

# Abstract

Scand J Clin Lab Invest. 1997 Nov;57(7):595-600.

## **Poor metabolic control, early age at onset, and marginal folate deficiency are associated with increasing levels of plasma homocysteine in insulin-dependent diabetes mellitus. A five-year follow-up study.**

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**BACKGROUND:** In a previous study, we showed that diabetic patients exhibited significantly increased concentrations of total plasma homocysteine (tHcy), but not until the onset of nephropathy. It was suggested that the hyperhomocysteinaemia might contribute to the accelerated atherosclerotic process in diabetic patients.

**METHODS:** In the present study, we have analysed the main determinants of plasma homocysteine (i.e. serum cobalamin, blood folate and serum creatinine), and also some other parameters related to diabetes mellitus, such as medical history, metabolic and renal quantities, on two occasions with a 5-year interval in 50 patients with insulin-dependent diabetes mellitus, in order to further elucidate the relation between plasma tHcy and diabetes mellitus.

**RESULTS:** The result of the present study shows that diabetic patients with the lowest age at onset and with the poorest metabolic control are those most prone to a rapid increase in plasma tHcy concentration.

**CONCLUSION:** The increment in plasma tHcy concentration in this group of patients may at least partly be explained by a marginal deficiency of blood folate concentrations.

PMID: 9397490

