

CARNOSINE IN PATIENTS WITH DIABETES MELLITUS TYPE I

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Abstract

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Examination of carnosine in patients with diabetes mellitus type I, showed that the plasma levels of carnitine were non significantly increased compared to the levels in healthy population, while the levels in red cells were decreased. Lowered levels of carnosine in red cells could point out similar deficit in other cells. Due to low levels in cells carnosine is less available for metabolic processes, like antioxidant reactions and its participation in antioxidants defense reactions is limited non-enzymatic glycosylation of proteins. Therefore it should be supplemented. (Tab. 1, Fig. 1, Ref. 15.)

Key words: carnosine, diabetes mellitus.

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Tab. 1. Carnosine levels in plasma, urine and erythrocytes.
Tab. 1. Karnozín v plazme, v moči a v erythrocytoch.

Parameter	Patients Pacienti		Controls Kontroly		p
	n	mean±SD priemer±SD	n	mean±SD priemer±SD	
Car Pl (μmol/l)	26	78,77±49,26	23	71,09±26,18	NS
Car U (μmol/24 h)	31	242,23±100,26	14	567,15±637,33	0,05
Car Er (μmol/g Hb)	32	0,65±0,50	27	1,17±0,72	0,01
Car TR (%)	24	96,05±4,38	14	82,01±21,78	0,01

Legenda: Car Pl-karnozín v plazme, Car U – karnozín v moči/24 hod.,
 Car Er – karnozín v erythrocytoch, Car TR – tubulárna reabsopcia karnozínu.

Legend: Car- carnosine, Car Pl- plasma carnosine, Car U – urinary excretion of carnosine /24 hour, Car TR -tubular reabsorption of carnosine.

Correlation: $r = 0,448$, $n = 28$, $p < 0,01$

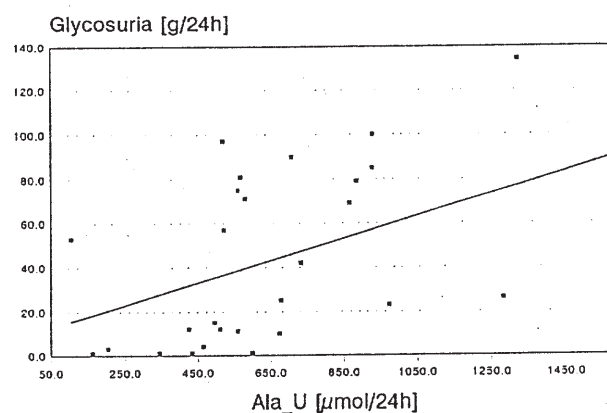


Fig. 1. Correlation between glycosuria and alanine levels in urine.
Obr. 1. Korelácia medzi glykozúriou a alanínom v moči.