Sports participation may improve schizophrenia symptoms

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The neurobiological mechanisms that may underlie the therapeutic effect of sports participation in patients with schizophrenia are described in the journal *Translational Psychiatry*. The authors caution that the findings need to be confirmed with a larger, randomized control study.

Exercise and sport are thought to have a positive impact in individuals with schizophrenia on both weight gain and the psychiatric symptoms of the disorder but the neurobiological basis for this has remained poorly understood. Hidehiko Takahashi and colleagues studied 13 patients with schizophrenia, who took part in a three-month programme that included aerobic exercise, nutritional education and basketball participation; another ten patients were studied as controls.

Body mass index and clinical symptoms were measured before and after the three-month period and both were improved in the programme group but not the control group. To measure brain activation,
patients underwent an fMRI scan while watching videos clips of basketball games. In the programme group, the authors observed increased activation of a region of the brain called the extrastriate body area (EBA), compared to the baseline, which suggests that the EBA may have a role in mediating the beneficial effects of sports participation. The study highlights the need for further studies, which take into account the diverse clinical backgrounds of the participants and which examine whether the observed effects are temporary or long-lasting.

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