Creatine does not slow rate of Parkinson's disease progression

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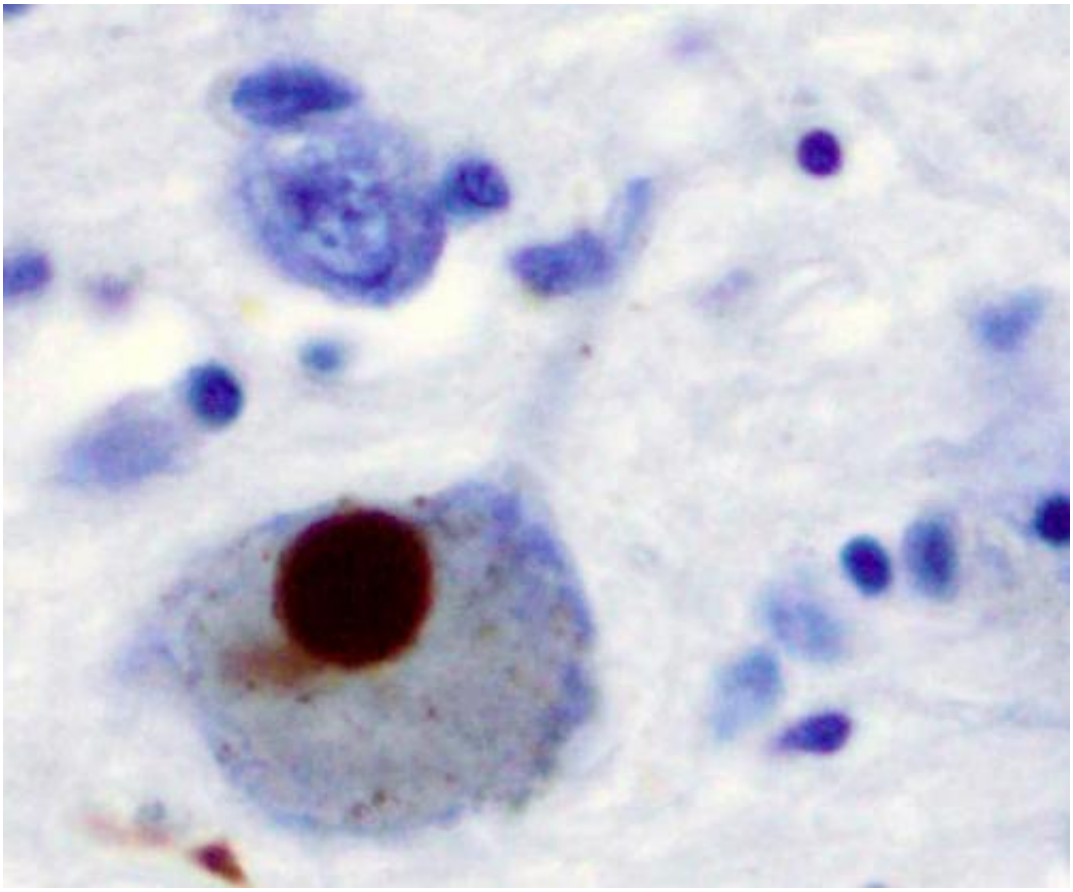

Immunohistochemistry for alpha-synuclein showing positive staining (brown) of an intraneural Lewy-body in the Substantia nigra in Parkinson's disease. Credit: Wikipedia

Treatment with creatine monohydrate for at least 5 years for patients

with early and treated Parkinson disease failed to slow clinical progression of the disease, compared with placebo, according to a study in the February 10 issue of *JAMA*.

Parkinson disease is a progressive neurodegenerative disorder that affects approximately 6 million people worldwide and more than one-half million individuals in the United States. Incidence is expected to increase over the next decade, but neither a cure nor a treatment is available that has been proven to slow progression. Evidence indicates that creatine, an amino acid, plays an important role in cellular energy production, which may be impaired in Parkinson disease. Oral creatine supplementation in mice has suggested a neuroprotective effect, according to information in the article.

Karl Kieburtz, M.D., M.P.H., of the University of Rochester, Rochester, N.Y., and colleagues, randomly assigned 1,741 men and women with early (within 5 years of diagnosis) and treated (receiving dopaminergic therapy) Parkinson disease to receive placebo or creatine monohydrate (10 g/d) for a minimum of 5 years (maximum follow-up, 8 years). Participants were recruited from 45 investigative sites in the United States and Canada, enrolled from March 2007 to May 2010, and followed up until September 2013.

The trial was terminated early for futility based on results of a planned interim analysis of participants enrolled at least 5 years prior to the date of the analysis (n = 955).The median follow-up time was 4 years. Using several measures of Parkinson disease progression, the researchers found that treatment with creatine, compared with placebo, did not improve clinical outcomes.

There were no detectable differences in adverse and serious adverse events by body system.

"These findings do not support the use of creatine monohydrate in patients with Parkinson disease," the authors write.

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