

Supplementary Information

Supplements

Table S1: Overview sampling schedule and number of collected samples. Post Hib refers to Post Hibernation events, Pre Hib refers to Pre Hibernation events.

Time Point	Born in 2021	Born in 2022
First Time	31	20
Pre Hib	31	20
Post Hib	29	20
Pre Hib	28	20
Post Hib	28	18
Pre Hib	28	
Post Hib	25	

Table S2 Analysis of Deviance (Type II Wald chi-square tests) for predictors of relative telomere length (T.S.ratio) in juvenile edible dormice (*Glis glis*). Only initial telomere length (ITL) showed a significant effect ($p < 0.001$), while activity condition, age, and sex were not significant.

	Chisq	Df	Pr (>Chisq)
ITL	27.823	1	<0.001
Act_Condition	0.074	2	0.964
Age	0.373	1	0.541
Sexm	2.968	1	0.085

Table S3: Model summaries for GLMMs predicting RTL. The model assessed RTL in relation to activity condition prior to sampling (n = 209 observations from 44 individuals). The model included initial telomere length (ITL), age, and sex as fixed effects, with individual ID as a random effect. Displayed are model estimates, standard errors (SE), z-values, and associated p-values. Statistically significant values are printed in bold. Act_ConditionHibernation_no = animals were prevented from hibernation, Act_ConditionHibernation_yes = animals performed hibernation. For further details see Statistics in the main text.

	Estimate	SE	z-value	p Value
Intercept	0.238	0.072	3.318	<0.001
ITL	0.379	0.076	4.986	<0.001
Act_ConditionHibernation_no	0.096	0.099	0.971	0.332
Act_ConditionHibernation_yes	0.007	0.052	0.131	0.895
Age	<0.001	<0.001	0.820	0.412
Sexm	0.019	0.061	1.941	0.052

Table S4: Results from GLMM investigating the relationship between post hibernation RTL and performance. Distance: n = 83 observations from 43 individuals; Velocity: n = 98 observations from 44 individuals. Both outcomes were log-transformed to meet model assumptions. Displayed are model estimates, standard errors (SE), z-values, and associated p-values. Statistically significant values are printed in bold. Pre Distance and Pre Velocity = performance prior hibernation, respectively. Hib_Dur = Hibernation duration (d). For further details see Statistics in the main text.

	Estimate	SE	z-value	p Value
Intercept	6.1883	0.2779	22.260	<0.001
Pre Distance	0.0002	0.0001	1.434	0.151
RTL	0.099	0.1337	0.742	0.458
Age	0.0992	0.0002	0.532	0.594
Hib_Dur	-0.0013	0.0015	-0.870	0.384
Sex	0.0458	0.1031	0.444	0.657
Intercept	1.7595	0.3492	5.038	<0.001
Pre Velocity	0.0231	0.0111	2.083	0.037
RTL	0.0046	0.1722	0.027	0.979
Age	-0.0004	0.0002	-1.779	0.075
Hib_Dur	0.0011	0.0007	1.529	0.126
Sex	-0.1443	0.1421	-1.016	0.310