

Pathophysiology and pathogenetically based treatment options of diabetic complica

Bearbeitet von
Elena Beltramo, Michael Brwownlee, Peter Kempler, Paul Thornalley, Paul J. Thornalley

1. Auflage 2009. Taschenbuch. 80 S. Paperback
ISBN 978 3 13 146141 4
Format (B x L): 17 x 24 cm
Gewicht: 180 g

[Weitere Fachgebiete > Medizin > Klinische und Innere Medizin > Diabetologie](#)

Zu [Inhaltsverzeichnis](#)

schnell und portofrei erhältlich bei


DIE FACHBUCHHANDLUNG

Die Online-Fachbuchhandlung beek-shop.de ist spezialisiert auf Fachbücher, insbesondere Recht, Steuern und Wirtschaft. Im Sortiment finden Sie alle Medien (Bücher, Zeitschriften, CDs, eBooks, etc.) aller Verlage. Ergänzt wird das Programm durch Services wie Neuerscheinungsdienst oder Zusammenstellungen von Büchern zu Sonderpreisen. Der Shop führt mehr als 8 Millionen Produkte.

Table 3.1 Characteristics of diabetic patients and normal volunteers recruited for the Essex UK study (Thornalley et al. 2007).

Group	N	Age (yrs)	BMI (kg/m ²)	HbA _{1c} (%)	GFR (ml/min)
Type 1 diabetes	26 (m: 10, f: 16)	48 ± 15	28 ± 5	8.7 ± 1.2	92 ± 29
Type 2 diabetes	48 (m: 29, f: 19)	61 ± 11	31 ± 6	8.6 ± 1.8	92 ± 30
Controls	20 (m: 10, f: 10)	53 ± 10	27 ± 4	5.0 ± 0.2	105 ± 7

N = number of patients, m = male, f = female, BMI = body mass index, GFR = glomerular filtration rate.

Table 3.2 Plasma thiamine concentration, thiamine clearance and fractional thiamine excretion (FE_{Thiamine}) in diabetic patients and normal volunteers (Thornalley et al. 2007). The data are given as median and range (minimum–maximum).

Subjects	N	Plasma thiamine (nM)	Thiamine clearance (ml/min)	FE _{Thiamine} (%)
Type 1 diabetics	26	11.7 (4.8–43.7)***	86.5 (12.8–228.4)***	71.2 (7.6–165.9)***
Type 2 diabetics	48	13.7 (2.5–53.3)***	59.8 (1.4–256.6)***	41.6 (1.1–228.9)***
Controls	20	61.4 (44.6–93.7)	3.7 (2.6–26.2)	2.8 (1.4–17.2)

*** p < 0.001.

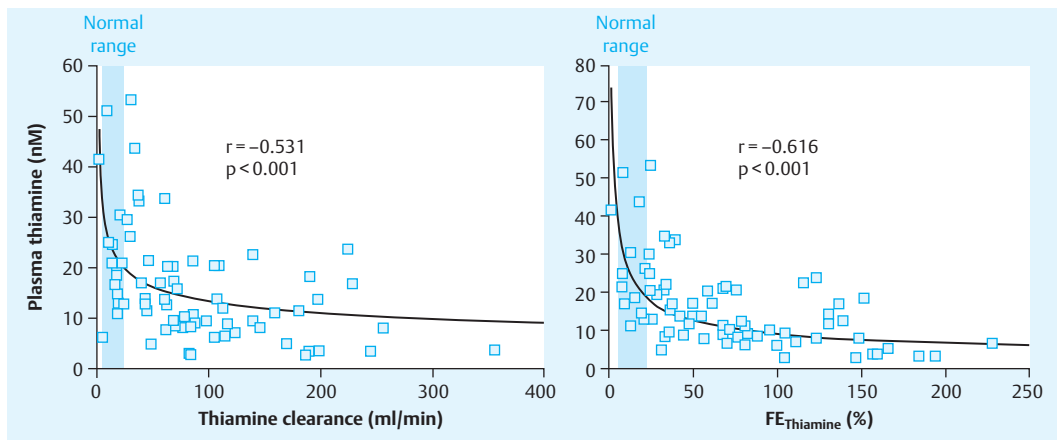


Fig. 3.2 Inverse correlation of plasma thiamine with renal clearance of thiamine and fractional thiamine excretion (FE_{Thiamine}) (Thornalley et al. 2007).

15-fold in type 2 diabetic patients (p < 0.001). Plasma thiamine concentrations correlated inversely with renal clearance of thiamine and FE_{Thiamine} (Fig. 3.2).

Erythrocyte transketolase activity, “thiamine effect” and erythrocyte membrane content of thiamine were also assessed in the Essex UK study. **Erythrocyte transketolase activity** was not changed significantly in diabetic patients: It was

1.06 ± 0.06 mU/mg Hb in normal volunteers, 1.18 ± 0.25 mU/mg Hb in type 1 diabetics and 1.01 ± 0.17 mU/mg Hb in type 2 diabetics (Thornalley et al. 2007). Quite surprisingly, the **concentration of thiamine in erythrocytes** was not changed in diabetic patients either. It was 0.318 ± 0.028 pmol/mg Hb in normal volunteers, 0.345 ± 0.025 pmol/mg Hb in type 1 diabetics and 0.328 ± 0.137 pmol/mg Hb in type 2 diabetics. The