

## **Enriched Sensorimotor Environments**

Enriched sensorimotor environments enable rodents to compensate for a wide range of neurological challenges, including those induced in animal models of autism. Given the sensorimotor deficits in most children with autism, we attempted to translate that approach to their treatment. In a randomized controlled trial, 3-12 year-old children with autism were assigned to either a sensorimotor enrichment group, which received daily olfactory/tactile stimulation along with exercises that stimulated other paired sensory modalities, or to a control group. We administered tests of cognitive performance and autism severity to both groups at the initiation of the study and after six months. Severity of autism, as assessed with the Childhood Autism Ratings Scale, improved significantly in the enriched group compared to controls. Indeed, 42% of the enriched group and only 7% of the control group had what we considered to be a clinically significant improvement of five points on that scale. Sensorimotor enrichment also produced a clear improvement in cognition, as determined by their Leiter-R Visualization and Reasoning scores. At six months, the change in average scores for the enriched group was 11.3 points higher than that for the control group. Finally, 69% of parents in the enriched group and 31% of parents in the control group reported improvement in their child over the 6-month study. Environmental enrichment therefore appears to be effective in ameliorating some of the symptoms of autism in children.