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2 Supplementary material
3

4 **Table S1 – Numerical overview on results presented in main figures 1 and 2. Mean ± SEM are**
5 **indicated.**

		state	4w WT	4w R6/2	10-11w WT	10-11w R6/2
Striatum	O ₂ pmol/(s*mg)	N _L	13,59 ± 1,62	13,47 ± 1,86	13,26 ± 0,97	10,31 ± 0,34
		N _P	43,32 ± 3,69	38,21 ± 6,77	65,18 ± 0,81	65,14 ± 7,14
		NS _P	79,71 ± 5,80	86,70 ± 5,02	111,13 ± 3,30	107,20 ± 4,94
		NS _E	117,47 ± 8,65	125,44 ± 5,60	154,81 ± 5,19	147,61 ± 4,56
		S _E	49,90 ± 3,23	56,59 ± 2,24	59,86 ± 2,08	58,97 ± 0,90
		CIV	133,66 ± 6,47	142,66 ± 11,67	167,75 ± 9,77	161,57 ± 15,86
	FCR	N _L	0,12 ± 0,01	0,11 ± 0,01	0,09 ± 0,01	0,07 ± 0,00
		N _P	0,37 ± 0,02	0,30 ± 0,04	0,42 ± 0,01	0,44 ± 0,04
		NS _P	0,68 ± 0,01	0,69 ± 0,01	0,72 ± 0,01	0,73 ± 0,02
		S _E	0,43 ± 0,01	0,45 ± 0,00	0,39 ± 0,01	0,40 ± 0,02
CIV		1,15 ± 0,05	1,14 ± 0,05	1,08 ± 0,06	1,10 ± 0,13	
Hippocampus	O ₂ pmol/(s*mg)	N _L	13,23 ± 1,62	11,78 ± 1,02	12,40 ± 0,63	9,92 ± 0,78
		N _P	48,6 ± 8,55	35,18 ± 5,25	55,52 ± 3,18	59,95 ± 7,29
		NS _P	80,44 ± 12,18	68,82 ± 3,24	87,92 ± 3,34	95,48 ± 8,17
		NS _E	130,91 ± 19,52	116,93 ± 3,50	145,21 ± 0,51	143,94 ± 9,05
		S _E	46,97 ± 7,05	41,17 ± 3,30	44,73 ± 1,73	50,59 ± 1,92
		CIV	141,50 ± 21,91	117,02 ± 10,51	146,96 ± 10,06	153,54 ± 10,23
	FCR	N _L	0,10 ± 0,01	0,10 ± 0,01	0,09 ± 0,00	0,07 ± 0,00
		N _P	0,37 ± 0,01	0,30 ± 0,05	0,38 ± 0,02	0,41 ± 0,03
		NS _P	0,61 ± 0,01	0,59 ± 0,02	0,61 ± 0,02	0,66 ± 0,02
		S _E	0,36 ± 0,01	0,35 ± 0,02	0,31 ± 0,01	0,35 ± 0,01
CIV		1,08 ± 0,07	1,01 ± 0,10	1,01 ± 0,07	1,07 ± 0,04	
Motorcortex	O ₂ pmol/(s*mg)	N _L	15,15 ± 2,05	13,82 ± 1,77	13,00 ± 1,27	10,67 ± 1,23
		N _P	74,6 ± 8,19	65,07 ± 3,15	77,27 ± 4,23	73,30 ± 10,97
		NS _P	108,10 ± 12,90	99,02 ± 7,91	114,65 ± 2,82	107,98 ± 14,05
		NS _E	153,62 ± 18,18	157,17 ± 12,88	173,04 ± 2,28	164,55 ± 18,18
		S _E	55,13 ± 6,52	50,83 ± 4,22	52,01 ± 1,26	51,58 ± 4,20
		CIV	184,45 ± 23,16	151,00 ± 27,58	183,35 ± 8,09	167,40 ± 22,73
	FCR	N _L	0,10 ± 0,00	0,09 ± 0,01	0,08 ± 0,01	0,07 ± 0,01
		N _P	0,49 ± 0,01	0,42 ± 0,02	0,45 ± 0,02	0,44 ± 0,02
		NS _P	0,70 ± 0,02	0,63 ± 0,01	0,66 ± 0,01	0,65 ± 0,02
		S _E	0,36 ± 0,01	0,32 ± 0,01	0,30 ± 0,00	0,32 ± 0,01
CIV		1,20 ± 0,03	0,95 ± 0,14	1,06 ± 0,05	1,02 ± 0,12	

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8 Table S2 – Summary of statistics (two-way ANOVA results to main figures 1 and 2)

	state	genotype	age	interaction	
Striatum	Per wet weight	N _L	F (1, 12) = 1.315, P=0.27	F (1, 12) = 1.709, P=0.22	F (1, 12) = 1.115, P=0.31
		N _P	F (1, 12) = 0.239, P=0.63	F (1, 12) = 21.441, P=0.001 ***	F (1, 12) = 0.231, P=0.64
		NS _P	F (1, 12) = 0.099, P=0.76	F (1, 12) = 28.645, P<0.001 ***	F (1, 12) = 1.267, P=0.28
		NS _E	F (1, 12) = 0.004, P=0.95	F (1, 12) = 23.010, P<0.001 ***	F (1, 12) = 1.496, P=0.25
		S _E	F (1, 12) = 1.634, P=0.23	F (1, 12) = 7.398, P=0.02 *	F (1, 12) = 2.802, P=0.12
	CIV	F (1, 12) = 0.015, P=0.90	F (1, 12) = 5.350, P=0.04 *	F (1, 12) = 0.439, P=0.52	
	Flux Control Ratio (FCR)	N _L	F (1, 12) = 2.910, P=0.11	F (1, 12) = 21.825, P=0.001 ***	F (1, 12) = 0.216, P=0.65
		N _P	F (1, 12) = 0.673, P=0.43	F (1, 12) = 8.873, P=0.012 *	F (1, 12) = 1.811, P=0.20
		NS _P	F (1, 12) = 0.565, P=0.47	F (1, 12) = 9.373, P=0.01 **	F (1, 12) = 0.029, P=0.87
		S _E	F (1, 12) = 3.681, P=0.08	F (1, 12) = 18,71 P=0.001 ***	F (1, 12) = 0.3315 P=0.58
CIV		F (1, 12) = 0.01, P=0.97	F (1, 12) = 0.374, P=0.55	F (1, 12) = 0.029, P=0.87	
Hippocampus	Per wet weight	N _L	F (1, 12) = 3.319, P=0.09	F (1, 12) = 1.551, P=0.24	F (1, 12) = 0.227, P=0.64
		N _P	F (1, 12) = 0.493, P=0.50	F (1, 12) = 6.119, P= 0.03 *	F (1, 12) = 1.945, P= 188
		NS _P	F (1, 12) = 0.069, P=0.80	F (1, 12) = 4.921, P=0.05 *	F (1, 12) = 1.554, P=0.24
		NS _E	F (1, 12) = .0489, P=0.50	F (1, 12) = 3.588, P=0.08	F (1, 12) = .340 P=0.57
	S _E	F (1, 12) = 0.000, P=0.99	F (1, 12) = 0.766, P=0.40	F (1, 12) = 2.018, P=0.18	
	CIV	F (1, 12) = 0.402, P=0.54	F (1, 12) = 2.214, P=0.16	F (1, 12) = 1.212, P=0.29	
	Flux	N _L	F (1, 12) = 1.758, P=0.21	F (1, 12) = 10.240, P=0.008 **	F (1, 12) = 0.669, P=0.43
		N _P	F (1, 12) = 0.419,	F (1, 12) = 4.708,	F (1, 12) = 2.833,

		P=0.53	P=0.051	P=0.12	
	NS_P	F (1, 12) = 0.659, P=0.43	F (1, 12) = 2.839, P=0.12	F (1, 12) = 4.582, P=0.054	
	S_E	F (1, 12) = 1.339, P=0.27	F (1, 12) = 2.269, P=0.16	F (1, 12) = 2.557, P=0.14	
	CIV	F (1, 12) = .009, P=0.93	F (1, 12) = .002, P=0.97	F (1, 12) = 0.726, P=0.41	
Motorcortex	Per wet weight	N_L	F (1, 12) = 1.282, P=0.28	F (1, 12) = 2.689, P=0.13	F (1, 12) = 0.097, P=0.76
		N_P	F (1, 12) = 0.854, P=0.37	F (1, 12) = 0.548, P=0.47	F (1, 12) = 0.146, P=0.71
		NS_P	F (1, 12) = 0.571, P=0.46	F (1, 12) = 0.554, P=0.47	F (1, 12) = 0.013, P=0.91
		NS_E	F (1, 12) = 0.029, P=0.87	F (1, 12) = 0.863, P=0.37	F (1, 12) = 0.174, P=0.68
		S_E	F (1, 12) = 0.282, P=0.61	F (1, 12) = 0.070, P=0.80	F (1, 12) = 0.188, P=0.67
		CIV	F (1, 12) = 1.299, P=0.28	F (1, 12) = 0.125, P=0.73	F (1, 12) = 0.163, P=0.69
	Flux Control Ratio (FCR)	N_L	F (1, 12) = 1.705, P=0.22	F (1, 12) = 9.213, P=0.01 **	F (1, 12) = 0.040, P=0.84
		N_P	F (1, 12) = 3.826, P=0.07	F (1, 12) = 0.234, P=0.64	F (1, 12) = 2.707, P=0.13
		NS_P	F (1, 12) = 6.981, P=0.02 *	F (1, 12) = 0.375, P=0.55	F (1, 12) = 4.073, P=0.07
		S_E	F (1, 12) = 1.024, P=0.33	F (1, 12) = 12.041, P=0.005 **	F (1, 12) = 7.059, P=0.02 *
CIV		F (1, 12) = 2.201, P=0.16	F (1, 12) = 0.119, P=0.74	F (1, 12) = 1.199, P=0.30	