

## Consumer Information Sheet

# Brain Training



Brain training involves doing repeated exercises that require different mental and cognitive abilities – these can be in paper-and-pencil format or by computer. Brain training is becoming increasingly popular and there are many products promoting themselves as ways to restore and improve brain function. The universal idea is “*use it or lose it*”.

### How does brain activity help?

The adult brain continues to change and develop across the life span. This dynamic capacity of the brain to change in response to stimulation is termed *neural plasticity*. In particular, neural plasticity refers to physical changes that occur to your brain cells – and the connections between them – in order for the brain to learn and process new information. For optimal neural plasticity and brain development, we need to stay mentally stimulated and active.

### Do brain exercises work?

No brain training product or package has been scientifically shown to reduce the development of dementia.

However, some scientific studies have shown benefits when combining exercises that target mental speed, attention, memory and problem solving. In general, these improve performance on the trained task, and may help maintain mental function in older persons.

More scientific research is needed to find out whether brain training can lead to real-world, meaningful changes in mental function, such as delaying the onset of dementia.

### What brain training products are available?

There are many commercial brain training products available. Not all products are listed or reviewed here. Each product has its own strengths and weaknesses. Many of the products now have free trials so that you can try samples of the program prior to purchasing it. A number of commercially available products have now undergone independent scientific research.

Questions to ask to help you choose the right brain training product to suits your needs.

1. Is the product based upon scientific research?
2. Does the product provide me with a structured program?
3. Does the product tell me what part of the brain is being stimulated?
4. Does it include different types of exercises challenging different parts of my brain?
5. Do the exercises themselves change to keep challenging me?
6. Is the product easy and fun to use?

For more general information about brain training go to: [www.sharpbrains.com](http://www.sharpbrains.com)

Product	Manufacturer	Product description	Research*	Multidomain
Brain Age	Nintendo DS	Palm device	No	Yes
www.BrainBuilder.com	Advanced Brain Technologies LLC	CD- Rom, DVD	No	Yes
www.Lumosity.com	Lumos Labs	Website	No	Yes
Brain Fitness Program 2.0	Posit Science Corp.	CD & requires internet	Yes	No
Insight	Posit Science Corp.	CD & requires internet	No	Yes
www.Happy Neuron.com	Quixit Inc.	Website & CD Rom	Yes	Yes
Cognifit Personal Coach www.cognitfit.com	CogniFit Ltd	Website	Yes	Yes
www.MyBraintrainer.com	Mybrain trainer LLC	Website	No	Yes
www.BrainFitness.com	Dakim Inc.	Website software and touch screen	No	Yes

\*Published peer reviewed research

### What other brain training products are available?

There are other types of products available in bookshops and educational stores that claim to provide brain stimulating activities, however these have no clear supporting evidence. There are also several books offering different types of mental challenges and activities such as the MENSA Ultimate Mental Challenge puzzles, and the workout for the Balanced Brain, and there are game cards, various puzzles, and handheld devices with other activities for speed and attention. Several books on memory are also available which provide strategies to improve memory, such as developing mnemonics. These strategies can be highly effective but they are not brain training.

### What's the most important feature of any brain training product?

Our reviews of the area suggest that multi-domain brain training is most likely to lead to meaningful benefits. This means that you 'cross-train' your brain, exercising several different mental functions such as memory, problem solving and attention span. Training only one cognitive domain (such as memory) does not seem to be as effective as multi-domain brain training. The product must be easy to negotiate with user friendly characteristics of clear instructions, limited intrusive pop-up advertisements, adjustments for visual and hearing impairment, and quality feedback.

### Are there other options for brain stimulation besides Brain Training products?

Yes. Research indicates that participation in leisure activities with a mental, social and physical component can keep our brain healthy and reduce our risk for dementia. Trying something new is very stimulating for the brain, particularly if it means learning new information and skills and involves ongoing practice. Examples include:

- Learning to dance
- Learning Tai-Chi
- Learning a new language
- Learn to sail, scuba, cross-country hiking
- Travelling to a foreign country
- Learning to play a musical instrument
- Taking up an artistic pastime like writing or painting
- Learning bridge, chess and other strategic games
- Joining a social group or volunteer organisation

*This consumer information sheet was prepared by Nicola Gates and Dr Michael Valenzuela of the Brain and Ageing Program at the University of New South Wales, and approved by Scientia Professor Perminder Sachdev, Director of the Brain and Ageing Program, on October 10, 2009.*