

System	species	area	N	Distance (mm)	Conduction time (ms) (range) (mean or med)	Conduction velocity (m/s) (range) (mean or med)	refs
Corpus callosum	mouse	visual	46	6 - 8	(2.0 - 20.0) (8.3)	(0.3 - 3.5) (---)	1
	rabbit	visual	40	~18	(2.4 - 39.8) (16.5)	(0.7 - 7.5) (---)	2
	cat	visual	36	---	(1.3 - 15.0) (2.7)	(---) (---)	3
	cat	Sense-motor	87	10 - 20	(2.0 - 32.0) (10.1)	(1.0 to 10.0) (---)	4
	monkey	Visual	51	~ 50	(2.6-18.0) (7.0)	(3.0 - 23.0) (7.0)	5
Cortico-cortical	rabbit	S1- S2	48	---	(2.0 - 28.9) (11.0)	(0.3 - 4.6) (1.3)	6
	cat	S1- S2	26	---	(2.0 - 42.0) (13.5)	(---) (---)	4
	monkey	LIP-FEF	329	30	(0.5 - 8.0) (2.3)		7
Cortico-tectal	rabbit	V1	101	22	(0.98 - 14.8) (3.7)	(1.5- 28.2) (6.4)	8
	cat	V1	68	30	(1.4 - 8.3) (2.9)	(3.7 - 25.0) (11.1)	9
	monkey	V1	89	---	(2 - 12.0) (4.6)	(3.0 - 19.0) (8.0)	10
Cortico-spinal	cat	M1	156	---	(0.5 - 5.0) (1.1)	(11.0 - 100.0) (---)	11
	monkey	M1	62	70	(0.6 - 5.2) (1.0)	(13.0 - 110.0) (70.0)	12
Cortico-	rabbit	V1	124	17	(2.0 - 42.7) (14.3)	(0.4 - 9.6) (---)	8
	cat	V1	134	20	(2.5 - 45.0) (---)	(0.4 - 8.0) (---)	13

thalamic (layer 6)	monkey	V1	35	---	-) (2.0 - > 20.0) (9.5)	(---)	(---)	14
Thalamo- cortical	rabbit	visual	127	17	(0.6 – 3.1) (1.2)	(5.5 – 28.0)	(14.8)	15
	cat	visual	250	~ 20	(0.3 – 9.7) (0.9)	(2.1- 67.0)	(22.2)	16
Locus coeruleus	rat	to neo- cortex	35	18	(23.0 – 82.0) (44.0)	(----)	(0.4)	17
	monkey	to neo- cortex	9	100	(82.0 – 130.0) (100.7)	(0.8 – 1.2)	(1.0)	18
Substantia nigra	rat	to neo- cortex	88	~ 11	(--- ) (22.9)	(--- )	(0.5)	19

Table 1. Values for axonal conduction times and velocities for select axonal pathways in several mammalian species. Some axonal systems are very rapidly conducting, some are very slowly conducting, and some are characterized by a great diversity in axonal conduction delays.

Table references: 1 Simmons and Pearlman, 1983; 2 Swadlow, 1974a; 3 Innocenti, 1980; 4 Miller, 1975; 5 Swadlow et al., 1978; 6 Swadlow, 1990; 7 Ferraina et al., 2002; 8 Swadlow and Weyand, 1987; 9 Weyand et al., 1986; 10 Finlay et al, 1976; 11 Takahashi, 1965; 12 Evarts, 1965; 13 Ferster and Lindstrom, 1983; 14 Briggs and Usrey, 2009; 15 Swadlow and Weyand, 1985; 16 Cleland et al., 1976; 17 Faiers and Mogensen, 1976; 18 Aston-Jones et al., 1985; 19 Gariano and Groves, 1988.

