45. Bruel–Jungerman, E., Laroche, S. & Rampon, C. New neurons in the dentate gyrus are involved in the expression of enhanced long–term memory following environmental enrichment. *Eur. J. Neurosci.* **21**, 513–521 (2005).

46. Sandeep *et al.* 11Beta–hydroxysteroid dehydrogenase inhibition improves cognitive function in healthy elderly men and type 2 diabetics. *Proc Natl Acad Sci U S A.* **101**, 6734–9 (2005).

47. Cameron, H.A. & McKay, R.D. Adult neurogenesis produces a large pool of new granule cells in the dentate gyrus. *J. Comp. Neurol.* **435**, 406–417 (2001).

48. Kozorovitskiy, Y. *et al*. Experience induces structural and biochemical changes in the adult primate brain. *Proc. Natl. Acad. Sci. U. S. A.* **102**, 17478–17482 (2005).

Table 1. Endocrine characteristics of Type 1 and Type 2 diabetes in rodents with different levels of corticosterone. Data were analyzed using 2 × 2 ANOVA and asterisk (*) indicates significance at $p < 0.05$ relative to sham–operated non–diabetic controls. Values shown are means and s.e.m. Abbreviations: STZ = streptozocin; SHAM = sham–operated, ADX + CORT = adrenalectomized with 25 μg ml^{-1} corticosterone replacement.

		FASTING GLUCOSE (mg dL^{-1})	FED GLUCOSE (mg dL^{-1})	INSULIN (ng ml^{-1})	CORTICOSTERONE (ng ml^{-1})
wildtype	SHAM	71.77 (8.63)	140.65 (15.67)	1.41 (0.15)	46.16 (15.99)
	ADX+CORT	64.80 (1.87)	95.95 (20.65)	1.41 (0.14)	18.85 (3.95)
db/db	SHAM	330.27 (21.01)*	334.12 (41.09)*	3.16 (0.68)*	258.55 (43.11)*
	ADX+CORT	98.40 (17.51)	328.88 (19.83)*	1.03 (0.17)	11.24 (2.21)
Vehicle	SHAM	30.19 (5.77)	129.86 (21.72)	2.07 (0.27)	53.08 (17.72)
	ADX+CORT	44.74 (2.23)	170.87 (11.74)	1.73 (0.27)	19.87 (4.56)
STZ	SHAM	290.96 (35.94)*	318.46 (16.76)*	0.79 (.09)*	418.24 (18.26)*
	ADX+CORT	221.08 (14.80)*	263.06 (11.29)*	0.91 (0.16)*	30.14 (5.78)

Supplementary Information Titles

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Corresponding Author:	Mark P. Mattson

Supplementary Item & Number **(add rows as necessary)**	Title or Caption
Supplementary Figure 1	Effects of corticosterone manipulation on path length during acquisition training and memory retention in diabetic rodents.
Supplementary Figure 2.	Effects of adrenalectomy and diabetes on object exploration and latency to explore in the novel object preference task.
Supplementary Figure 3.	Effects of manipulating corticosterone levels on baseline synaptic transmission and presynaptic plasticity in diabetic rodents.
Supplementary Figure 4.	Reduction of dentate gyrus cell proliferation and adult neurogenesis in Type I diabetic rats.
Supplementary Figure 5.	A high replacement dose of corticosterone reinstates learning deficits in type 2 diabetic mice.
Supplementary Table 1	Effects of manipulating corticosterone levels on food intake, water intake, and body weight in diabetic rodents.
Supplementary Methods	[NO DESCRIPTIVE TITLE NECESSARY]