Brain training can change autistic behaviour

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NEUROFEEDBACK practice may be able to alleviate some of the symptoms of autism, according to a pilot study on eight children with the disorder.

The technique involves hooking people up to electrodes and getting them to try and control their brain waves. In people with autism, the "mu" wave is thought to be dysfunctional. Since this wave is associated with "mirror neurons" - the brain cells that underpin empathy and understanding of others - Jaime Pineda at the University of California, San Diego, wondered if controlling it through neurofeedback could exercise faulty mirror neurons and improve their function.

He attached sensors to the necks and heads of eight children with autism and had them watch a video game of a racing car going round a track. For all of the children, sitting still and concentrating kept the car travelling around the track, but five of them were also able to harness their mu waves and use them to adjust the car's speed.

After 30 sessions over 10 weeks, Pineda found that the five children's mu brainwaves had changed and they performed better on tasks involving imitation, typically difficult for people with autism. Pineda presented his work at the annual meeting of the Cognitive Neuroscience Society in San Francisco last week.

"This seems to indicate the children improve," Pineda says. How long the effects will last, though, is unknown.

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