

# Free Minibook!

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## Training Your Brain

FOR  
DUMMIES<sup>®</sup>

### *This minibook features:*

- Training your brain basics
- The best foods to eat for brain health
- Fun puzzles to complete

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# **Training Your Brain For Dummies**

*The brain is the body's most important muscle and, with regular exercise, you can improve its performance and strengthen it against age-related deterioration.*

*This guide offers everything you need to know to keep your brain and memory in tip-top shape, whether it's choosing the right foods or playing the piano.*

*From puzzles and exercises to the best day-to-day habits and long-term mental fitness techniques, Training For Brain For Dummies will show you how to your boost your mental agility and reduce memory-loss.*

*So read this sample and get your brain fighting fit in no time!*

Extract from  
*Training Your Brain For Dummies*

# Introducing Brain Training



**E**veryone 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 and 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 and 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 of the full book); play a brain game while you're on the move (Chapter 19); and spend a few minutes each day in contemplation (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 and 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 and 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 are examples of 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.

## ***Feeding the Brain***

Food has a tremendous power over your brain, from reminding you of fun-filled childhood memories (Chapter 4) to relaxing frazzled nerves (Chapter 10). Yet most people probably view food as purely functional and something they have to do to keep their bodies moving. Eating is something you may do without too much thought, sometimes with friends at a swanky new restaurant; sometimes on your own in front of a TV. Here, however, I highlight how food can actually change your brain from childhood to adult life.



Taking advice from a suitably qualified medical practitioner is always a good idea before making significant changes to your diet.

# *Developing Eating Habits for a Lifetime*

Most of you have probably been on a diet at some point in your life. Whether it was for an event you wanted to look good for or health reasons, most people can relate to the trials and tribulations of calorie counting. Yet calorie counting and bouncing from one diet plan to another isn't really a good way to live life. You probably know that having a food plan that's part of your lifestyle is much more effective. In this section I list foods that research shows are an essential part of any lifestyle. Don't worry; you don't have to eat like a rabbit to keep your brain at its best!

## *Juicing for life*

Juice bars have recently sprung up all over, and nowadays it's not hard to find one, even at a small airport. What's so great about juices? And how can they benefit your brain? For starters, juices are packed with vitamins, which have a host of benefits for your body and your brain.

Juices also give you your 'five a day' in a quick and easy method. Many people have an odd assortment of fruits and vegetables lying around the kitchen, and juicing lets you throw these all together. You can experiment with all sorts of combinations: celery and apple, cabbage and mango, broccoli and raspberry and the list is endless. You don't even need any cooking skills!



Here's a list of some fruits that should be at the top of any juicing list:



✓ Pomegranates. Recently, pomegranate juice has become very popular. Pomegranate juice is very pleasant to drink and studies confirm that unlike most food fads this one really does live up to its hype. For starters, pomegranates are a 'superfood', which means that they're rich in antioxidants, more so than other fruit. Pomegranate juice is great from pregnancy to adulthood. At one end of the lifespan, expectant mothers who drink this juice can help the baby's brain to resist brain injuries resulting from low oxygen supply. At the other end of the lifespan, studies confirm that pomegranate juice can prevent Alzheimer's disease, helping people stay sharp in old age.

✓ Prunes. If pomegranates are the 'trendy' fruit, people often think of prunes as distinctly unfashionable. Most people associate prunes with alleviating constipation and other related bladder conditions. But did you know that prunes are also good for your brain? Prunes contain vitamin A, which not only boosts your body's defence system but also helps brain cells repair themselves quickly.



You can make your own prune juice by soaking 1 cup of prunes in 5 cups of water for four hours. Remove any seeds, puree, and enjoy.

✓ Be 'grapeful'. Grape juice contains high levels of flavonoids, which work to lower blood pressure and increase levels of good cholesterol. Studies have found that grape juice can improve memory and coordination. If you're already a fan of grape

juice, make sure that you're drinking juice made from red or purple grapes because these are packed with brain-boosting goodness. One study even found that grape juice was better for your heart than cranberry or orange juice.

- ✓ **Colour me blue.** Blueberries are another superfood and are rich in vitamin C and potassium (which helps bones). Clinical trials found that 2 cups a day is enough to boost learning and brain power. Even frozen blueberries deliver the same benefits to your brain, so you can enjoy them all year long.



Be aware of the sugar content in ready-made juices. Some juices add so much sugar that a single glass can exceed the daily recommended dose. Read the contents to make sure that no sugar is added. Also try to avoid juices with sweeteners or aspartame, because these have been found to be bad for your health. If possible, make your own juice at home. This way you can be creative with your chosen combinations of fruits and vegetables and know that you're not adding extra sugar. Why not add a vegetable you don't eat often (maybe kale or spinach) with a favourite fruit. If you find fresh juice hard to stomach without sugar, add a little honey.

## ***Making meat count***

You may have heard of the Atkins diet, which requires the person to cut out all sugar (including fruit) but allows lots of protein and fat, including steak and bacon. Although I'm not advocating the Atkins diet (or any other diet!), a protein-rich diet has merits.



Eating protein encourages your brain to produce different chemicals to keep you energised and stay alert. But you don't need too much of it. Protein-rich foods should only make up 10 to 15 per cent of your daily calories. Chicken and lean meat provide the best sources. Vegetarians can get their protein fix from dairy products, legumes, and nuts.



As with most good things, you pay a price with a protein-rich diet. Red meat can be high in cholesterol, which affects your health and your brain. Scientific studies have found that people on a diet that's high in saturated fat and cholesterol are more likely to experience memory loss. In particular, their working memories and the ability to remember and manipulate information and are very poor. How does such a diet affect your brain? This type of poor diet results in an inflammation in the brain. This inflammation affects memory skills, as well as physical functioning such as vision and hearing. The key is to use moderation and limit red meat to once a week.

## The egg truth

What's the story on eggs? One minute you're told that they're great for you, the next minute you hear that you should avoid eggs. And now it seems that more is better.

Researchers previously thought that eating eggs raised cholesterol levels. However, studies now confirm that for average individuals, eating up to two eggs a day poses no health risk at all.

The benefits of eggs are plain to see and they're rich in vitamins (vitamins A, B, D, and E), most of which are from the egg yolk. They're also rich in omega-3 fatty acids. Pregnant women also benefit from eggs because they help the baby's brain development.

So what are you waiting for? Get scrambling, poaching, boiling, or frying. Whatever suits your taste!

## *Brain foods in your cupboard*

If you still have the view that eating healthy is like taking medicine, here are some brain foods that'll definitely put a smile on your face.

- ✓ **Black gold.** Tea drinkers, it may be time for a change. It's coffee's turn to shine. This simple and ubiquitous drink is incredibly rich in vitamins, minerals, and antioxidants and all of which give your brain a boost. In fact, coffee is such a great brain food that studies have shown that people who drink it regularly may actually reduce the risk of mental decline and Alzheimer's and dementia.

Choose freshly ground coffee to get these benefits, rather than powdered coffee. If you can, swapping your cappuccino for an espresso is the best way to get your brain food and espresso is pure and full of brain-boosting properties. But do use moderation and too much caffeine has its negative effects (see Chapter 13).

- ✓ **Sweet tooth.** Chocolate is another food that you can smile about. The cacao bean and what chocolate is made from and has been hailed as a fantastic brain food. The cacao bean in its pure form is best. Dark chocolate with a high percentage of cacao solids is the next best thing. Milk chocolate contains too much sugar and too little cacao solids, and white chocolate contains no cacao solids at all. So before you indulge, make sure that you select chocolate that has at least 70 per cent cacao content. Otherwise all you're getting is the sugar, fat, and artificial flavourings, with none of the benefits.
- ✓ **Nutty delights.** Walnuts are touted as brain food because they're packed with omega-3 fatty acids. A mere quarter of a cup of walnuts provides over 90 per cent of the recommended daily intake of omega-3 fatty acids. Almonds and pistachios are another example of a brain nut. So get cracking and sprinkle these nuts over your oats, yogurt, and salads.

# *Puzzles to Get Your Brain into Gear!*

## *Word Scrambles*

The strategies for approaching word scrambles are pretty straightforward:

- ✓ If you're working on a series of jumbled words, look at each one in turn to see if any words jump out at you. You'll be amazed by how quickly you can solve some scrambles; the mind seems built for this type of task.
- ✓ When an answer doesn't jump out at you, try writing the letters in a different order. Don't worry about creating a word right away and just putting the letters in a new order may trigger that 'Aha!' moment you're looking for.

Unscramble the capitalised word to solve the riddles.

1. What some feel ELVIS does? \_ \_ \_ \_ \_
2. What some ACTORS hate to do? \_ \_ - \_ \_ \_ \_
3. What mishandling ROSES can lead to? \_ \_ \_ \_ \_
4. How a RESCUE can make the saved person feel?  
\_ \_ \_ \_ \_
5. Easy thing to do when you're SILENT? \_ \_ \_ \_ \_

# Logic Puzzles



Try to keep the answer pages closed until you've given each puzzle a good effort. You want the best workout your mind can get, and sometimes that means letting yourself get a little frustrated.

1. How many times can a mathematician subtract ten from 100?
2. A woman gave birth to two boys on the same day, in the same year, within minutes of each other, yet the boys weren't twins. How is this possible?
3. Under what circumstance could a person walk along a railway track, discover an oncoming train, and have to run towards the train to avoid being struck?
4. Alexander is a great magician, skilled in many things. He weighs exactly 90 kilograms and is about to cross a bridge with a strict weight limit of 100 kilograms. The problem is, he's carrying three pieces of gold, each weighing 5 kilograms each. The gold puts him 5 kilograms over the strict weight limit. What can Alexander do to cross the bridge safely with all three pieces of gold?

## *Word Search*

Can you find all of these hidden words in the grid?

AIDE

HELPER

ASSISTANT

HIRED

ASSOCIATE

JOBHOLDER

ATTENDANT

LABOURER

CHARGE

LIFT

COLLEAGUE

MANAGEMENT

COMMAND

MANUAL

COMRADE

MEATHOOK

CONVEY

MITT

DELIVER

PALM

EMPLOYEE

SIDEKICK

FIST

STAFFER

GUIDANCE

SUPPORT

HAND

WORKER



In case you've never seen one before, a word search is simply a grid of letters in a square or rectangular shape that contains hidden words. Your goal is to find and circle the words, which may appear horizontally, vertically, or diagonally within the grid. Some words may be written backwards.



# *Riddles*

Riddles are a great way to introduce kids to the joy of playing with language. And for adults, riddles are a great way to keep the mental gears cranking even when you've only a short time each day to devote to puzzling.

As with logic puzzles and other puzzle types, each riddle should have just one unique answer. If you can think of two or more reasonable answers to the same riddle, chances are you've outwitted the puzzle constructor!

Can you figure out the answers to these easy riddles?

1. What becomes larger the more you take away from it, and smaller the more you add to it?
2. What grows up at the same time it grows down?
3. What gets larger as it eats, but smaller as it drinks?

# *Sudoku*

If you have never done Sudoku, the premise is simple- you have to make sure that each row, column, and small  $3 \times 3$  box in the puzzle contains the numbers 1 through to 9. Each of these numbers can appear only once in each row, column and  $3 \times 3$  box.

				3	6		9	5
3			9		4		7	
	9	7						
	3	1	6					
			2		1			
					9	5	4	
						2	5	
	1		4		7			8
4	6		5	9				

# ***The Payoff: Checking Your Answers***

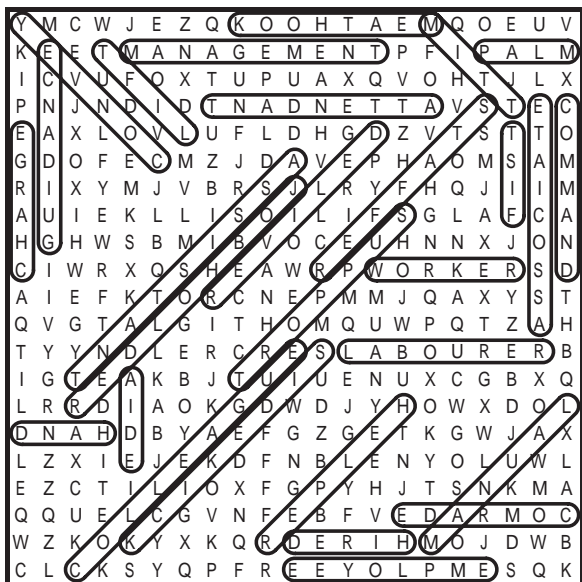
## ***Word Scrambles***

1. LIVES
2. CO-STAR
3. SORES
4. SECURE
5. LISTEN

## ***Logic Puzzles***

1. Once. After that, the mathematician would be subtracting 10 from 90, then 80, then 70 . . .
2. They were part of a set of triplets, the third child being a daughter.
3. The person is on tracks in a railroad tunnel walking toward the train and is close to the end when he notices the oncoming train. The person must then run forward to clear the tunnel before the train enters.
4. Alexander juggles the gold as he crosses the bridge, keeping at least one piece in the air at all times.

# Word Search



## ***Riddles***

1. A hole in the ground
2. A goose
3. A fire

## ***Sudoku***

1	2	4	7	3	6	8	9	5
3	5	8	9	1	4	6	7	2
6	9	7	8	5	2	4	1	3
8	3	1	6	4	5	7	2	9
9	4	5	2	7	1	3	8	6
2	7	6	3	8	9	5	4	1
7	8	9	1	6	3	2	5	4
5	1	3	4	2	7	9	6	8
4	6	2	5	9	8	1	3	7

# About the author



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