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Low Vit D levels linked to multiple sclerosis

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In a new study, neurologists at the University at Buffalo have shown that low vitamin D levels may be associated with more advanced physical disability and cognitive impairment in persons with multiple sclerosis.

The study results, reported at the American Academy of Neurology meeting, held earlier this month, indicated that: The majority of MS patients and healthy controls had insufficient vitamin D levels.

Clinical evaluation and magnetic resonance imaging (MRI) images show low blood levels of total vitamin D and certain active vitamin D byproducts are associated with increased disability, brain atrophy and brain lesion load in MS patients.

A potential association exists between cognitive impairment in MS patients and low vitamin D levels.

The MRI study involved 236 MS patients -- 208 diagnosed with the relapsing-remitting type and 28 with secondary progressive, a more destructive form of MS -- and 22 persons without MS.

All participants provided blood serum samples, which were analyzed for total vitamin D (D2 and D3) levels as well as levels of active vitamin D byproducts. MRI scans performed within three months of blood sampling were available for 163 of the MS patients.

Results showed that only seven percent of persons with secondary-progressive MS showed sufficient vitamin D, compared to 18.3 percent of patients with the less severe relapsing-remitting type.

Higher levels of vitamin D3 and vitamin D3 metabolism byproducts (analyzed as a ratio) also were associated with better scores on disability tests, results showed, and with less brain atrophy and fewer lesions on MRI scans.

Bianca Weinstock-Guttman, MD, UB associate professor of neurology/Jacobs Neurological Institute and director of the Baird Multiple Sclerosis Center, is first author on the study. Commenting on these results, Weinstock-Guttman said: "Clinical studies are necessary to assess vitamin D supplementation and the underlying mechanism that contributes to MS disease progression."