

Table S1. Mean and maximum life spans of G6PD transgenic male flies

Genotype	Mean (Days)	% vs. Responder/+	% vs. Driver/+	‡Maximum (Days)
+/G6PD 4c	62.532			75
+/G6PD 5f	62.266			73
+/G6PD 7b	66.439			74
+/G6PD 9g	66.463			75
armadillo/+	57.615			66
armadillo/4c	83.626	34**	45**	98
armadillo/5f	68.584	10*	19**	82
armadillo/7b	86.158	30**	50**	102
armadillo/9g	90.226	36**	57**	102
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+/G6PD 4c	58.847			69
+/G6PD 5f	59.182			69
+/G6PD 7b	64.836			76
+/G6PD 9g	64.340			74
Tubulin/+	63.567			75
Tubulin/4c	80.640	37**	27**	97
Tubulin/5f	81.761	38**	29**	101
Tubulin/7b	80.928	25**	27**	100
Tubulin/9g	77.254	20**	22**	92
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+/G6PD 4c	60.892			76
+/G6PD 5f	71.072			92

Overexpression of G6PD extends life span

Tubulin/+	69.715			88
Tubulin/4c	80.803	23**	16*	96
D42/+	70.220			80
D42/4c	78.175	19**	11*	95
D42/5f	75.044	6	7*	93
D42/7b	74.820	18**	7	95
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+/G6PD 4c	67.699			80
+/G6PD 5f	71.047			89
+/G6PD 7b	69.378			85
+/G6PD 9g	69.505			85
Appl/+	72.087			91
Appl/4c	76.393	13*	6	98
Appl/5f	77.009	8*	7	95
Appl/7b	80.537	16**	12*	100
Appl/9g	72.751	5	1	90
D42/+	63.324			82
D42/9g	70.982	2	12*	86
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+/G6PD 4c	70.047			87
+/G6PD 5f	73.232			90
+/G6PD 7b	71.659			87
+/G6PD 9g	76.155			94
da/+	56.124			64
da/4c	74.098	6	32**	95
da/5f	76.124	4	36**	98

Overexpression of G6PD extends life span

C23/9g	82.164	33**	27**	93
Tubulin/+	78.378			100
Tubulin/4c	84.868	23**	8	100
Tubulin/5f	86.546	48**	10	102
Tubulin/7b	79.235	9	1	99
Tubulin/9g	91.076	48**	16*	103
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+/G6PD 4c	58.834			66
+/G6PD 5f	59.889			72
+/G6PD 7b	59.146			68
armadillo/+	55.651			67
armadillo/4c	72.397	23**	30**	85
armadillo/5f	69.373	16**	25**	84
armadillo/7b	81.813	38**	47**	95
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†G6PD 5f/+	56.150			69
†G6PD 7b/+	72.029			85
†G6PD 9g/+	66.756			84
†+/Tubulin	72.759			87
†5f/Tubulin	75.867	35**	4	92
†7b/Tubulin	77.962	8*	7	93
†9g/Tubulin	74.827	12*	3	88
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+/G6PD 4c	65.540			80
+/G6PD 5f	70.466			86
+/G6PD 7b	63.232			80

Overexpression of G6PD extends life span

+/G6PD 7b	65.159			85
+/G6PD 9g	61.681			81
Appl/+	70.608			91
Appl/4c	81.795	34**	16**	100
Appl/5f	78.439	10*	11*	97
Appl/7b	75.062	15*	6	96
Appl/9g	73.676	19**	4	96
D42/+	67.131			88
D42/4c	78.971	30**	18**	99
D42/5f	75.769	7	13*	95
D42/7b	76.495	17**	14*	94
D42/9g	74.344	20**	11*	91
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+/G6PD 4c	69.019			84
+/G6PD 5f	58.415			69
+/G6PD 7b	73.000			91
+/G6PD 9g	61.605			73
da/+	61.699			74
da/4c	78.061	13**	27**	91
da/5f	69.740	19**	13*	81
da/7b	80.509	10*	30**	93
da/9g	76.739	25**	24**	91
C23/+	64.493			74
C23/4c	74.880	8*	16**	91
C23/5f	69.189	18**	7	90
C23/7b	82.416	13**	28**	96

Overexpression of G6PD extends life span

da/7b	80.833	13*	44**	99
da/9g	77.606	2	38**	98
C23/+	63.842			87
C23/4c	76.409	9	20*	95
C23/5f	79.705	9	25**	97
C23/7b	81.963	14*	28**	98
C23/9g	78.023	2	22**	95

* $P < 0.05$ in comparison with the corresponding driver/+ or +/responder control genotype.

** $P < 0.0005$. Genotypes between dividing lines were assayed simultaneously. Boldface type indicates cohorts for which survivorship curves are presented in Fig. 1. Note: the background was *y w* for all flies.

†Parents switched in this experiment.

‡ Maximum survival time denotes the last age at which $\geq 10\%$ of the flies remained alive.