

□ 1: [J Endocrinol Invest.](#) 2001 Jan;24(1):37-41.

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**Administration of glutathione in patients with type 2 diabetes mellitus increases the platelet constitutive nitric oxide synthase activity and reduces PAI-1.**

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Several studies suggest that nitric oxide (NO) production is impaired in diabetes mellitus. Reduced levels of NO could contribute to cardiovascular mortality. Furthermore, NO synthesis is impaired in glutathione (GSH)-depleted human umbilical vein endothelial cells and GSH is reduced in patients with type 2 diabetes mellitus (T2DM). We tested the hypothesis that treatment with GSH may improve platelet constitutive NO synthase (cNOS) activity in patients with T2DM. Fifteen patients with T2DM underwent a treatment with GSH 600 mg/day i.m. for 10 days. With respect to the basal values on the 10th day of treatment, the red blood cell GSH concentration and platelets cNOS increased (1.4+/-0.1 vs 1.9+/-0.1 micromol/10(10) RBC, p<0.001 and 0.7+/-0.1 vs 2.9+/-0.2 fmol x min(-1) x 10(-9) PLTs, p<0.001, respectively) and the plasma PAI-1 levels diminished (81.4+/-3.7 vs 68.7+/-4.0 ng/ml, p<0.002). A negative correlation between the cNOS and the PAI-1 was found on the basal values. After a wash-out of 30 days the values of red blood cell GSH concentration, platelet cNOS activity and PAI-1 Ag returned to the basal levels. **These data suggest that the administration of GSH, in patients with T2DM, is able to improve platelet cNOS activity together with a reduction of PAI-1.**

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