

1. Arch Neurol. 2002 Oct;59(10):1541-50, Shultz CW et al.

Effects of coenzyme Q10 in early Parkinson disease: evidence of slowing of the functional decline.

**BACKGROUND:** Parkinson disease (PD) is a degenerative neurological disorder for which no treatment has been shown to slow the progression.

**OBJECTIVE:** To determine whether a range of dosages of coenzyme Q10 is safe and well tolerated and could slow the functional decline in PD.

**DESIGN:** Multicenter, randomized, parallel-group, placebo-controlled, double-blind, dosage-ranging trial.

**SETTING:** Academic movement disorders clinics.

**PATIENTS:** Eighty subjects with early PD who did not require treatment for their disability.

**INTERVENTIONS:** Random assignment to placebo or coenzyme Q10 at dosages of 300, 600, or 1200 mg/d.

**MAIN OUTCOME MEASURE:** The subjects underwent evaluation with the Unified Parkinson Disease Rating Scale (UPDRS) at the screening, baseline, and 1-, 4-, 8-, 12-, and 16-month visits. They were followed up for 16 months or until disability requiring treatment with levodopa had developed. The primary response variable was the change in the total score on the UPDRS from baseline to the last visit.

**RESULTS:** The adjusted mean total UPDRS changes were +11.99 for the placebo group, +8.81 for the 300-mg/d group, +10.82 for the 600-mg/d group, and +6.69 for the 1200-mg/d group. The P value for the primary analysis, a test for a linear trend between the dosage and the mean change in the total UPDRS score, was .09, which met our prespecified criteria for a positive trend for the trial. A prespecified, secondary analysis was the comparison of each treatment group with the placebo group, and the difference between the 1200-mg/d and placebo groups was significant (P = .04).

**CONCLUSIONS:** Coenzyme Q10 was safe and well tolerated at dosages of up to 1200 mg/d. Less disability developed in subjects assigned to coenzyme Q10 than in those assigned to placebo, and the benefit was greatest in subjects receiving the highest dosage. Coenzyme Q10 appears to slow the progressive deterioration of function in PD, but these results need to be confirmed in a larger study.

PMID: 12374491 [PubMed - indexed for MEDLINE]