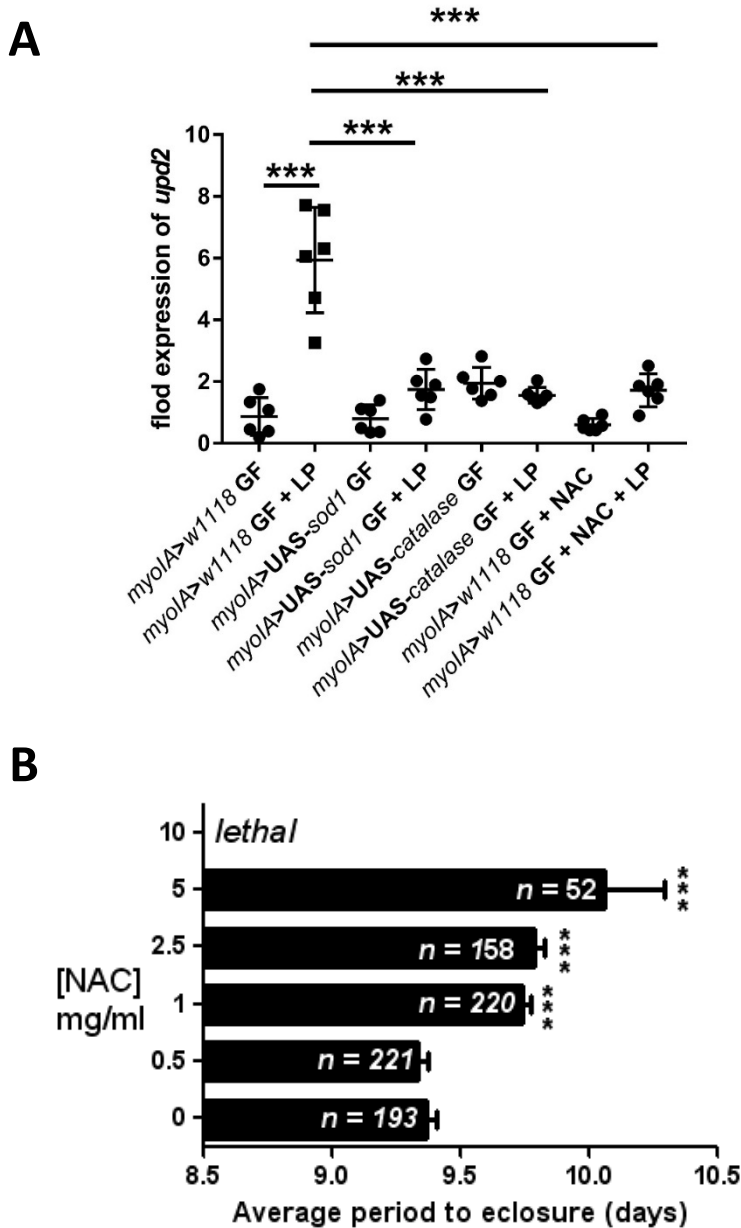


**Figure S1.** Average weight of adult male flies of the indicated phenotypes. Each data point represents the average of 10 adult male flies. (**B and C**) Representative adult male images of flies used for measurements graphed in (A).



**Figure S2. (A)** Measurement of *upd2* transcript levels in dissected third instar larval midguts of the indicated genotypes under the enterocyte-specific *myoIA-gal4* driver. Germ-free larvae were mono-associated with *Lactobacillus plantarum* (LP) for 4 hours. All *upd2* transcript levels were normalized to levels detected in the conventionally raised *myoIA-gal4 w1118*, which were averaged and set to a value of 1. For each data point, 5 larval intestines were pooled and total RNA extracted. Unpaired t-test analysis determined \*\*\* =  $p < 0.001$ ,  $n=6$ . NAC = N-acetyl Cysteine at 5 mg/ml final concentration in food. **(B)** Measurement of the average number of days for larvae to eclose. Note: larvae take longer to eclose with higher concentrations of NAC. No eclosed adults were detected in vials where larvae were propagated in food containing 10mg/ml NAC. Unpaired t-test analysis determined \*\*\* =  $p < 0.001$ . The number of eclosed adults ( $n$ ) is noted within each column.