

Supplementary Figures

Figure S1: Blood glucose levels after streptozotocin injection, before and after insulin pellet implantation (at the time of ischemia / sham surgery).

Blood glucose levels measured for (1) ITD + sham (n = 8), (2) ITD + ischemia (n = 11), (3) ITD + RH + sham (n = 14), (4) ITD + RH + ischemia (n = 15), (5) ITD + RH + glucose + sham (n = 12), and (6) ITD + RH + glucose + ischemia (n = 14) after streptozotocin injection, before and after insulin pellet implantation (at the time of ischemia / sham surgery). The results are presented as mean \pm SEM.

Figure S2: Blood glucose levels, before, during, and after induction of hypoglycemia.

Blood glucose levels measured for (1) ITD + RH + sham (n = 14), (2) ITD + RH + ischemia (n = 15), (3) ITD + RH + glucose + sham (n = 12), (4) ITD + RH + glucose + ischemia (n = 14) during hypoglycemia procedure at baseline (prior to hypoglycemia); at 1 hr, 2 hr, and 3 hr post-insulin injection (during hypoglycemia), and at the recovery phase (after hypoglycemia). The results are presented as mean \pm SEM.

Figure S3: The effect of cerebral ischemia on distance traveled and latency during the Barnes maze test.

The distance traveled for naïve, ITD, ITD + RH, and ITD + RH + glucose groups subjected to sham or ischemia are presented in figures A, B, C, and D, respectively. The latency to find escape tunnel for naïve, ITD, ITD + RH, and ITD + RH + Glucose groups subjected to sham or ischemia are presented in figures E, F, G, and H, respectively. The groups include (1) naïve + sham (n = 9), (2) naïve + ischemia (n = 8), (3) ITD + sham (n = 7), (4) ITD + ischemia (n = 5), (5) ITD + RH + sham (n = 14), (6) ITD + RH + ischemia (n = 8), (7) ITD + RH + glucose + sham (n = 12), (8) ITD + RH + glucose + ischemia (n = 7). The results are presented as mean \pm SEM. A day (groups improved over time) effect ($p < 0.01$ for distance and $p < 0.005$ for latency), was observed among the four ischemia groups (naïve, ITD, ITD + RH, and ITD + RH + glucose) for these two parameters. The rates of learning (distance traveled) in ITD + ischemia ($p < 0.05$) and ITD + RH + glucose +

ischemia ($p < 0.05$) groups were significantly impaired when compared to the respective sham groups.

Figure S4: The search strategy used during the Barnes maze test.

The groups include (1) naïve + sham ($n = 9$), (2) naïve + ischemia ($n = 8$), (3) ITD + sham ($n = 7$), (4) ITD + ischemia ($n = 5$), (5) ITD + RH + sham ($n = 14$), (6) ITD + RH + ischemia ($n = 8$), (7) ITD + RH + glucose + sham ($n = 12$), (8) ITD + RH + glucose + ischemia ($n = 7$). The results are presented as mean \pm SEM.

Figure S1

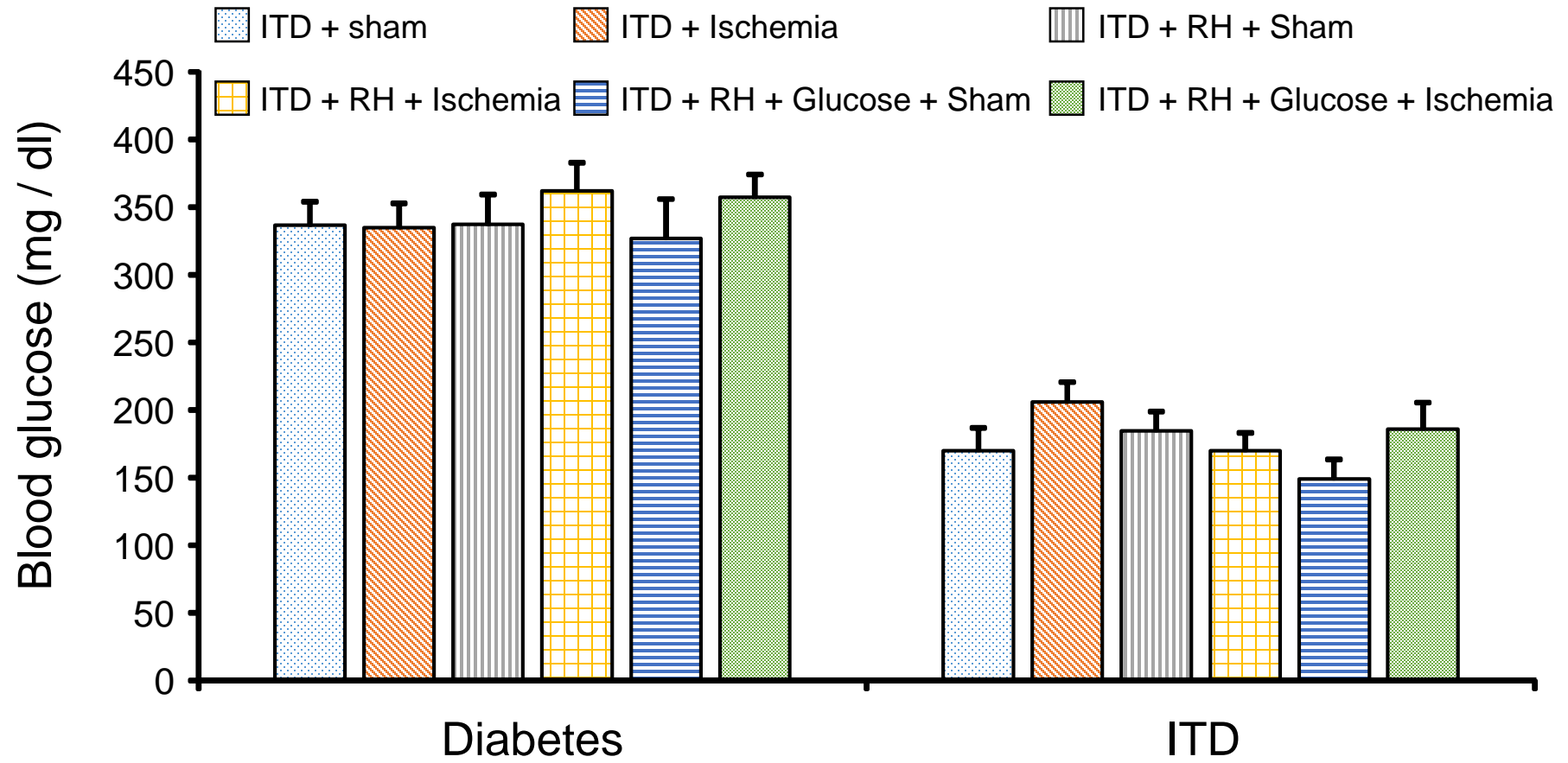


Figure S2

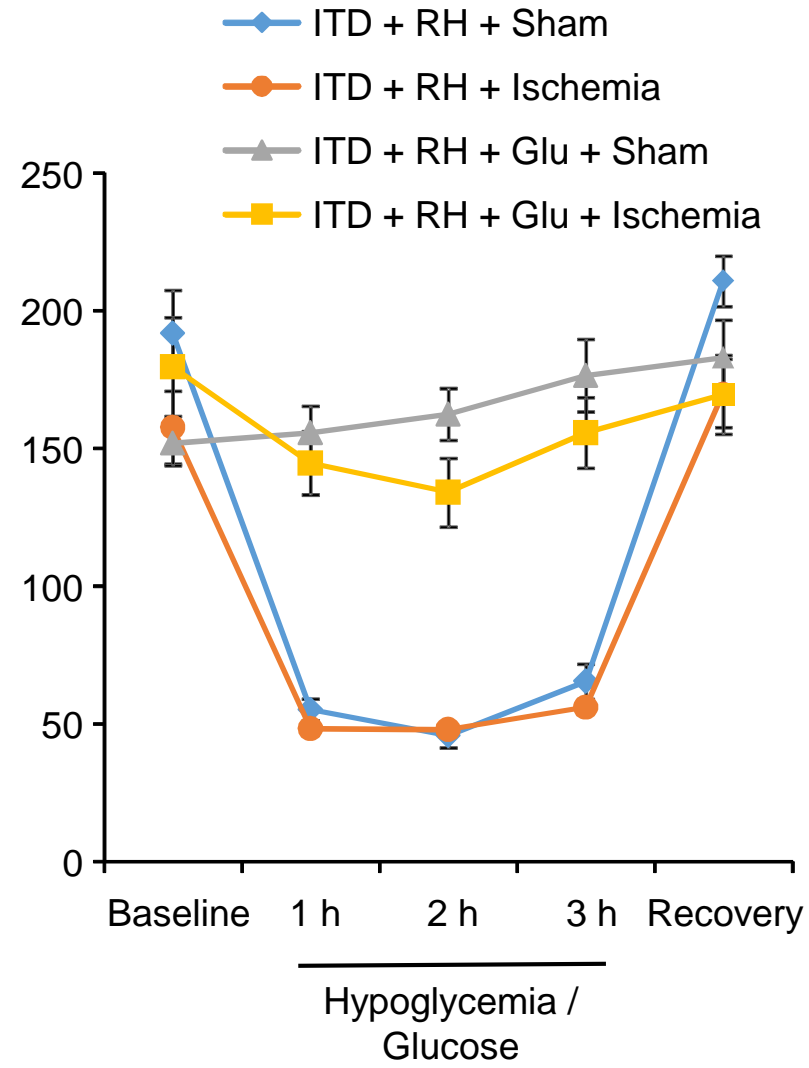


Figure S3

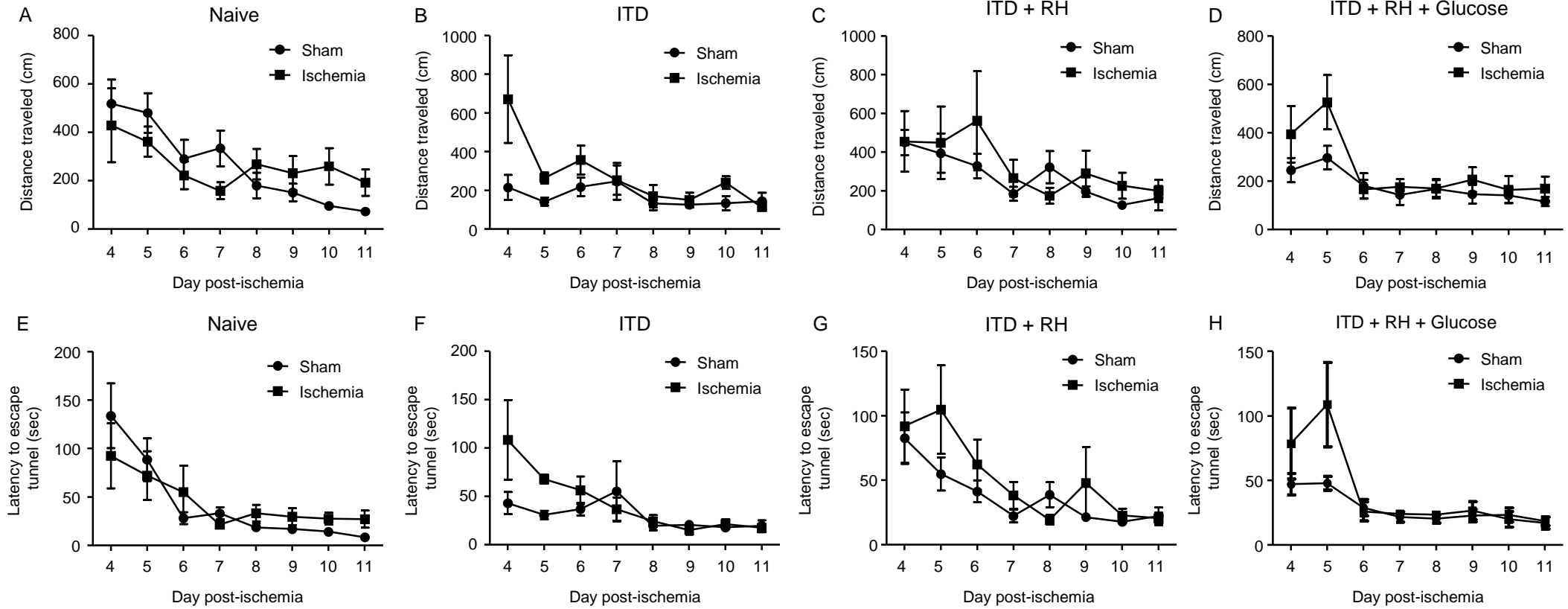


Figure S4

