

# Abstract

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## Serum folate, vitamin B12, and homocysteine in major depressive disorder, Part 2: predictors of relapse during the continuation phase of pharmacotherapy.

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**OBJECTIVE:** In the present study, we assessed the relationship between serum folate, vitamin B12, and homocysteine levels on the rate of relapse in outpatients with remitted major depressive disorder (MDD) during a 28-week continuation phase of treatment with fluoxetine.

**METHOD:** Seventy-one outpatients (mean +/- SD age = 40.2 +/- 11.1 years; 56.3% women) with MDD (as assessed with the Structured Clinical Interview for DSM-III-R) who had remitted and who were enrolled in the continuation phase of treatment with fluoxetine had serum folate, vitamin B12, and homocysteine measurements completed at baseline (prior to acute-phase treatment). Patients were followed for 28 weeks of continued treatment with fluoxetine 40 mg/day to monitor for depressive relapse. Folate levels were classified as either low (< or = 2.5 ng/mL) or normal. Vitamin B12 levels were classified as either low (< or = 200 pg/mL) or normal. Homocysteine levels were classified as either elevated (> or = 13.2 micromol/L) or normal. With the use of separate logistic regressions, we then assessed the relationship between folate, vitamin B12, and homocysteine level status and relapse. The study was conducted from November 1992 to January 1999.

**RESULTS:** The presence of low serum folate levels ( $p = .004$ ), but not low B12 ( $p > .05$ ) or elevated homocysteine levels ( $p > .05$ ), was associated with relapse during continuation treatment with fluoxetine. The relapse rates for patients with ( $N = 7$ ) and without ( $N = 64$ ) low folate levels were 42.9% versus 3.2%, respectively.

**CONCLUSION:** Low serum folate levels were found to place patients with remitted MDD at risk for depressive relapse during the continuation phase of treatment with fluoxetine.

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