SUPPLEMENTARY DATA

Supplementary Table 1. Individual fluxes of net glycogenolysis (GLYnet) and glycogen phosphorylase (GLYphos) fluxes measured with *vivo* ^{13}C MRS and $^{2}H_2O$ methods, respectively. Values are expressed as absolute numbers ($\mu mol.kg^{-1}.min^{-1}$) and as percentage of endogenous glucose production (% EGP). N.D. = not determined

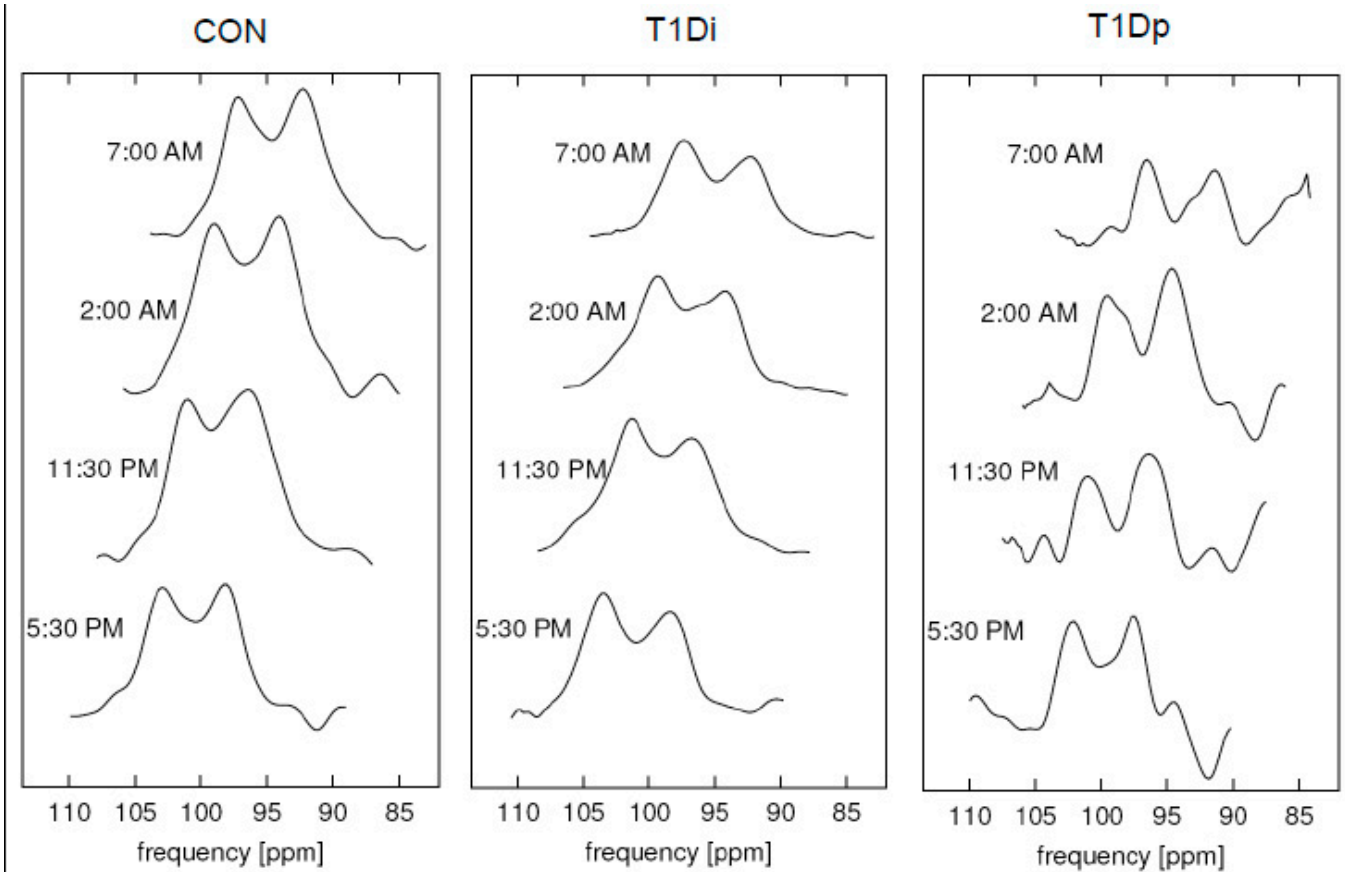
Subjects	GLYnet ($\mu mol.kg^{-1}.min^{-1}$)	GLYphos ($\mu mol.kg^{-1}.min^{-1}$)	GLYnet (% EGP)	GLYphos (% EGP)
CON	3.1	3.8	32	38
CON	2.0	3.8	23	43
CON	6.3	4.6	62	45
CON	4.1	4.3	38	40
CON	2.5	4.1	18	29
CON	5.8	5.3	42	38
CON	4.2	7.6	31	57
CON	3.8	5.9	27	52
Mean ± S.D.	**4.0 ± 1.5**	**4.9 ± 1.0**	**35 ± 9**	**41 ± 6**
T1Dp	3.1	N.D.	16	N.D.
T1Dp	4.4	4.3	32	32
T1Dp	1.8	8.0	10	44
T1Dp	2.3	7.5	12	39
T1Dp	5.3	9.9	30	56
T1Dp	6.6	8.2	44	53
T1Dp	2.9	N.D.	15	N.D.
T1Dp	2.4	7.1	17	50
T1Dp	2.1	N.D.	14	N.D.
T1Dp	1.9	4.1	14	30
Mean ± S.D.	**3.3 ± 1.6**	**7.0 ± 1.6**	**20 ± 9**	**43 ± 8**
T1Di	2.1	N.D.	17	N.D.
T1Di	11.8	4.6	85	33
T1Di	6.1	N.D.	45	N.D.
T1Di	4.0	N.D.	31	N.D.
T1Di	5.1	4.2	33	27

SUPPLEMENTARY DATA

T1Di	3.6	2.8	32	24
T1Di	7.0	4.4	59	37
T1Di	2.3	2.5	17	19
Mean ± S.D.	**5.3 ± 3.2**	**3.7 ± 0.8**	**41 ± 19**	**28 ± 6**

SUPPLEMENTARY DATA

Supplementary Figure 1. ^{13}C NMR example spectra from one healthy control (CON), one diabetic patient with poor glycemic control (T1Dp) and one diabetic patient with improved glycemic control (T1Di). 50 minutes acquisition time with formic acid reference signal. Enlarged field depicts glycogen concentration at various time points (6:00 p.m., 12:00 a.m., 2:00 a.m. and 7:00 a.m.).



SUPPLEMENTARY DATA

Supplementary Figure 2. Individual fluxes of ^{2}H NMR spectra of urinary glucuronides following derivatization to monoacetone glucose (MAG). The individual ratio of signal 5 and signal 2 areas (H5/H2) are shown for each spectrum.