

of Florence and centers in Milan, Bari, Catania, and Rome, Italy. At a mean period of 2 years follow-up, 70% had cognitive impairment, deteriorating in 75%, especially verbal memory, attention, verbal fluency, and receptive language. Older age was a predictor of cognitive deterioration ( $p=0.003$ ). Depression developed in 30%, fatigue in 21%, and interference with school activities in 30%. Regular assessment of psychosocial functioning and rehabilitation strategies in MS childhood patients are indicated. (Amato MP, Goretti B, Ghezzi A et al. Cognitive and psychosocial features in childhood and juvenile MS: Two-year follow-up. **Neurology** Sept 28, 2010;75:1134-1140). (Response and reprints: Dr Maria Pia Amato, Department of Neurology, University of Florence, Viale Morgagni 85, 50134 Florence, Italy. E-mail: [mariapia.amato@unifi.it](mailto:mariapia.amato@unifi.it)).

COMMENT. In a previous multicenter study, these investigators found a 31% prevalence of cognitive impairment and a low IQ in 28% of 63 childhood MS cases. (Amato MP et al. **Neurology** 2008;70:1891-1897).

## COGNITIVE LEISURE AND COGNITIVE RESERVE IN MULTIPLE SCLEROSIS PATIENTS

The effect of cognitive leisure (eg reading books, playing cards etc) on prevention of cognitive impairment was studied in 36 adults (31 women) with MS treated at Kessler Research Center, West Orange, New Jersey Medical School, and Teachers College, Columbia University, NY, NY. Cognitive status was measured with a composite score of processing speed and memory, and brain atrophy was measured by third ventricle width on MRI. Controlling for brain atrophy, vocabulary and education, premorbid cognitive leisure was positively associated with current cognitive status ( $p<0.01$ ). Patients with MS who engaged in more cognitive leisure were able to withstand the effects of more severe brain atrophy. Cognitive leisure is an independent source of cognitive reserve in patients with MS. (Sumowski JF, Wylie GR, Gonnella A, Chiaravalloti N, DeLuca J. Premorbid cognitive leisure independently contributes to cognitive reserve in multiple sclerosis. **Neurology** Oct 19, 2010;75:1428-1431). (Response and reprints: Dr James F Sumowski, Neuropsychology & Neuroscience Laboratory, Kessler Foundation Research Center, 300 Executive Drive, Suite 10, West Orange, NJ 07052. E-mail: [jsumowski@kesslerfoundation.org](mailto:jsumowski@kesslerfoundation.org)).

COMMENT. Lifetime intellectual enrichment lessens the adverse effect of neurologic disease (eg Alzheimer disease) on cognitive status. (Stern Y. **Neuropsychologia** 2009;47:2015-2028). The present study shows that cognitive leisure time may contribute to cognitive reserve in patients with MS.

The "London taxi driver" study provides neuroanatomic support for the cognitive reserve hypothesis (Maguire EA et al. Navigation-related structural change in the hippocampi of taxi drivers. **Proc Natl Acad Sci USA** 2000;97:4398-4403). The time as a taxi driver (in London) is positively correlated with posterior hippocampal volumes (serving spatial memory). I believe that London taxi drivers were required to study and pass a City address and navigation test to obtain a license. Not an easy task. The term "cognitive toil" might be more appropriate.