

Abstract

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Vitamin B status in patients with chronic fatigue syndrome.

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OBJECTIVE: Some patients with chronic fatigue syndrome say they benefit from taking vitamin supplements.

METHODS: We assessed functional status for the B vitamins pyridoxine, riboflavin and thiamine in 12 vitamin-untreated CFS patients and in 18 healthy controls matched for age and sex. Vitamin-dependent activities--aspartate aminotransferase (AST) for pyridoxine, glutathione reductase (GTR) for riboflavin, transketolase (TK) for thiamine--were measured in erythrocyte haemolysates before and after in-vitro addition of the relevant vitamin.

RESULTS: For all three enzymes basal activity (U/g Hb) was lower in CFS patients than in controls: AST 2.84 (SD 0.62) vs 4.61 (1.43), $P < 0.001$; GTR 6.13 (1.89) vs 7.42 (1.25), $P < 0.04$; TK 0.50 (0.13) vs 0.60 (0.07), $P < 0.04$. This was also true of activated values: AST 4.91 (0.54) vs 7.89 (2.11), $P < 0.001$; GTR 8.29 (1.60) vs 10.0 (1.80), $P < 0.001$; TK 0.56 (0.19) vs 0.66 (0.08), $P < 0.07$. The activation ratios, however, did not differ between the groups.

CONCLUSION: These data provide preliminary evidence of reduced functional B vitamin status, particularly of pyridoxine, in CFS patients.

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