

Chapter 1

Introducing Brain Training

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Everyone wants their brain to work at its best – whether you want to stay sharp to keep up with your children or come up on top at work. The exciting thing is that science now provides evidence for what works and what doesn't. So training your brain no longer has to be a case of trial and error – trying one thing, finding out that it doesn't work and then trying something else.

In this chapter I talk about cutting-edge, scientific research and examine how this research can influence your life and change your brain for the better.

Yes, You Can Train Your Brain!

People who use their brain more efficiently tend to have better jobs, better relationships, and more happy and fulfilling lives. And here's the exciting thing: you can change your brain and, as a result, change your circumstances. Although you may have long been told that you're stuck with the brain you have, scientific research has now found that this isn't true!

Brain plasticity – the brain's amazing ability to adapt and change throughout your life – is an exciting and growing area. And the great thing is, you have the power to change your brain to help it function more effectively.



Brain training doesn't have to include a major overhaul of your life. Here are some straightforward tips to get you started:

- ✔ **No time?** Grab a handful of blueberries on your way out the door (Chapter 12); play a brain game while you're on the move (Chapter 19); and spend a few minutes each day in (Chapter 10).
- ✔ **No energy?** Find out the best exercise to boost your brain (your body will also thank you; Chapter 14); reap the benefits of green tea (Chapter 13); and discover the power of sleep for your brain (Chapter 14).
- ✔ **No motivation?** Friendships not only increase motivation, but they also improve your brain power! Spend just ten minutes socialising to experience the same benefits to your brain as doing a crossword puzzle (Chapter 11).

Getting to Know Your Brain

You've heard of the left brain and the right brain. Well, it's true that the brain is made up of the left and right hemispheres and that they have different functions. However, it's not entirely true that some people are only 'left-brainers' and others are 'right-brainers'. For example, language skills are located in the left hemisphere (see Chapter 2) and everyone uses this part of the brain! You don't need to hide behind the excuse that you're a right-brainer so you can't remember names. With the activities included in this book, you can get both halves of your brain working at their optimum levels.

In the world of brain training, key players exist and I talk about how to keep them alert and active in Chapter 2. The most important thing to remember is that the different parts of the brain don't work in isolation – they come together like a team. When you train one part of the brain, the rest also benefits. You can think of the brain like an orchestra or like a sports teams. The message is the same – one star player can't carry the rest of the team. They all have to work together.

The Long and Short of Memory

Your brain stores information that you come across briefly in your *short-term memory*. If you rehearse the information often, you can move it to your *long-term memory*. After the information is in your long-term memory, you usually have access to it indefinitely.



The long story

Long-term memory is made up of many different types of memories:

- ✔ **Autobiographical memories.** Childhood memories and meaningful events, for example, are known as *autobiographical memories*. These types of memories are really powerful and the loss of them can be a good early indicator of dementia and Alzheimer's disease. You can do many things to keep these memories fresh; I discuss how in Chapter 4.
- ✔ **Semantic memory.** Your knowledge of facts and random bits of information is known as *semantic memory*, which is very useful in converting new information from your short-term memory into your long-term memory. Find what strategies for doing this work best in Chapter 4.
- ✔ **Procedural memory.** *Procedural memory* is an automatic skill that you don't even have to think about – like driving a car or writing your name. You can discover how to make new things become automatic in order to help your brain work more efficiently.

The short story

Short-term memory is responsible for you remembering verbal, visual and spatial information. People don't usually remember things in their short-term memory for very long unless they make a conscious effort to 'move' them into long-term memory stores.



Here are a few different ways in which you use your short-term memory.

- ✔ **Verbal.** Do you forget what you were saying in the middle of a conversation? Find yourself standing on the top of the stairs and can't remember why you walked up there? These are common phenomena and aren't signs of serious memory loss. However, if you want to keep your brain in top shape, find out how to keep your language skills sharp. Whether you want to remember your list of errands or avoid memory loss as you get older, keeping your brain active can overcome signs of Alzheimer's disease (see Chapter 6).
- ✔ **Visual.** Why do some people look so familiar, yet you struggle to remember their names? This is an example of visual memory at work. Use tricks to boost your brain when it comes to remembering faces and other types of visual information (see Chapter 7).

- ✓ **Spatial.** Do you always find yourself struggling to remember directions? Spatial memory holds the key to getting you to the right destination instead of ending up in the wrong neighbourhood. One trick is to adopt a bird's eye perspective when you're in a new place. Read Chapter 7 for more tips on how to improve your spatial memory skills.

Developing a Healthy Brain

Mental health refers to your state of being. Are you happy? When do you find yourself frustrated? Do you feel stressed out? What makes you feel anxious? These questions are important in determining how well your brain functions. So make sure that you pay attention to your mental health – doing so can make the difference between living a fulfilled life and a frustrated one.



Don't take your passions and hobbies for granted. Discover how these can make your brain more creative. And a more creative brain is a smarter brain. Whether you're a music lover or a budding writer, you can choose from a range of activities to help your brain.



You can choose to be optimistic to make a difference to your mental health. You can easily think that a change in circumstances will change everything for you and make your life better. But this is seldom the case. The cautionary tale of the lottery winner in Chapter 9 demonstrates that – despite winning millions – he ended up unhappy and wishing he'd never even won in the first place! So how do you make yourself smile? Chapter 9 gives you a lot of ideas that you can easily try out.

Getting swept away in a myriad of things that demand your attention on a daily basis is easy. Yet in this ever-demanding environment, finding time to quiet your brain and create a space for contemplation is increasingly important. Calm time brings tremendous benefits for your brain. You don't have to be a nun or a monk and spend hours each time to experience the benefits of contemplation. Scientific research has found that even ten minutes a day makes a big difference in improving how your brain works. Read Chapter 10 to find out more and pick up pointers on what you can do in your daily life to make time for quiet.



One great way to train your brain is to keep it socially active. From picking up the phone, to meeting for coffee, to discussing the latest movie together – growing research illustrates the benefits of friendships for the brain.

And it's not just face-to-face interactions that make a positive impact. Virtual friendships can also boost your brain power! Digital technology is advancing, but be aware that not all digital technology benefits your brain. Only when you're actively engaging with digital technology can you also experience benefits to your cognitive skills. Read Chapter 11 for more advice.

Getting Active for Life

An active lifestyle leads to a more efficient brain – one that can respond better to stress, remember information, and be more attentive. From what you eat, to what exercise you do, to how much sleep you get and the amount of caffeine you drink – all these affect your brain. Understanding how your daily decisions in these areas could be making a big difference to how your brain works is important. So before you take another bite of your sandwich or drink another glass of wine, find out what really is best for your brain.

Here is a quick overview of tips and strategies you can find in this book:

- ✔ **Eat for your brain.** Chocolate to boost your brain? Juice to help your memory? Steak to help your attention? Eating the right brain food doesn't mean that you end up eating lettuce and flavourless food. On the contrary, many delicious and wonderful foods are packed with nutrients that are fantastic for your brain. Read Chapter 12 before you start cooking so that you can eat the best foods for your brain.
- ✔ **Get help from stimulants.** Caffeine, alcohol, and medication – they're all a double-edged sword. In some instances stimulants can help your brain work better. But many of these stimulants come at a price. Not all stimulants are equal – and you could end up harming instead of helping your brain. Read Chapter 13 to make sure that you know what you're getting into before it's too late.
- ✔ **You've got to move it!** If you think that Chapter 14, which is all about exercise, is going to make you feel guilty for not getting a gym membership, don't worry. It won't. Instead, you find out how even the brain responds to physical activity, how you can keep depression and memory loss at bay, and even how to help your body heal faster. Chapter 14 is also about rest – the importance of sleep to ensure that your brain is in great working shape.

