Extended data

A neuronal relay mediates muscle-adipose communication that drives systemic metabolic adaptation to high-sugar diets
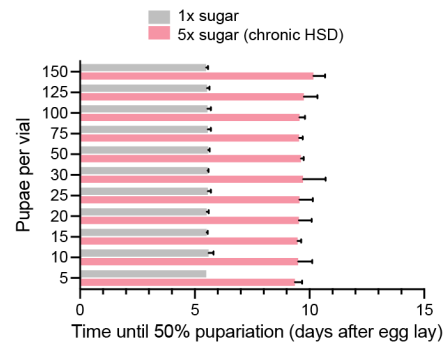
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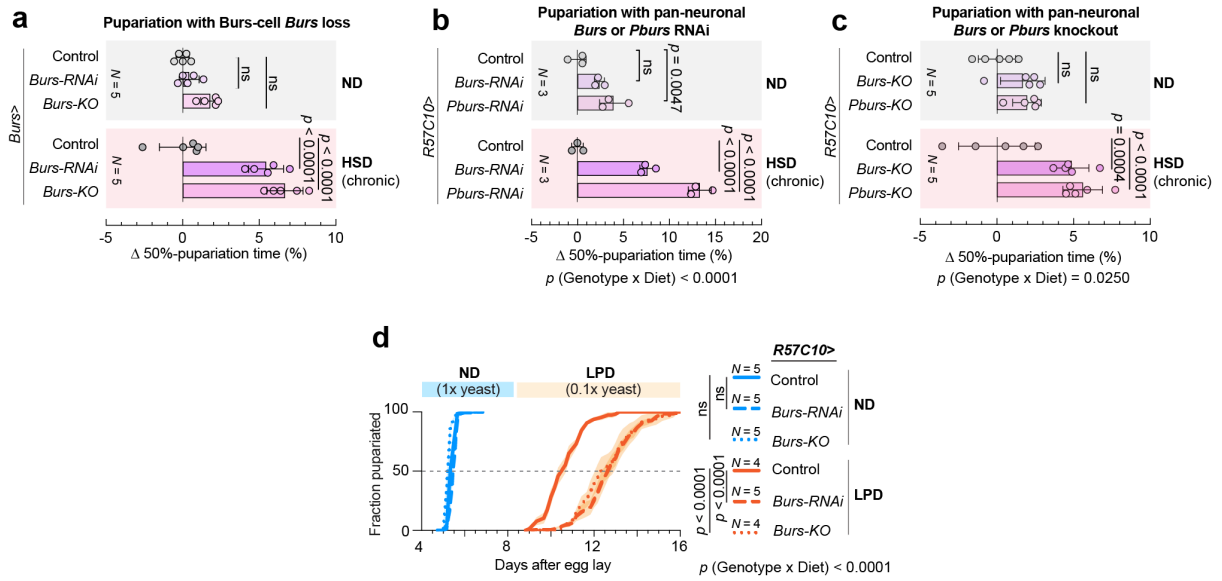
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Extended data, Figure 1. Pupation timing for animals raised on normal or high-sugar diet, at a range of population densities. Statistics: Error bars represent mean and SEM.
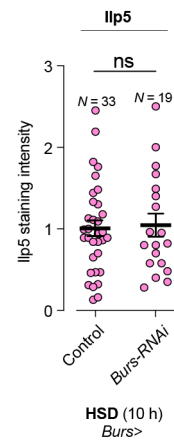
Extended data, Figure 2.

(A) Related to Figure 2B. Difference in the time until 50% pupariation between controls and animals lacking *Burs* expression in the *Burs*-expressing cells, raised on normal or high-sugar diet.

(B) Difference in the time until 50% pupariation between controls and animals expressing pan-neuronal knockdown of *Burs* or *Pburs*, raised on normal or high-sugar diet.

(C) Difference in the time until 50% pupariation between controls and animals expressing pan-neuronal somatic deletion of *Burs* or *Pburs*, raised on normal or high-sugar diet.

(D) Pupation timing on normal and low-yeast diets for animals with pan-neuronal knockdown or knockout of *Burs*.

Statistics: Error bars represent mean and SEM. ns, not significant (p>0.05). A, B, C, D, one-way ANOVAs with Tukey's correction between 50%-pupariation times for multiple comparisons and two-way ANOVA for interaction.

Extended data, Figure 3. Quantification of anti-Ilp5 staining intensity in multiple samples from animals with Burs$^+$ cell *Burs* loss. Statistics: Error bars represent mean and SEM. ns, not significant (p>0.05). Two-sided unpaired t-test.
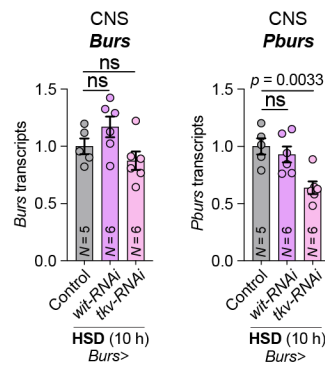
Extended data, Figure 4. Transcript levels of *Burs* (left) and *Pburs* (right) measured by qPCR in dissected CNS samples from controls and animals expressing RNAi against *wit* or *tkv* in the *Burs*-expressing cells, fed high-sugar diet for 10 hours. Statistics: Error bars represent mean and SEM. ns, not significant (p>0.05). One-way ANOVAs with Dunnett's correction.
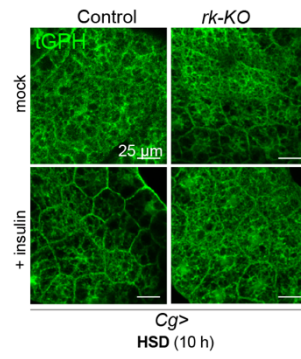
Extended data, Figure 5. Representative images of tGPH insulin-indicator responses to exogenously applied human insulin in fat-body explants from controls and animals expressing CRISPR-mediated deletion of *rickets* in the fat body, exposed to high-sugar diet for 10 hours before dissection. Scale bars, 25 microns.