

Gross M, S Reiter, N Zollner. Metabolism of D-ribose administered to healthy persons and to patients with myoadenylate deaminase deficiency. *Klin Wochenschr* 1989;67:1205-1213.

D-ribose was administered orally or intravenously over at least 5 h to eight healthy volunteers and five patients with myoadenylate deaminase deficiency. Intravenous administration rates were 83, 167, and 222 mg/kg/h, which were well tolerated but oral administration of more than 200 mg/kg/h caused diarrhea. The average steady state serum ribose level ranged between 4.8 mg/100 ml (83 mg/kg/h, oral administration) and 81.7 mg/100 ml (222 mg/kg/h, intravenous administration). Serum glucose level decreased during ribose administration. The intestinal absorption rate of orally administered ribose was 87.8%-99.8% of the intake at doses up to 200 mg/kg/h without first pass effect. Urinary losses were 23% of the intravenously administered dose at 222 mg/kg/h. Ribose appeared to be excreted by glomerular filtration without active reabsorption; a renal threshold could not be demonstrated. The amount of ribose transported back from the tubular lumen depended on the serum ribose level. There was no difference in ribose turnover in healthy subjects and patients with MAD deficiency.

