Appendix 7a – Sensitivity analysis for glucose response, substituting morning time points with afternoon time points where available.

Figure 1. Forest plot of the glucose sensitivity analysis.

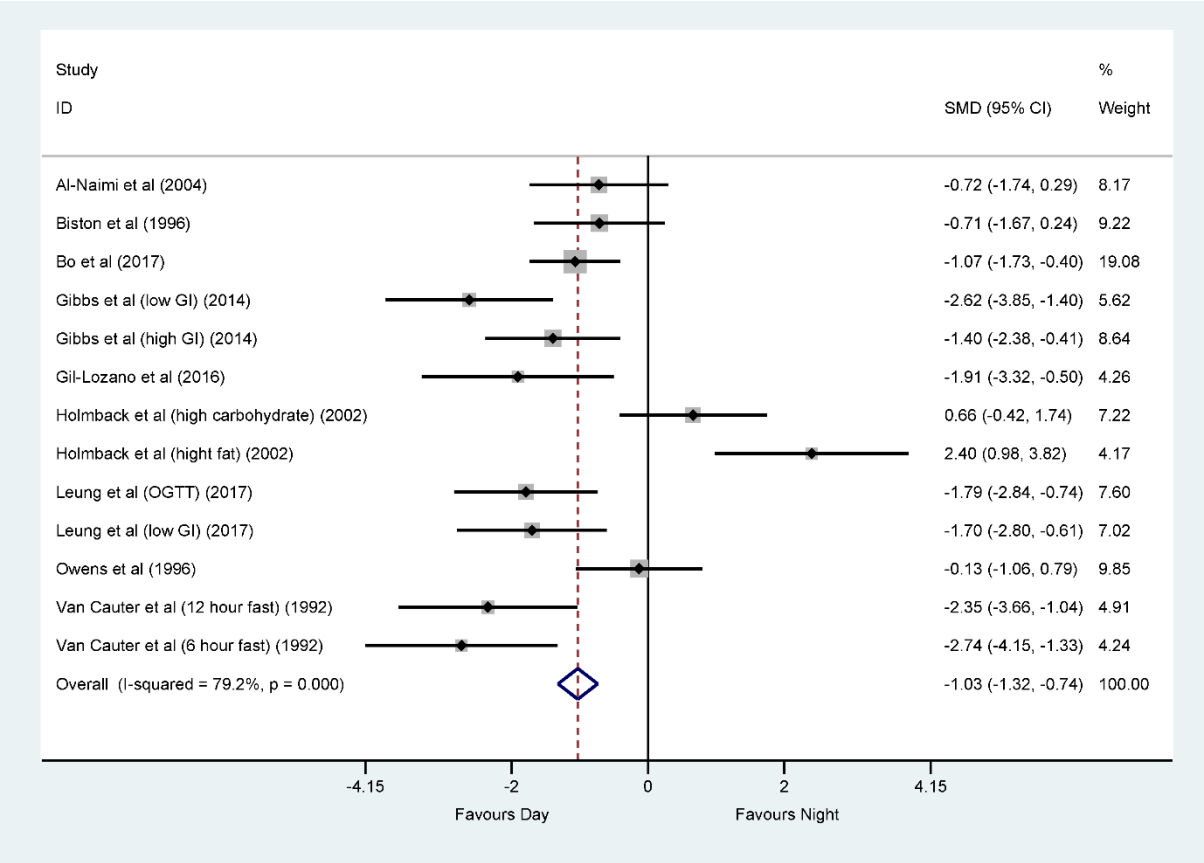

Table 1. Glucose data used in the sensitivity analysis. The comparisons shaded in grey were replaced by later day time points provided by the study.

Reference	**Postprandial concentration – reported units**	**Comparison (day time, night time)**	**Day (mean ± SD*)**	**Night (mean ± SD*)**
Al-Naimi et al, 2004	AUC (mmol/l.h)	1300, 0100h	15.3 ± 1.3	17.2 ± 1.3
		1600, 0400h	15.5 ± 0.9	16.5 ± 1.8
Biston et al, 1996	iAUC (mmol/l.min)	0830, 2000h	193 ± 76.7	540 ± 116.3
		1400, 2000h	457 ± 116.3	540 ± 116.3
Bo et al, 2017	AUC (mg/dl x h)	0800, 2000h	15383 ± 1585.5	17183.3 ± 1775.5
Gibbs et al, 2015 - *Low GI*	iAUC (mmol/L.h)	0800, 2000h	142.0 ± 63.7	309.0 ± 63.7
Gibbs et al, 2015 - *High GI*	iAUC (mmol/L.h)	0800, 2000h	218.0 ± 80.9	351.0 ± 107.9
Gil-Lozano et al, 2015	iAUC (g/dl. 180 min)	1100, 2300h	16.7 ± 1.3	19.0 ± 1.2
Holmback et al, 2002 [a]	iAUC (mmol/L.3h)	1200, 0000h	165.1 ± 67.5	209.6 ± 38.6
High carbohydrate		1600, 0400h	225.1 ± 49.1	190.0 ± 56.6
Holmback et al, 2002	iAUC (mmol/L.3h)	1200, 0000h	123.3 ± 38.3	190.6 ± 29.8
High fat		1600, 0400h	229.4 ± 32.9	149.8 ± 33.4
Leung et al, 2017 – *OGTT*	iAUC (mmol/l.2h)	0800, 2000h	180.4 ± 88.1	357.9 ± 109.2
Leung et al, 2017 – *low GI meal*	iAUC (mmol/l.3h)	0800, 2000h	66.9 ± 94.2	264.9 ± 135.0
Owen et al, 1996 [b]	iAUC (mmol/l.3h)	0800, 2000h	143.2 ± 52.1	285.5 ± 143.3
		1400, 0200h	226.1 ± 85.1	238.4 ± 100.7
Van Cauter et al, 1992 - *12 hour fast*	2hr iAUC (mmol/l.min)	0800, 2000h	111.3 ± 43.2	203.5 ± 34.9
Van Cauter et al, 1992 [b] - *6 hour fast*	2hr iAUC (mmol/l.min)	0800, 2000h	83.9 ± 28.3	195.0 ± 50.0

* SD (standard deviation) was adjusted with correlation factor (0.4). [a] Plasma glucose levels supplied by Holmback et al, iAUC calculated by the review's authors.
[b] In the original article, authors stated that they were reporting AUC, but from their description of method, it was understood that they reported iAUC.
AUC: area under the curve, iAUC: incremental area under the curve

Appendix 7b – Sensitivity analysis for insulin response, substituting morning time points with afternoon time points where available.

Figure 2. Forest plot of the insulin sensitivity analysis.

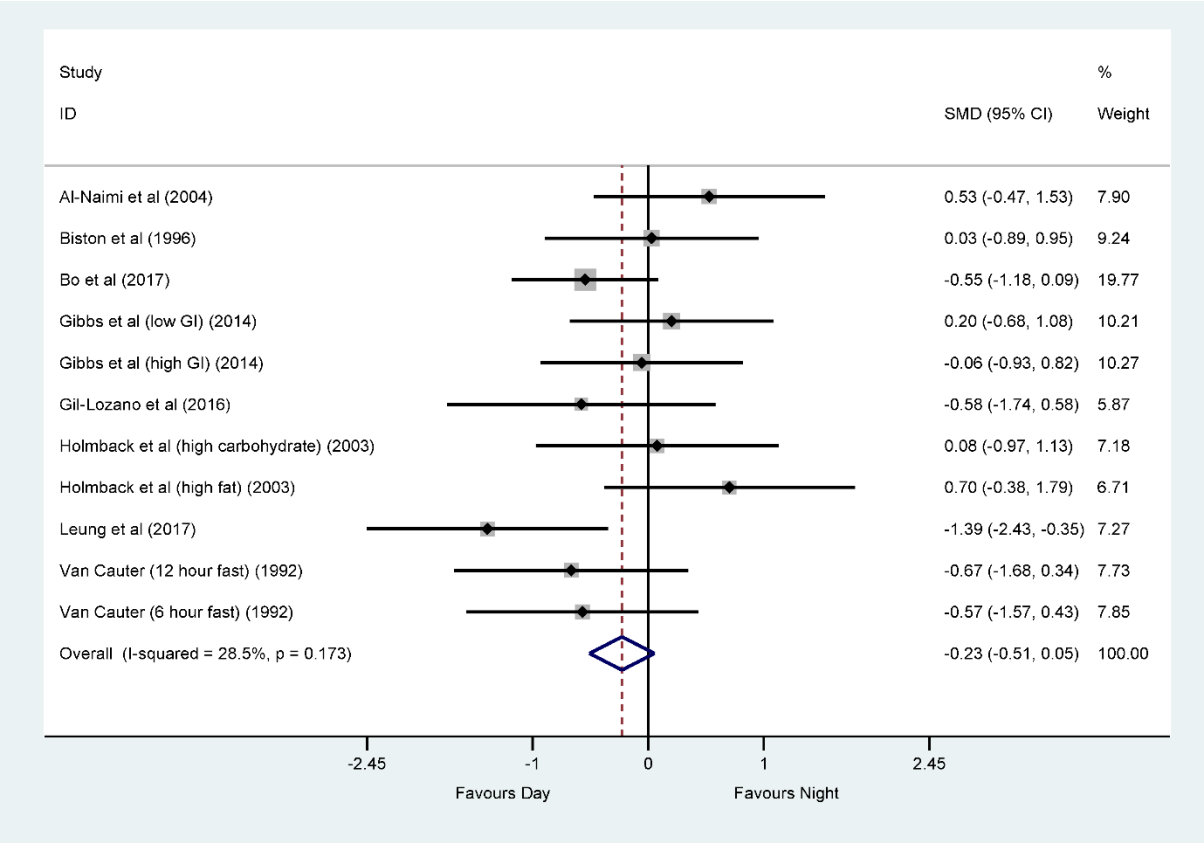

Table 2. Insulin data used in the sensitivity analysis. The comparisons shaded in grey were replaced by later day time points provided by the study.

Reference	Postprandial concentration – reported units	Comparison (day time, night time)	Day (mean ± SD*)	Night (mean ± SD*)
Al-Naimi et al, 2004	AUC (pmol/l.h)	1300, 0100h	699 ± 153.2	550 ± 150.9
		1600, 0400h	452 ± 148.5	384 ± 106.1
Biston et al, 1996	iAUC (nmol/l.min)	0830, 2000h	35.4 ± 8.3	44.6 ± 14.0
		1400, 2000h	45.0 ± 13.5	44.6 ± 14.0
Bo et al, 2017	AUC (µU/ml x h)	0800, 2000h	6968.9 ± 2323.9	8597.8 ± 3525.9
Gibbs et al, 2015 - *Low GI*	iAUC (pmol/L.h)	0800, 2000h	1356 ± 1080.4	1077 ± 1623.3
Gibbs et al, 2015 - *High GI*	iAUC (pmol/L.h)	0800, 2000h	1159 ± 1723.4	1236 ± 917.1
Gil-Lozano et al, 2015	iAUC (ng/ml.120min)	1100, 2300h	52.7 ± 21.2	64.3 ± 18.8
Holmback et al, 2003 [a]	iAUC (mU/L.3h)	1200, 0000h	2955.6 ± 1102.0	2900.5 ± 878.8
High carbohydrate		1600, 0400h	3603.6 ± 1379.5	3495.0 ± 1417.1
Holmback et al, 2003	iAUC (mU/L.3h)	1200, 0000h	2516.6 ± 782.5	2792.8 ± 734.3
High fat		1600, 0400h	3332.4 ± 876.7	2739.4 ± 809.1
Leung et al, 2017 – *low GI*	iAUC (mU/L.3h)	0800, 2000h	1930.5 ± 818.2	3051.7 ± 793.1
Van Cauter et al, 1992 - *12 hour fast*	2hr iAUC (nmol/L.min)	0800, 2000h	15.0 ± 3.6	17.7 ± 4.5
Van Cauter et al, 1992 [b] - *6 hour fast*	2hr iAUC (nmol/L.min)	0800, 2000h	13.3 ± 2.9	15.6 ± 5.0

* SD (standard deviation) was adjusted with correlation factor (0.3). [a] Plasma insulin levels supplied by Holmback et al, iAUC calculated by the review's authors.
[b] In the original article, authors stated that they were reporting AUC, but from their description of method, it was understood that they reported iAUC.
AUC: area under the curve, iAUC: incremental area under the curve.