

**Supplemental Table S1.** Telomere length (average of each sample) in relation to the covariates Age (days), mass (g) and Hatch Order (1,2,3) and the factors Sex (Male) (male and female) and Treatment (Control or Vitamins; note that day 1 measurements are coded as control for all nestlings). Factors in the final model have been highlighted in **bold**. Significant factors ( $p < 0.05$ ) have an \*. Random terms are included in all models, and their values are in *italic*. Non-significant interactions were excluded from the models when estimating coefficients of main effects.

Percentile 10						
Fixed terms					Random terms	
Terms	Intercept	Estimate (S.E.)	F (d.f)	p	Terms	Variance
<b>Age</b>	<b>6121</b>	<b>-8.026 (1.148)</b>	<b>48.91 (78.07)</b>	<b>&lt;0.001*</b>	<i>Chick / Nest</i>	<i>76148</i>
<b>Treatment (Vitamins)</b>		<b>78.03 (30.11)</b>	<b>6.714 (87.62)</b>	<b>0.011*</b>	<i>Nest</i>	<i>45756</i>
Rejected: Hatch order	6229	-60.54 (59.94)	1.02 (34.12)	0.32	<i>Gel</i>	<i>66411</i>
Rejected: Sex (Male)	6265	-74.6 (93.68)	0.634 (42.04)	0.43	<i>Residual</i>	<i>6675</i>
Rejected: Mass	6269	-0.014 (0.035)	0.162 (77.43)	0.688		
Rejected: Age:Sex (Male)	6242	-1.901 (1.918)	0.982 (73.65)	0.325		
Rejected: Age:Mass	6212	-0.001 (0.002)	0.127 (73.67)	0.722		
Rejected: Age:Hatch order	6161	0.667 (1.607)	0.172 (76.09)	0.679		
Rejected: Age:Treatment	6147	1391 (3972)	0.123 (70.56)	0.727		

Percentile 20						
Fixed terms					Random terms	
Terms	Intercept	Estimate (S.E.)	F (d.f)	p	Terms	Variance
<b>Age</b>	<b>6908</b>	<b>-7.735 (1.04)</b>	<b>55.34 (77.9)</b>	<b>&lt;0.001*</b>	<i>Chick / Nest</i>	<i>93020</i>
<b>Treatment (Vitamins)</b>		<b>70.88 (27.53)</b>	<b>6.629 (84.6)</b>	<b>0.012*</b>	<i>Nest</i>	<i>57931</i>
Rejected: Hatch order	7017	-60.93 (65.71)	0.86 (35.61)	0.36	<i>Gel</i>	<i>60908</i>
Rejected: Sex (Male) (Male)	7059	-89.03 (102)	0.755 (44.11)	0.390	<i>Residual</i>	<i>5415</i>
Rejected: Mass	7060	-0.005 (0.03)	0.027 (77.23)	0.87		
Rejected: Age:Mass	6994	-0.001 (0.001)	0.738 (74.99)	0.393		
Rejected: Age:Sex (Male) (Males)	6996	-0.855 (1.908)	0.2 (73.53)	0.656		
Rejected: Age:Hatch order	6947	0.642 (1.463)	0.192 (76.36)	0.662		
Rejected: Age:Treatment (Vitamins)	6943	0.351 (3.607)	0.01 (71.36)	0.923		

Percentile 30						
Fixed terms					Random terms	
Terms	Intercept	Estimate (S.E.)	F (d.f)	p	Terms	Variance
Age	7622	-8.023 (1.172)	46.83 (78.37)	<0.001*	Chick / Nest	111046
					Nest	79409
Treatment		74.7 (31.01)	5.804 (85.38)	0.018*	Gel	76908
					Residual	6892
Rejected: Sex (Male)	7666	-103 (112)	0.849 (44.75)	0.362		
Rejected: Hatch order	7771	-58.32 (71.7)	0.662 (33.17)	0.422		
Rejected: Mass	7769	0.008 (0.036)	0.051 (77.59)	0.821		
Rejected: Age:Mass	7684	-0.001 (0.001)	0.956 (75.27)	0.331		
Rejected: Age:Hatch order	7617	-0.869 (1.639)	0.281 (77.82)	0.597		
Rejected: Age:Treatment	7630	-1.35 (4.043)	0.112 (72.79)	0.739		
Rejected: Age:Sex (Male)	7629	-0.118 (2.184)	0.003 (71.87)	0.957		

Percentile 40						
Fixed terms					Random terms	
Terms	Intercept	Estimate (S.E.)	F (d.f)	p	Terms	Variance
Age	8420	-8.473 (1.506)	31.64 (79.24)	<0.001*	Chick / Nest	141293
					Nest	115654
Treatment		78.22 (39.62)	3.897 (87.93)	0.051	Gel	130402
					Residual	11457
Rejected:Sex (Male)	8474	-129 (129)	1 (43.39)	0.323		
Rejected:Hatch order	8608	-73.28 (81.34)	0.812 (32.29)	0.374		
Rejected:Mass	8602	0.019 (0.047)	0.174 (78.38)	0.677		
Rejected: Age:Treatment	8597	-4.386 (4.567)	0.923 (75.66)	0.34		
Rejected: Age:Hatch order	8526	-1.227 (2.012)	0.372 (77.52)	0.544		
Rejected: Age:Mass	8436	-0.001 (0.002)	0.291 (73.68)	0.591		
Rejected: Age:Sex (Male)	8435	0.739 (2.803)	0.069 (72.22)	0.793		

Percentile 50						
Fixed terms					Random terms	
Terms	Intercept	Estimate (S.E.)	F (d.f)	p	Terms	Variance
Age	9373	-8.906 (1.983)	20.18 (80.51)	<0.001*	Chick / Nest	185604
Treatment		79.62 (51.78)	2.364 (91.38)	0.128	Nest	169804
Rejected:Hatch order	9546	-96.78 (94.96)	1.039 (33.67)	0.315	Gel	240977
Rejected:Sex (Male)	9623	-159.9 (151.4)	1.115 (41.42)	0.297	Residual	20044
Rejected:Mass	9612	0.034 (0.061)	0.314 (79.71)	0.577		
Rejected:Treatment	9604	-7.946 (5.989)	1.76 (76.33)	0.189		
Rejected:Hatch order	9482	-2.078 (2.626)	0.626 (78.26)	0.431		
Rejected:Sex (Male)	9511	1.431 (3.453)	0.172 (73.51)	0.68		
Rejected:Mass	9430	-0.001 (0.003)	0.149 (73.53)	0.7		

Percentile 60						
Fixed terms					Random terms	
Terms	Intercept	Estimate (S.E.)	F (d.f)	P	Terms	Variance
Age	10515	-9.060 (2.646)	11.72 (82.14)	<0.001*	Chick / Nest	265472
Treatment		66.43 (68.6)	0.938 (95.11)	0.335	Nest	231185
Rejected:Hatch order	10741	-126.7 (114.1)	1.232 (33.63)	0.275	Gel	424537
Rejected:Sex (Male)	10808	-138.4 (183.5)	0.569 (41.84)	0.455	Residual	36055
Rejected:Mass	10790	0.052 (0.082)	0.404 (81.74)	0.527		
Rejected:Age:Treatment	10780	-0.116 (7.977)	2.125 (77.67)	0.149		
Rejected:Age:Hatch order	10590	-3.323 (3.482)	0.911 (79.53)	0.343		
Rejected:Age:Sex (Male)	10658	3.612 (4.577)	0.623 (74.78)	0.433		
Rejected:Age:Mass	10550	-0.002 (0.004)	0.143 (74.92)	0.707		

Percentile 70						
Fixed terms					Random terms	
Terms	Intercept	Estimate (S.E.)	F (d.f)	P	Terms	Variance
Age	11929	-10.04 (3.575)	7.888 (83.76)	0.007*	Chick / Nest	427914
Treatment		104.8 (92.2)	1.292 (97.98)	0.259	Nest	304942
Rejected:Hatch order	12202	-152.7 (145.1)	1.107 (34.28)	0.3	Gel	744645
Rejected: Mass	12170	0.078 (0.11)	0.503 (84.59)	0.48	Residual	66301
Rejected: Sex (Male)	12210	-77.04 (233)	0.109 (43.9)	0.743		
Rejected: Age:Treatment	12190	-17.14 (10.73)	2.551 (79.16)	0.114		
Rejected: Age:Sex (Male)	12310	8.038 (6.078)	1.749 (77.17)	0.19		
Rejected: Age:Hatch order	12060	-4.109 (4.713)	0.76 (79.98)	0.386		
Rejected: Age:Mass	11820	-0.003 (0.005)	0.426 (76.58)	0.516		

Percentile 80						
Fixed terms					Random terms	
Terms	Intercept	Estimate (S.E.)	F (d.f)	P	Terms	Variance
<b>Age</b>	<b>13824</b>	<b>-10.72 (5.045)</b>	<b>4.516 (82.92)</b>	<b>0.037*</b>	<i>Chick / Nest</i>	<i>953071</i>
<b>Treatment</b>		<b>120.7 (130.5)</b>	<b>0.855 (96.15)</b>	<b>0.357</b>	<i>Nest</i>	<i>371546</i>
Rejected:Hatch order	14245	-234.7 (212.3)	1.222 (35.56)	0.276	<i>Gel</i>	<i>1433344</i>
Rejected:Mass	14210	0.094 (0.154)	0.374 (84.51)	0.542	<i>Residual</i>	<i>131713</i>
Rejected:Sex (Male)	14210	-2.335 (332.7)	0 (46.84)	0.994		
Rejected: Age:Treatment	14190	-24.35 (15.09)	2.605 (78.67)	0.111		
Rejected: Age:Sex (Male)	14380	13.69 (8.524)	2.578 (76.69)	0.112		
Rejected: Age:Hatch order	14050	-5.358 (6.622)	0.655 (79.33)	0.421		
Rejected: Age:Mass	13710	-0.005 (0.007)	0.426 (76.33)	0.516		

Percentile 90						
Fixed terms					Random terms	
Terms	Intercept	Estimate (S.E.)	F (d.f)	P	Terms	Variance
<b>Age</b>	<b>17092</b>	<b>-15.61 (8.318)</b>	<b>3.522 (73.48)</b>	<b>0.065</b>	<i>Chick / Nest</i>	<i>4678974</i>
<b>Treatment</b>		<b>255.9 (218.8)</b>	<b>1.065 (82.04)</b>	<b>0.305</b>	<i>Nest</i>	<i>451097</i>
Rejected: Hatch order	18281	-659 (449)	2.153 (33.93)	0.152	<i>Gel</i>	<i>6731578</i>
Rejected: Mass	18250	0.0985 (0.254)	0.151 (75.91)	0.699	<i>Residual</i>	<i>350493</i>
Rejected: Sex (Male)	18328	-149.8 (670.2)	0.05 (44.07)	0.824		
Rejected: Age:Sex (Male)	18600	19.35 (13.89)	1.942 (69.99)	0.168		
Rejected: Age:Treatment	18604	-25.38 (25.61)	0.982 (69.48)	0.325		
Rejected: Age:Hatch order	18187	-6.816 (11.11)	0.376 (71)	0.542		
Rejected: Age:Mass	18090	-0.001 (0.012)	0.012 (68.34)	0.913		