

	fMRI responses												number of voxels												
	BOLD (% signal change)				SEM BOLD (% signal change)				t-value								p-value								
	VISUAL		AUDITORY		SENSORIMOTOR		VISUAL		AUDITORY		SENSORIMOTOR		VISUAL		AUDITORY		SENSORIMOTOR								
PA01	0.251	-0.211	-0.23	0.951	0.622	0.053	0.064	0.065	0.249	0.123	4.75	-3.306	-3.561	3.827	5.068	0.000004	0.00132	0.000467	0.000214	0.000002	76	56	46	57	37
PA02	-0.366	-0.309	-0.328	0.941		0.094	0.077	0.067	0.274		-3.894	-4.003	-4.933	3.433		0.000136	0.000088	0.000002	0.000085		54	100	198	26	86
PA03	-0.345			-0.395		0.09			0.096		-3.854			-4.111		0.000159			0.000072		34				
PA04	0.147	-0.214	-0.136			0.032	0.078	0.025			4.549	-2.766	-5.442			0.000009	0.006219	0.0000001			58	98	181		
PA05	0.161	-0.194		0.302		0.039	0.03		0.059		4.133	-4.432		5.162		0.000053	0.000015		0.000001		41	107			15
PA06	0.464	0.513		-0.32		0.147	0.149		0.122		3.164	3.45		-2.624		0.001807	0.000688		0.009933		62	59			114
PA07	-0.384	-0.401	-0.202			0.119	0.136	0.029			-3.214	-2.944	-6.867			0.001579	0.003719	0.0000001			93	87	219		
PA08	0.327	-0.233	0.166			0.111	0.071	0.046			2.942	-3.286	3.629			0.00367	0.001208	0.000365			86	116	106		
PA09	0.176	0.155		0.244		0.063	0.053		0.034		2.788	2.903		7.068		0.003831	0.004121		0.0000001		81	42			204
PA10	-0.236		0.232	0.77		0.071		0.041	0.136		-3.313	-3.894	-4.933	5.458		0.001095		0.0000001		0.0000001	99		81		32
PA11	-0.131	0.171	0.176	0.883	1.127	0.026	0.029	0.032	0.114	0.185	-5.105	5.811	5.417	7.727	6.102	0.000001	0.0000001	0.0000001	0.0000001	0.0000001	123	496	92	306	68
PA12	0.135	0.22	-0.159	1.459	2.385	0.038	0.058	0.029	0.174	0.329	3.554	3.816	5.567	8.403	7.24	0.000478	0.000182	0.0000001	0.0000001	0.0000001	22	41	71	71	97
PA13	-0.154	-0.161	1.436			0.044	0.028	0.249			-3.523	-3.745		5.754		0.000024	0.0000001		0.0000001		14	29	311		107
PA14	0.137	0.166	0.14	0.884	0.716	0.032	0.039	0.037	0.137	0.087	-4.245	-4.296	3.733	6.457	8.245	0.000034	0.000027	0.000245	0.0000001	0.0000001	26	13	357		426
PA15	-0.191	-0.237	0.193	0.207		0.04	0.034	0.052	0.04	0.053	-5.806	-4.558	4.855	3.887		0.0000019	0.0000001	0.000009	0.000002	0.000158	42	107	95		16
PA16	-0.176	0.131	0.649			0.04	0.034	0.052	0.04	0.104	-4.384	3.856		6.24		0.000019	0.000157		0.0000001		42	65			91
PA17	-0.381	-0.333	-0.867			0.124	0.102	0.201			-3.059	-3.269	-4.319			0.002506	0.001262	0.00003			53		109		70
PA18	-0.14		-0.169	-0.499		0.029	0.023	0.027	0.052		-4.765	-6.321	-4.769	-6.212	-5.402	0.000004	0.0000001	0.0000001		0.0000001	43		59		23
CT01	-0.144	0.96	0.386			0.023	0.02	0.027	0.178		-6.321	-4.769	-6.212	3.296		0.0000001	0.000003	0.0000001	0.001259		77	91	59		24

Figure S1 Comprehensive description of fMRI response patterns. Comprehensive description of the fMRI response patterns during visual, auditory, and sensorimotor stimulation (beta values, standard error, t values, P values, and number of voxels of the clusters) per participant and brain hemisphere. PA, perinatal asphyxia participants; CT, control participant; fMRI, functional magnetic resonance imaging; BOLD, blood-oxygen-level-dependent; SEM, standard error of the mean.

Table S1 fMRI BOLD responses by type of sedation in participants with PA

fMRI BOLD responses (% signal change) per stimulus and hemisphere	Sedation type		P
	Midazolam (N=7)	Propofol (N=11)	
Visual left, mean ± SD	0.757±0.428	-0.0336±0.175	0.563
Visual right, mean ± SD	-0.057±0.363	-0.119±0.189	0.303
Auditory left, median (IQR)	-0.202 (-0.26 to 0.135)	-0.193 (-0.273 to 0.195)	1.0
Auditory right, median (IQR)	-0.279 (-0.328 to -0.279)	0.159 (-0.165 to 0.184)	0.145
Sensorimotor left, mean ± SD	0.524±0.731	0.52±1.001	0.928
Sensorimotor right, mean ± SD	0.176±0.52	0.782±0.821	0.266

fMRI, functional magnetic resonance imaging; BOLD, blood-oxygen-level-dependent; PA, perinatal asphyxia; N, number; SD, standard deviation; IQR, interquartile range. Retrieved with permission from Pinto CR, Duarte JV, Marques C, Vicente IN, Paiva C, Eloi J, et al. The role of early functional neuroimaging in predicting neurodevelopmental outcomes in neonatal encephalopathy. Eur J Pediatr. 2023;182(3):1191-200. Copyright license at <https://creativecommons.org/licenses/by/4.0/>.