
BBC LEARNING ENGLISH

6 Minute English

Brain training



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ENGLISH

NB: This is not a word-for-word transcript

Sophie

Hello and welcome to 6 Minute English. I'm Sophie...

Neil

Watashi-wa Ni-ru.

Sophie

What did you say?

Neil

Watashi-wa Ni-ru. 'I'm Neil.' It's Japanese, Sophie.

Sophie

Very good, Neil! So your Japanese language lessons are going well, then?

Neil

They are indeed. And did you know, Sophie, that scientists believe learning a second language can boost brainpower? **Bilingualism** – or speaking two languages equally well – is a form of brain training.

Sophie

Brain training is where you're learning ways to increase your memory or intelligence. That's great Neil – but you're not exactly... bilingual... are you?

Neil

Not yet. No.

Sophie

Well, brain training is the subject of today's show. And ways to train your brain might be doing a crossword puzzle, playing chess, or studying a new language! Now I have a question for you, Neil.

Neil

I hope my brain is up to the challenge.

Sophie

I'm sure it is. Can you tell me: How many **neurons** – or nerve cells – are there in the typical human brain? Is it ...

a) 8.6 billion

b) 86 billion

Or c) 860 billion

Neil

Hmm. I'm going to say a) 8.6 billion.

Sophie

Well, we'll find out later on in the show whether you got the answer right or not. But now let's listen to neuropsychologist Dr Catherine Loveday talking about why being bilingual may protect your brain from damage if you have a stroke.

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Dr Catherine Loveday, neuropsychologist

I think the theory behind why bilingualism might be a protective factor is that [it] involves a lot of switchings – a lot of attentional changes – lots of switching. And that seems to exercise the sort of executive parts of our brain. Those parts of the brain are kind of stronger and fitter when it comes to resisting some kind of damage from the stroke.

Neil

A **stroke** is a serious illness that occurs when blood flow to an area of the brain is cut off. And **executive functions** are the mental skills involved with doing things like problem solving and planning.

Sophie

So when a bilingual speaker **switches** – or changes – from one language to another – this exercises the executive parts of their brain, making it stronger and fitter. And because the brain is stronger, it's able to **resist** – or prevent – damage caused by a stroke.

Neil

But many of us aren't bilingual are we? So our brains aren't going to be protected against strokes.

Sophie

Don't worry, Neil. There are other things you can do to exercise your brain. If you're right handed, doing tasks like brushing your teeth with your left hand will stimulate your brain – or getting dressed in the dark with your eyes shut. Or simply memorizing a list of words, for example your shopping list.

Neil

Doing things with the wrong hand sounds hard. But the shopping list thing sounds easier... OK. Let's see... pizza, doughnuts, crisps, bottle of coke, chocolate cake...

Sophie

That's not a very healthy list, Neil! A good diet is also important in keeping your brain fit and healthy.

Neil

Maybe I should cut down on the chocolate cake then?

Sophie

Actually, that's the one thing you could leave on the list. According to research, chocolate may **enhance** – or improve – cognitive performance, and that is your ability to acquire and utilize knowledge. Now let's listen to Dr Loveday talking about building up our **cognitive reserve** – this is the idea of building up extra abilities to help protect the brain against declining memory or thinking.

INSERT

Dr Catherine Loveday, neuropsychologist

Continually just stimulating the brain – things like learning a language, learning music, just educating yourself, seems to continue to build up that cognitive reserve. So even if people take up languages or take up other things later in life it will give them a degree of protection.

Neil

Stimulate means to make something become more active. Hmm. Not sure I'm continually stimulating my brain. What do you think, Sophie?

Sophie

With all our stimulating discussions, Neil, I'm sure we're both building up our cognitive reserve. And there are your Japanese lessons too.

Neil

Well, so I am doing well as far as my cognitive reserve goes. Sophie you've put my mind at rest.

Sophie

And if you **put someone's mind at rest** you stop them worrying. Well, don't get too relaxed Neil – your brain needs constant stimulation, remember?

Neil

Hmm. I think I might just lie down after the show with a box of chocolates and today's crossword... or maybe I'll memorize another shopping list... this time in Japanese.

Sophie

OK. I think it's time to hear the answer to today's quiz question. I asked: How many neurons are there in the typical human brain? Is it ... a) 8.6 billion b) 86 billion or c) 860 billion?

Neil

And I said a) 8.6 billion.

Sophie

I thought you were feeling clever today, Neil. I'm afraid that's the wrong answer. It's b) 86 billion. But do you know how scientists calculated that number?

Neil

Did they have a guess, Sophie?

Sophie

No, not exactly. Apparently, the easiest way is to count how many neurons there are in one part of the brain and then multiply that for the rest of the brain's volume.

Neil

Well, that's a lot of brain cells. OK, can we hear the words we learned today?

Sophie

They are:

bilingualism

brain training

neurons

stroke

executive functions

switches

resist

enhance

cognitive reserve

stimulate

put someone's mind at rest

Neil

Well, that's the end of today's 6 Minute English. Don't forget to join us again soon!

Both

Bye.

Vocabulary

bilingualism

speaking two languages equally well

brain training

learning ways to increase your memory or intelligence

neurons

nerve cells

stroke

a serious illness that occurs when blood flow to an area in the brain is cut off

executive functions

behaviour that is the same as the way most other people behave

switches

changes

resist

try to stop or prevent

enhance

improve

cognitive reserve

the idea of building up extra abilities to help protect the brain against declining memory or thinking. Well Sophie you've put my mind at rest

stimulate

make something become more active

put someone's mind at rest

stop someone from worrying