## **BBC** NEWS 'Brain training' claims dismissed

## People who spend money on brain trainers to keep their mind sharp may well get the same benefit from simply doing a crossword, experts conclude.

Consumer group Which? asked three experts to check claims made about several devices, including the Nintendo DS, on memory and staving off dementia.

They found the evidence behind such claims was non-existent or "weak".

But there is evidence that exercise, a healthy diet and an active social life help keep an agile mind, Which? said.

Brain trainers, often promoted by celebrity endorsement, have been increasing in popularity. They are marketed as helping to improve memory, keep the mind fit and active and in some cases to prevent dementia. Manufacturers behind the products were asked what the benefits of their products were and what evidence they had to back up the claims.

The panel of scientists then gave their view on the research provided. None of the claims was supported by peer-reviewed research in a recognised scientific journal and much of it was flawed, they concluded.

## Memory decline

According to the Which? report, Dr Kawashima's Brain Training for the Nintendo DS, which costs £110 with the console, says that use "can help consolidate memory and creativity and may hopefully help develop a resistance against decline in later life".

The exercises are chosen because they increase blood flow to the frontal cortex region of the brain. But the experts said surfing the internet or chatting to friends would produce the same effects on blood flow.

Dr Chris Bird, a clinical neuroscientist at University College London added: "There is no evidence that using this product will have any functional impact on your life whatsoever".

Another product looked at was the £88 Mindfit for the PC, which the company says "exercises important abilities that are  $\Box$  known to decline in later life, such as short-term memory".

However, results did not show that it was any better than standard computer games such as Tetris, said Dr Adrian Owen, a senior scientist at the Medical Research Council's Cognition and Brain Sciences Unit.

The team also looked at Lumosity online training system, which costs £4.99 a month, MindSpa, a £175 system which uses audiovisual stimulation to promote relaxation and increase focus, and the £9.99 Test and Improve Your Memory computer programme.

None of the manufacturers' claims on improved cognition are supported by evidence that meets the minimum standard by which scientific research is judged, the panel said.

Martyn Hocking, editor at Which?, said: "If people enjoy using these games, then they should continue to do so - that's a no-brainer.

"But if people are under the illusion that these devices are scientifically proven to keep their minds in shape, they need to think again."

A spokesman for Nintendo said they did not claim that Brain Training is scientifically proven to improve cognitive function.

"What we claim is the Brain Training series of games, like playing sudoku, are enjoyable and fun. These exercises can also help keep the brain sharp."

Bruce Robinson, chief executive of MindWeavers, which sells MindFit, said they were not claiming that it would stop Alzheimer's.

"Serious brain stimulation software is an emerging field.

"Others who have reviewed the wider evidence, notably New Scientist and the British Medical Journal, have drawn the conclusion it is difficult not to conclude brain training works, under some circumstances."

He added: "Properly designed cognitively challenging products clearly have a role to play alongside other things including exercise, diet and social interaction, and it is up to the individual to choose what they want to do."

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