

Supporting Information

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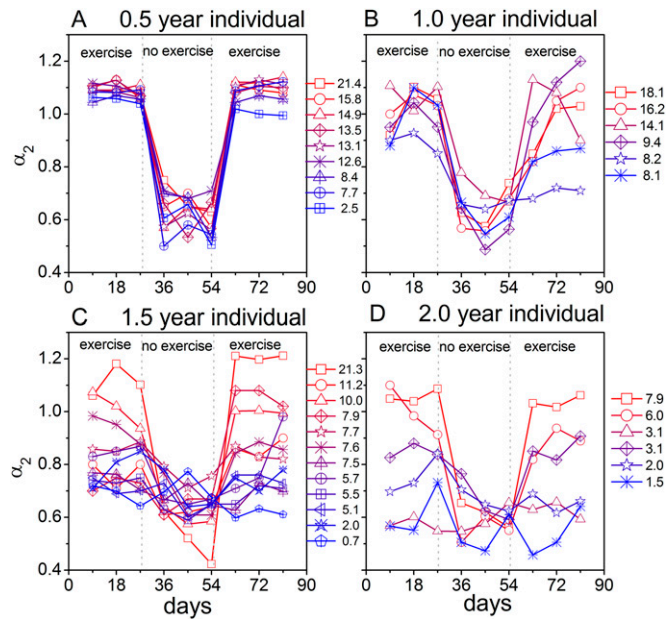


Fig. S1. Corresponding to Fig. 4, scale-invariant correlation from ~3 to 24 h in activity fluctuations are exhibited in all studied individual mice of 0.5 y (9 mice), 1 y (6 mice), 1.5 y (12 mice), and 2 y (6 mice). Shown are separate curves for individual mice of (A) 0.5 y, (B) 1 y, (C) 1.5 y, and (D) 2 y. The mice expressed different numbers of running wheel revolutions, indicated on the right of the panels. The values are the mean from before and after wheel removal, and expressed in kilometers per day. There was a small SE of the scaling exponent α_2 in the group of 0.5 and 1 y. There was a large SE in the group of 1.5 and 2 y. The amount of exercise of the aged animals was highly predictive for α_2 .

Table S1. α_1 at timescales from 3 to 24 h in region I

Condition	0.5 y, m \pm SE	1 y, m \pm SE	1.5 y, m \pm SE	2 y, m \pm SE
With wheels	1.07 \pm 0.02	1.10 \pm 0.01	1.14 \pm 0.02	1.10 \pm 0.04
Without wheels	1.09 \pm 0.01	1.10 \pm 0.01	1.12 \pm 0.02	1.09 \pm 0.04
P value*	0.37	0.63	0.36	0.33

m, mean; SE, standard error.

*Paired *t* test.

Table S2. α_2 at timescales from 3 to 12 h in region II (the length of the time series is 3 d)

Condition	0.5 y, m \pm SE	1 y, m \pm SE	1.5 y, m \pm SE	2 y, m \pm SE
With wheels	1.08 \pm 0.02	1.01 \pm 0.04	0.83 \pm 0.05	0.83 \pm 0.07
Without wheels	0.68 \pm 0.04	0.67 \pm 0.04	0.69 \pm 0.04	0.66 \pm 0.05
P value*	0.001	0.001	0.01	0.04

The presence of a wheel was followed by the absence of a wheel, and the last 3 d with a wheel are compared with the first 3 d without a wheel. m, mean; SE, standard error.

*Paired *t* test.

Table S3. α_2 at timescales from 3 to 12 h in region II during daytime

Condition	0.5 y, m \pm SE	1 y, m \pm SE	1.5 y, m \pm SE	2 y, m \pm SE
With wheels	0.66 \pm 0.04	0.61 \pm 0.03	0.68 \pm 0.03	0.58 \pm 0.02
Without wheels	0.46 \pm 0.04	0.40 \pm 0.02	0.49 \pm 0.03	0.42 \pm 0.03
<i>P</i> value*	0.002	0.001	0.001	0.001

m, mean; SE, standard error.

*Paired *t* test.

Table S4. α_2 at timescales from 3 to 12 h in region II (the length of the time series is 3 d)

Condition	0.5 y, m \pm SE	1 y, m \pm SE	1.5 y, m \pm SE	2 y, m \pm SE
Without wheels	0.61 \pm 0.02	0.61 \pm 0.04	0.63 \pm 0.02	0.61 \pm 0.03
With wheels	1.08 \pm 0.01	0.91 \pm 0.06	0.83 \pm 0.06	0.80 \pm 0.07
<i>P</i> value*	0.001	0.01	0.002	0.02

The presence of a wheel was followed by the absence of a wheel, and the last 3 d with a wheel are compared with the first 3 d without a wheel.
m, mean; SE, standard error.

*Paired *t* test.