Table S1. Effects of genetic background on disease onset and time to end-stage disease in *SOD1^{G93Adl}* mice separated by sex.

Genetic background	Sample size		Mild tremors		Moderate tremors		Limb-tone		Grip-strength		Startle response		Time to endpoint (weeks)	
	♀	♂	♀	♂	♀	♂	♀	♂	♀	♂	♀	♂	♀	♂
C57BL/6J	11	15	19.0	17.5	31.3	26.5	30.4	28.7	30.2	32.7	21.7	20.1	37.5	38.1
BALB/c	3	3	14.7	14.0	29.7	27.0	27.0	27.0	31.7	29.0	19.7	16.0	34.1	28.4
C3H	4	2	15.0	14.0	29.3	30.0	25.5	25.0	29.5	29.0	31.0	30.0	33.5	30.4
FVB	5	3	12.8	12.0	24.0	22.0	20.0	21.3	29.0	24.7	30.0	25.0	29.7	28.1
B6-BALB/c	9	6	15.6	19.5	25.7	28.5	36.1	32.2	36.3	33.0	19.4	21.5	37.6	32.6
B6 wildtype littermates	10	9	28.0	28.0	-	-	-	32.0	-	-	27.3	27.3	-	-

All values are the mean average age-at-onset per phenotype (weeks). Because of the low numbers per sex analysed for BALB/c, C3H and FVB strains we only attempted to detect phenotypic sex bias on the B6 and B6-BALB/c strains. Significant effects of gender on the B6 background only for time to onset of moderate tremors (P<0.001). For the hybrid B6-BALB/c background the onset of all traits was affected by sex, including tremors, limb-tone, grip-strength and startle-response (moderate tremor P=0.085; limb-tone P=0.001; grip-strength P=0.007; startle response P=0.029).Time to end point was significantly affected in B6-BALB/c (P=0.001).

Table S2. Mean averages and 95% confident intervals for survival time (weeks) for *SOD1^{G93Adl}* on different genetic backgrounds, together with survival Log-rank pairwise comparisons (sex-averaged data).

Genetic background	Mean survival (weeks)	Std. error	95% confidence interval		C57BL/6	BALB/c	C3H	FVB	B6-BALB/c
			Lower bound	Upper bound	Sig. (Log rank)	Sig. (Log rank)	Sig. (Log rank)	Sig. (Log rank)	Sig. (Log rank)
C57BL/6J	37.8	0.5	36.800	38.847	-	<.001	<.001	<.001	0.213
BALB/c	31.3	1.4	28.488	34.082	<.001	-	0.870	0.896	0.008
C3H	32.5	1.1	30.398	34.552	<.001	0.870	-	0.258	0.041
FVB	29.1	1.9	25.407	32.878	<.001	0.896	0.258	-	0.005
B6-BALB/c	35.6	1.0	33.741	37.461	0.213	0.008	0.041	0.005	-