

# New Treatment for Hyperactivity in Children: Thought-Operated Computer System

ScienceDaily (Jan. 11, 2010) — A new thought-operated computer system which can reduce the symptoms of Attention Deficit Hyperactivity Disorder (ADHD) in children will be rolled out across the UK this month.

Professor Karen Pine at the University of Hertfordshire's School of Psychology and assistant Farjana Nasrin investigated the effects of EEG (Electroencephalography) biofeedback, a learning strategy that detects brain waves, on ten children with an attention deficit from Hertfordshire schools

They used a system called Play Attention, supplied by not-for-profit community interest company, Games for Life, three times a week for 12 weeks.

The system involves the child playing a fun educational computer game whilst wearing a helmet similar to a bicycle helmet. The helmet picks up their brain activity in the form of EEG waves related to attention. As long as the child concentrates they control the games, but as soon as their attention waivers the game stops.

The researchers found at the end of the study that the children's impulsive behaviour was reduced, compared to a control group who had not used the system.

"Children with a diagnosis of ADHD find it hard to control their impulses and



*Child using Play Attention. (Credit: Image courtesy of University of Hertfordshire)*

inhibit inappropriate behaviour," said Professor Pine, "This can lead to educational and behavioural difficulties. The Play Attention method may prevent long-term problems by helping the children to be less impulsive and more self-controlled."

Professor Pine and Dr Rob Sharp a senior specialist educational psychologist are continuing to work on futuristic projects with Ian Glasscock, Managing Director of Games for Life. A means of assessing learning in children with severe communication and physical difficulties by a thought-controlled computer game method is likely to have considerable potential for these children who cannot operate a computer manually.

"Attention-related difficulties including ADHD affects many children, young people and adults and has a significant impact on their lives," said Mr Glasscock. "Mind-controlled educational computer games technology is the only intervention shown to reduce the core symptoms of ADHD, historically medication may have been prescribed for the child."

Games for Life plans to roll out this new system across the UK this month.

For more information, see: <http://www.gamesforlife.co.uk/>

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### **Story Source:**

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