**ONLINE APPENDIX**

**Supplementary Table 1.** Characteristics of controls and of diabetic subjects with and without early* severe hypoglycaemia (SH), given as mean (SD) unless otherwise noted.

| Characteristic                              | Controls | Diabetes with early SH | Diabetes without early SH |
|---------------------------------------------|----------|------------------------|---------------------------|
| No. of subjects (women/men)                 | 27 (13/14) | 9 (3/6)                | 18 (10/8)                 |
| Age (years) at baseline                     | 12.9 (2.0) | 12.6 (2.5)             | 13.1 (1.8)                |
| Age (years) at follow-up                    | 28.7 (2.1) | 28.1 (2.2)             | 28.8 (2.0)                |
| Age (years) at diagnosis                    | 5.4 (2.6)  |                        | 9.8 (2.9)                 |
| Diabetes duration (years)                   |           |                        |                           |
| No. of SH episodes                          | 11† (9)   | 4‡ (4)                 |                           |
| Lifetime mean HbA1c§ (%)                    | 9.3 (1.1)  | 8.5 (0.7)              |                           |
| No. of HbA1c measurements                   | 72 (12)   | 53 (13)                |                           |
| Parental EWI-difference|| -0.5 (0.6) | 0.0 (0.5)             |
| No. of subjects with higher/equal/lower attainment education level than matched control | 0/2/7 | 6/4/8 |
| Glucose (mmol/l) before test¶              | 10.1 (3.0-16.5) | 9.1 (3.8-18.1) |                  |
| Glucose (mmol/l) after test¶               | 15.5# (12.2-17.5) | 11.6 (3.3-21.4) |              |

*: defined as first SH ≤ 10 years of age  
†: median number = 7  
‡: median number = 3  
§: average HbA1c since diabetes onset, weighted for frequency of recordings  
||: Education-and-work index difference (diabetic subject – matched control) at baseline. Details are given in reference 8.
¶: mean (range)  
#: n = 8
**Supplementary Table 2.** Mean (SD) neuropsychological test scores at follow-up in controls and in diabetic subjects with and without early* severe hypoglycaemia (SH). Higher scores indicate better performance, except for the tests marked with †.

| Neuropsychological test                          | Controls   | Diabetes with early SH | Diabetes without early SH |
|--------------------------------------------------|------------|------------------------|---------------------------|
| Memory                                           |            |                        |                           |
| RAVLT 1                                          | 7.2 (1.8)  | 7.3 (2.0)              | 7.4 (1.9)                 |
| RAVLT 5                                          | 13.4 (1.7) | 12.7 (2.1)             | 12.9 (1.8)                |
| RAVLT interference list                           | 7.6 (2.2)  | 6.1 (1.6)              | 6.1 (1.5)                 |
| RAVLT 6                                          | 12.3 (2.0) | 12.2 (2.0)             | 11.7 (1.8)                |
| RAVLT 7                                          | 12.5 (1.8) | 12.1 (2.5)             | 12.1 (2.2)                |
| RAVLT recognition                                | 14.5 (0.7) | 14.4 (0.9)             | 14.5 (0.9)                |
| RAVLT discrimination index                        | 14.2 (1.0) | 13.3 (2.9)             | 14.2 (0.9)                |
| WMS-R immediate visual memory                     | 36.0 (3.0) | 35.1 (4.1)             | 36.7 (2.4)                |
| WMS-R delayed visual memory                       | 35.3 (3.2) | 33.0 (7.6)             | 35.6 (2.0)                |
| Motor speed                                       |            |                        |                           |
| Finger Tapping, dominant hand                     | 51.0 (6.9) | 49.8 (8.6)             | 49.8 (5.4)                |
| Finger Tapping, non-dominant hand                 | 47.4 (6.3) | 48.1 (9.3)             | 45.6 (4.7)                |
| Psychomotor efficiency                            |            |                        |                           |
| Trail Making A†                                    | 24.6 (4.2) | 28.2 (9.0)             | 24.2 (5.2)                |
| Trail Making B†                                    | 55.4 (19.6)| 61.4 (25.2)            | 53.1 (13.6)               |
| DKEFS letter fluency                              | 45.9 (14.9)| 33.2 (6.0)             | 42.3 (11.7)               |
| DKEFS category fluency                            | 53.8 (10.6)| 45.3 (9.3)             | 53.1 (9.6)                |
| DKEFS category switching total correct responses   | 14.5 (2.8) | 13.0 (2.1)             | 14.7 (2.6)                |
| DKEFS category switching total switching accuracy  | 12.8 (3.1) | 11.0 (2.4)             | 13.6 (2.6)                |
| WAIS-III digit symbol                             | 80.9 (11.1)| 70.6 (14.0)            | 77.7 (18.1)               |
| Attention                                         |            |                        |                           |
| Sea-Shore Rhythm Test                             | 26.9 (2.5) | 26.3 (2.8)             | 26.7 (2.6)                |
| CPT-II omissions†                                  | 1.0 (1.6)  | 0.9 (1.4)              | 1.3 (2.3)                 |
| CPT-II commissions†                                | 9.4 (6.0)  | 10.4 (4.7)             | 12.5 (7.3)                |

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Problem solving
WAIS-III similarities 29.0 (3.4) 18.4 (7.9) 27.7 (4.1)
WAIS-III picture completion 21.3 (2.0) 19.8 (1.6) 21.3 (2.1)

Spatial function
WAIS-III block design 52.8 (9.3) 47.3 (8.5) 50.2 (11.5)

Verbal function
WAIS-III vocabular 53.1 (7.3) 41.4 (9.4) 51.2 (6.4)

*: defined as first SH ≤ 10 years of age
Abbreviations: RAVLT, Rey Auditory Verbal Learning Test; WMS-R, Wechsler Memory Scale-Revised; DKEFS, Delis Kaplan Executive Function System; WAIS-III, Wechsler Adult Intelligence Scale III; CPT-II, Connor’s Continuous Performance Test – II.