

Abstract

Am J Clin Nutr. 1993 Oct;58(4):468-76.

Metabolic evidence that deficiencies of vitamin B-12 (cobalamin), folate, and vitamin B-6 occur commonly in elderly people.

Joosten E, van den Berg A, Riezler R, Naurath HJ, Lindenbaum J, Stabler SP, Allen RH.

Department of Internal Medicine, University Hospitals KU Leuven, Belgium.

OBJECTIVE: Measurements of the serum concentrations of the metabolites homocysteine, cystathionine, methylmalonic acid, and 2-methylcitric acid, which accumulates when vitamin B-12-, folate-, and vitamin B-6-dependent enzymatic reactions are impaired, should provide a better indication of intracellular deficiency of these vitamins.

METHODS: We measured the serum concentration of these vitamins and the four metabolites in 99 healthy young people, 64 healthy elderly subjects, and 286 elderly hospitalized patients.

RESULTS: A low serum vitamin B-12 concentration was found in 6% and 5%, low folate in 5% and 19%, and low vitamin B-6 in 9% and 51%, and one or more metabolites were elevated in 63% and 83% of healthy elderly subjects and elderly hospitalized patients, respectively.

CONCLUSION: These results strongly suggest that the prevalence of tissue deficiencies of vitamin B-12, folate, and vitamin B-6 as demonstrated by the elevated metabolite concentrations is substantially higher than that estimated by measuring concentrations of the vitamins.

PMID: 8037789

FREE FULL TEXT

