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Supplemental information

**Dissecting the daily feeding pattern: Peripheral
CLOCK/CYCLE generate the feeding/fasting episodes
and neuronal molecular clocks synchronize them**

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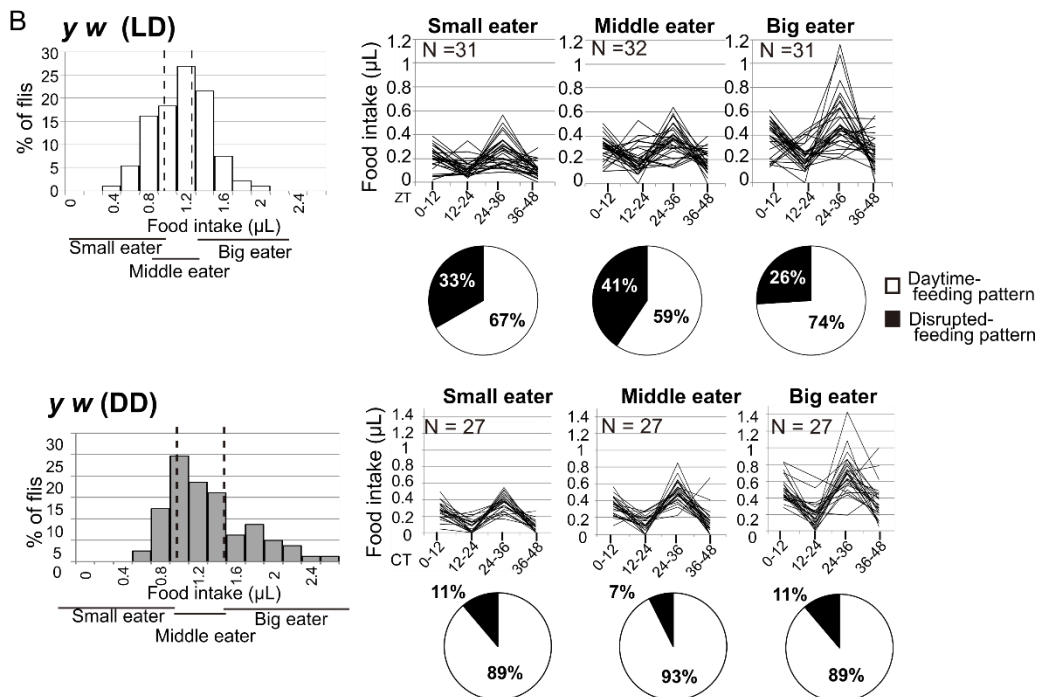
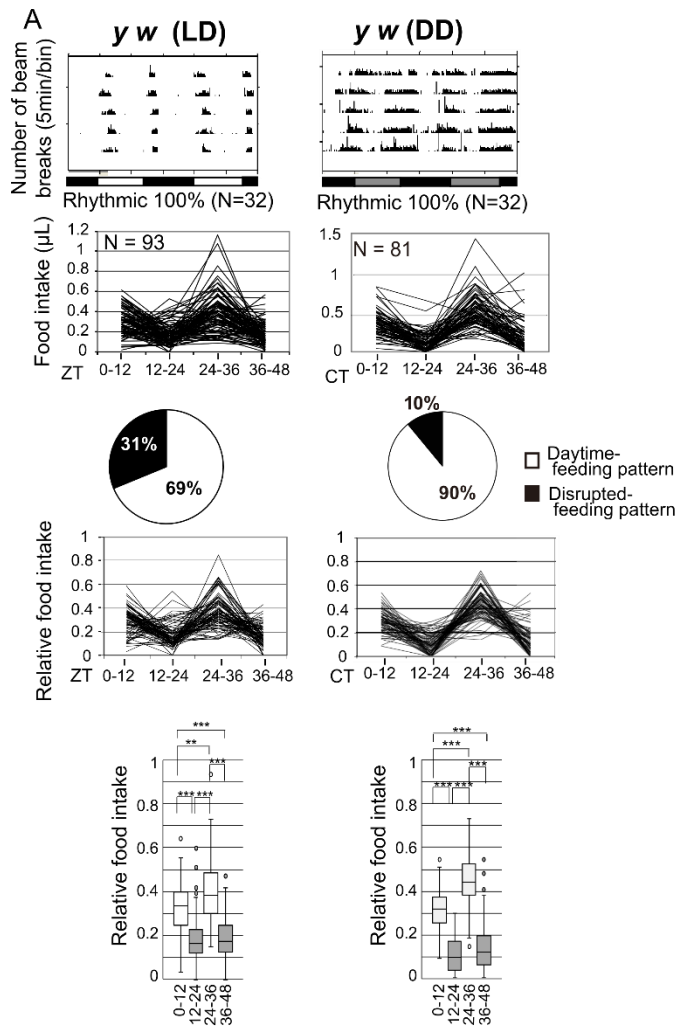
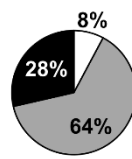
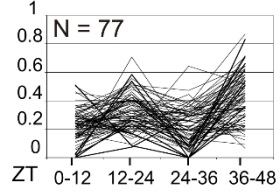
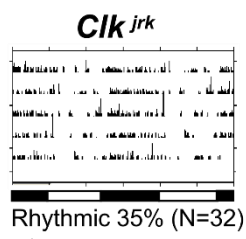
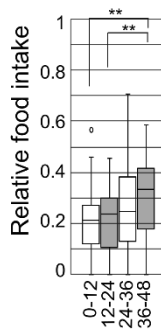
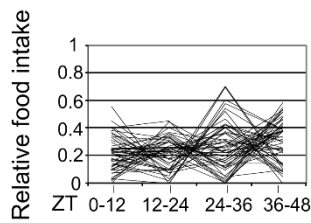
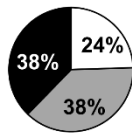
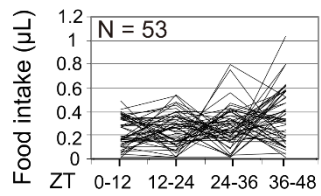
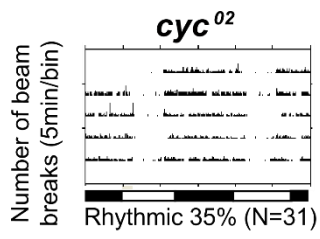


Figure S1. Most wild-type flies show a daytime feeding pattern with more food intake during subjective day, Related to Figure 1

(A) (Top) Representative actogram of locomotor activity and percentages of flies with locomotor rhythms of wild type flies (*y w*) under LD and DD condition. (Middle) Line graphs show the amount of food ingested by individual flies for every 12 hours measured by the modified CAFE assay plotted over 48 hours. Pie charts show the ratio of flies showing Daytime-feeding pattern (more food ingestion during subjective daytime than nighttime for both days (white)) and Disrupted-feeding patterns (more food ingestion during nighttime, inconsistent patterns between the first and second day, or showed steady increases or decreases (black)). (Bottom) The amount of food ingested was normalized by the total amount of food consumed during the entire assay (48 hours) and plotted over time. The same data are also shown in box plots. Box plot centerline: median; box limits: first and third quartile; whiskers: min/max values. Outliers are displayed as points. ** $p < 0.01$, *** $p < 0.001$; TukeyHSD test. (B) Flies were divided into three groups depending on total food consumption under LD (Top) and DD (Bottom) conditions. All groups (small, middle, and big eaters) display robust diurnal feeding patterns. No significant differences in feeding patterns between small, middle, and big eaters were detected ($p > 0.05$, Fisher's exact test).



□ Daytime-feeding pattern
 ■ Nighttime-feeding pattern
 ■ Inconsistent-feeding pattern

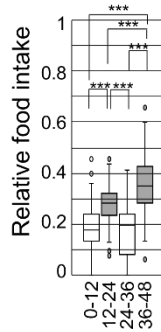
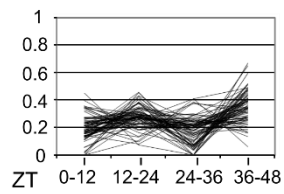


Figure S2. *Clk*⁻, *cyc*⁻ null mutant flies showed nocturnal feeding pattern in LD, Related to Figure 7

(Top) Representative actogram of locomotor activity of *y w* flies under LD condition. (Middle) Line graphs show the amount of food ingested by individual flies for every 12 hours measured by the modified CAFE assay plotted over 48 hours (Food intake). Pie charts show the ratio of flies showing Daytime-feeding patterns (more food ingestion during subjective daytime than nighttime for both days (white)), Nighttime feeding patterns (more food ingestion during subjective nighttime than daytime for both days (gray)) and Inconsistent-feeding patterns (inconsistent patterns between the first and second day, or showed steady increases or decreases (black)). (Bottom) The amount of food ingested was normalized by the total amount of food consumed during the entire assay (48 hours) and plotted over time. The same data are also shown in box plots. Box plot centerline: median; box limits: first and third quartile; whiskers: min/max values. Outliers are displayed as points. ** $p < 0.01$, *** $p < 0.001$, TukeyHSD test.