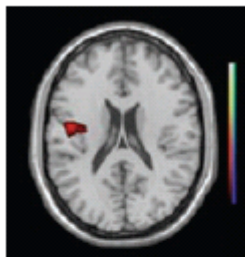


PET scans show gene therapy normalizes brain function in Parkinson's patients

Brain scans used to track changes in patients who received an experimental gene therapy show that the treatment normalizes brain function. The workers had delivered the gene for glutamic acid decarboxylase via an adeno-associated virus vector into the subthalamic nuclei of Parkinson's patients. The study was designed as a phase I safety study, and the genes were delivered



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to only one side of the brain to reduce risk and to better assess the treatment. The clinical results of the trial have been previously published; the new report focuses on the power of modern brain scans to show that the therapy altered brain activity in a favorable way. Positron emission tomography scans were performed before the surgery and repeated 6 months later and then again 1 year after the surgery. The motor network on the untreated side worsened; on the treated side, however, it improved. The level of improvements in the motor network correlated with increased clinical ratings of patient disability. (*Proc Natl Acad Sci USA*, published online 27 November 2007; doi:10.1073/pnas.0706006104)