better. So, listen, write, touch, draw and say what you need to learn. If you can, act it out. And if you act it out, do it in front of a mirror so I can see, because I think you'd look fabulous doing that.

### **And finally...**

You have extraordinary power to shape your brain in ways that will help you to be good at the things you want to be good at. Don't worry if you make mistakes along the way because it's how I learn, strengthen and keep you shimmering. You're a magic maker, a king, a queen, a legend. Write it on a note and stick it on your mirror. There is so much 'awesome' in you. Be brave enough to believe it, and know that with time, effort and patience, you can get better at anything. We're an amazing team you and I. Thanks for believing in you.

**Love from,**

**Your Brain.**