

**Online supplementary table 2.** Univariable and multivariable generalised linear mixed models for the associations between insulin treatment in hyperglycaemic infants and moderate to severe neurodevelopmental disability at 6.5 years of age in children born extremely preterm.

Hyperglycaemia definition	Moderate to severe NDD in hyperglycaemic infants		Crude OR (95% CI)	P value	aOR* (95% CI)	P value	aOR† (95% CI)	P value	
	No insulin	Insulin							
<b>&gt;8 mmol/L</b>	at least once	102/323 (31.6%)	30/57 (52.6%)	2.33 (1.31 to 4.17)	0.004	1.33 (0.65 to 2.73)	0.441	1.17 (0.56 to 2.47)	0.677
	on ≥2 consecutive days	74/219 (33.8%)	30/57 (52.6%)	1.86 (1.01 to 3.43)	0.048	1.15 (0.55 to 2.41)	0.706	1.03 (0.48 to 2.22)	0.937
	on ≥3 consecutive days	48/131 (36.6%)	28/53 (52.8%)	1.73 (0.88 to 3.40)	0.114	1.28 (0.58 to 2.81)	0.540	1.00 (0.43 to 2.32)	0.999
<b>&gt;10 mmol/L</b>	at least once	77/241 (32.0%)	30/57 (52.6%)	2.22 (1.22 to 4.04)	0.009	1.21 (0.57 to 2.56)	0.616	1.10 (0.51 to 2.38)	0.803
	on ≥2 consecutive days	40/130 (30.8%)	28/55 (50.9%)	2.00 (1.02 to 3.94)	0.045	1.08 (0.48 to 2.41)	0.857	1.05 (0.46 to 2.37)	0.912
	on ≥3 consecutive days	27/70 (38.6%)	26/47 (55.3%)	1.97 (0.91 to 4.23)	0.084	1.37 (0.57 to 3.28)	0.479	1.12 (0.44 to 2.86)	0.812
<b>&gt;12 mmol/L</b>	at least once	54/167 (32.3%)	30/56 (53.6%)	2.15 (1.14 to 4.07)	0.019	1.56 (0.72 to 3.39)	0.264	1.45 (0.66 to 3.20)	0.353
	on ≥2 consecutive days	22/72 (30.6%)	25/50 (50.0%)	1.81 (0.80 to 4.05)	0.151	1.11 (0.43 to 2.83)	0.834	1.01 (0.39 to 2.65)	0.983

Hyperglycaemia definition	Moderate to severe NDD in hyperglycaemic infants		Crude OR (95% CI)	P value	aOR* (95% CI)	P value	aOR† (95% CI)	P value
	No insulin	Insulin						
on $\geq 3$ consecutive days	11/26 (42.3%)	19/35 (54.3%)	1.61 (0.55 to 4.74)	0.380	1.24 (0.37 to 4.12)	0.724	0.97 (0.25 to 3.70)	0.958
at least once	37/116 (31.9%)	28/53 (52.8%)	2.30 (1.16 to 4.58)	0.018	1.74 (0.80 to 3.80)	0.163	1.54 (0.68 to 3.48)	0.299
<b>&gt;14 mmol/L</b>								
on $\geq 2$ consecutive days	13/39 (33.3%)	17/35 (48.6%)	1.78 (0.67 to 4.72)	0.246	1.15 (0.38 to 3.47)	0.809	1.00 (0.30 to 3.33)	0.999
on $\geq 3$ consecutive days	6/10 (60.0%)	11/21 (52.4%)	0.69 (0.13 to 3.65)	0.652	0.55 (0.08 to 3.62)	0.521	0.06 (0.002 to 2.50)	0.134

Random intercepts were used to account for the clustering effects of twins/triplets and treating hospital.

\* Adjusted for duration of hyperglycaemia (according to respective definition) during the first 28 postnatal days.

† Adjusted for gestational age at birth, durations of mechanical ventilation and steroid treatments during the first 14 postnatal days, surgery due to patent ductus arteriosus or necrotising enterocolitis during the first 14 postnatal days, and duration of hyperglycaemia (according to respective definition) during the first 28 postnatal days.