

Table e-1. Correlations between select factors and hippocampi volume among middle-aged adults with childhood-onset T1D from the Pittsburgh Epidemiology of Diabetes Complications Study (N=79).

	Mean $\pm$ SD or N (%)	Hippocampi	
		Rho	p-value *
Physical activity (Kcal; Median (IQR)) †	520 (420-2044)	0.395	<0.001
<b>Demographic Factors</b>			
Female	-0.133	-0.133	0.25
Years of education	15 $\pm$ 2	0.038	0.74
Body mass index (kg/m <sup>2</sup> )	27 $\pm$ 5	-0.155	0.18
<b>Other risk factors</b>			
Depressive symptoms ‡	22 (28%)	-0.121	0.29
Diastolic blood pressure (mmHg)	65 $\pm$ 10	-0.191	0.097
History of high blood pressure	0.030	0.030	0.80
APOE 4 allele (24, 34, or 44)	25 (32%)	0.028	0.81
<b>T1D-specific factors</b>			
T1D duration (years)	41.3 $\pm$ 6.4	-0.002	0.99
Age at T1D diagnosis (years)	8.4 $\pm$ 4.3	-0.239	0.034
Glucose disposal rate (mg/kg/min) §	7.2 $\pm$ 2.5	0.113	0.33
Serum glucose (mg/dL)	176.9 $\pm$ 84.8	-0.046	0.69
HbA1c months (AU)	1157.0 $\pm$ 424.1	-0.018	0.88
Proliferative retinopathy	42 (53%)	0.250	0.028
Distal symmetric polyneuropathy (n=72)	41 (57%)	-0.062	0.61
Coronary artery disease	10 (13%)	-0.069	0.55

Glomerular filtration rate (n=71)    ¶	79.9 ± 26.8	-0.046	0.71
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Statistical significance set at 0.003 (per Sidak correction, 0.05/17)

\* Rho and p-values after partialling out age and intracranial volume with the exception of T1D duration and age at diagnosis; these factors are highly collinear with age

† Rho and p-value based on Log10 transformed physical activity

‡ Score  $\geq 10$  on Beck Depression Inventory

§ Estimated glucose disposal rate, a measure of insulin sensitivity

|| Assessed in 2004-2006

¶ Estimated per Chronic Kidney Disease Epidemiology Collaboration (CKD-EPI) equation