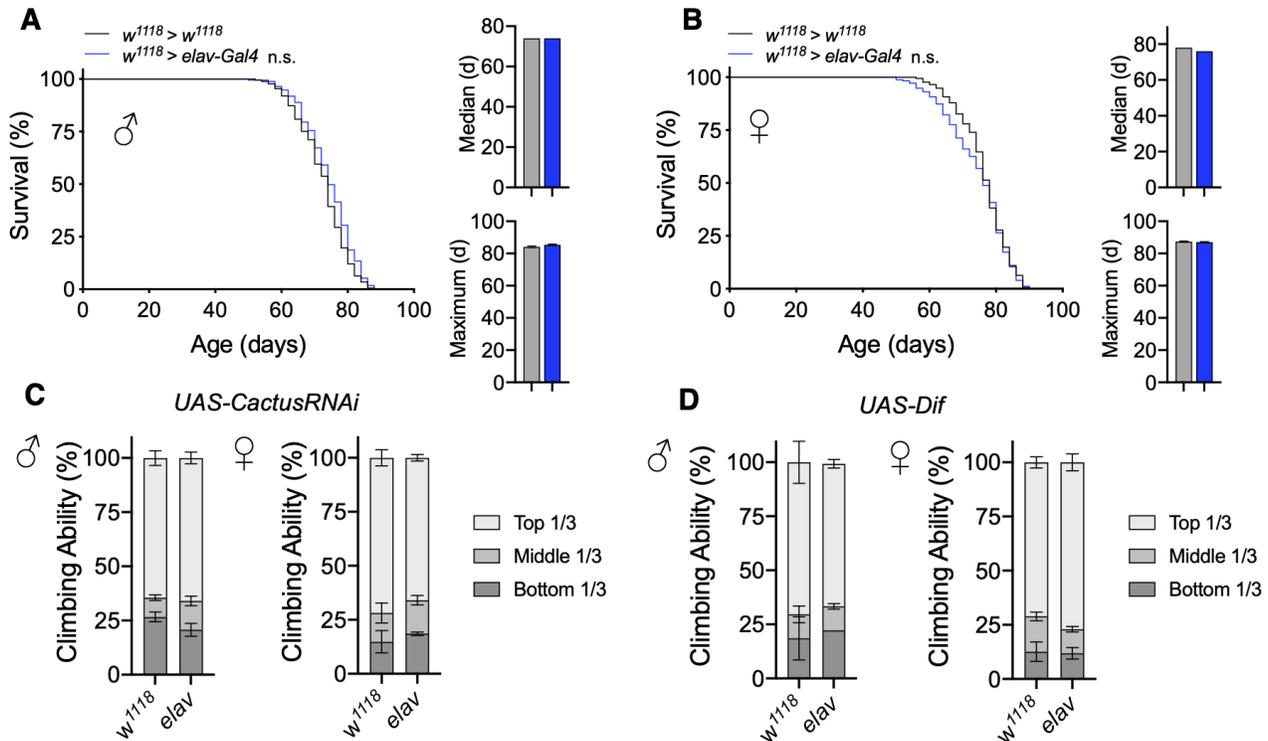
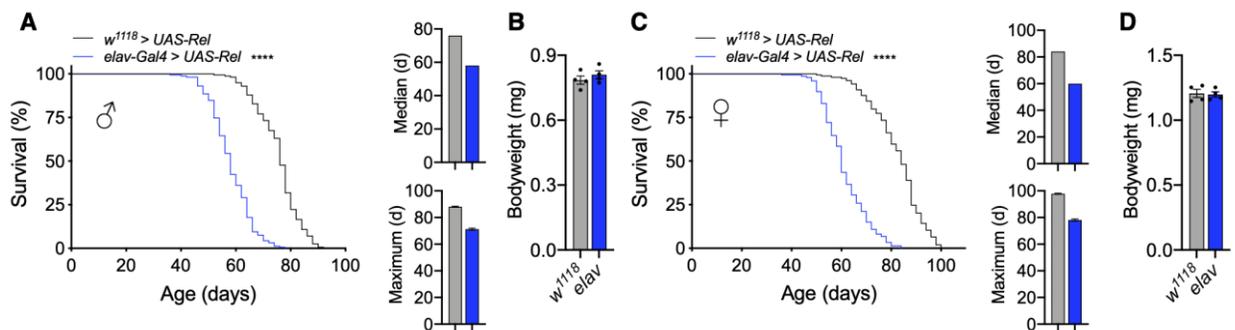


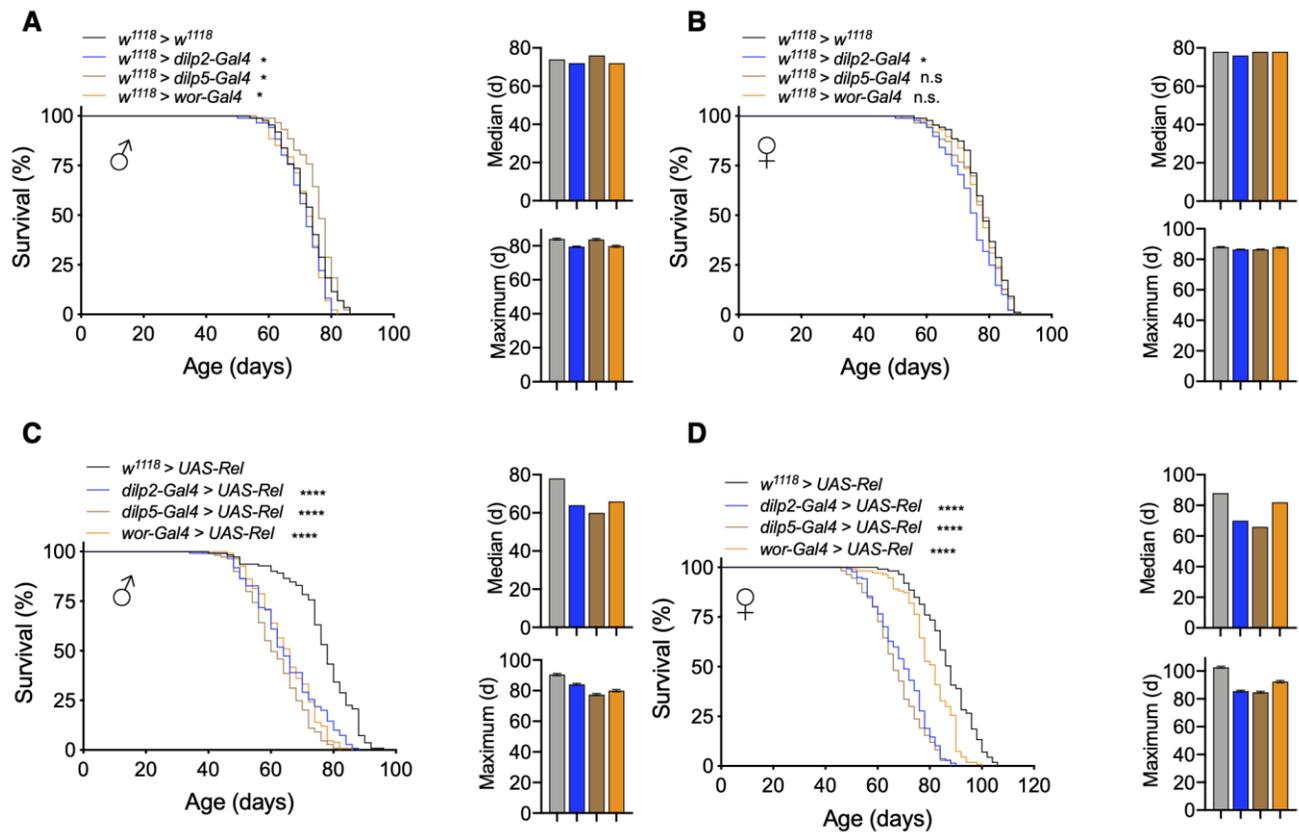
Supplementary Figures



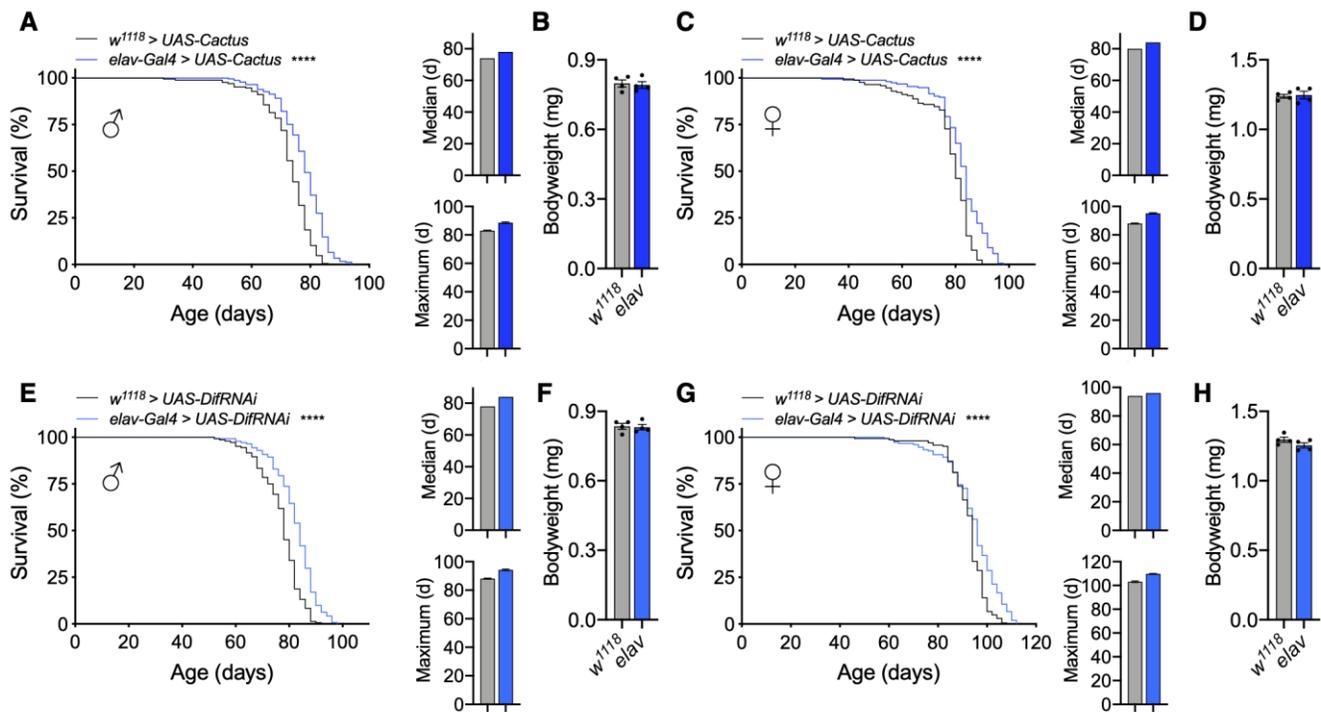
Supplementary Figure 1. *elav-Gal4* does not affect lifespan. (A, B) Survival, median lifespan, and 10% max lifespan of $w^{1118}; elav-Gal4/+$ males (blue) and $w^{1118}; +/+$ (black) control males (A). Corresponding lifespan analysis for females (B). (C) 10-day negative geotaxis for $elav-Gal4/UAS-CactusRNAi$ and $UAS-CactusRNAi/+$ females. (D) 10-day negative geotaxis for $elav-Gal4/UAS-Dif$ and $UAS-Dif/+$ females. Data information: statistics for curve comparisons are shown in the figure. Error bars represent mean \pm s.e.m. n.s. not significant (log-rank test).



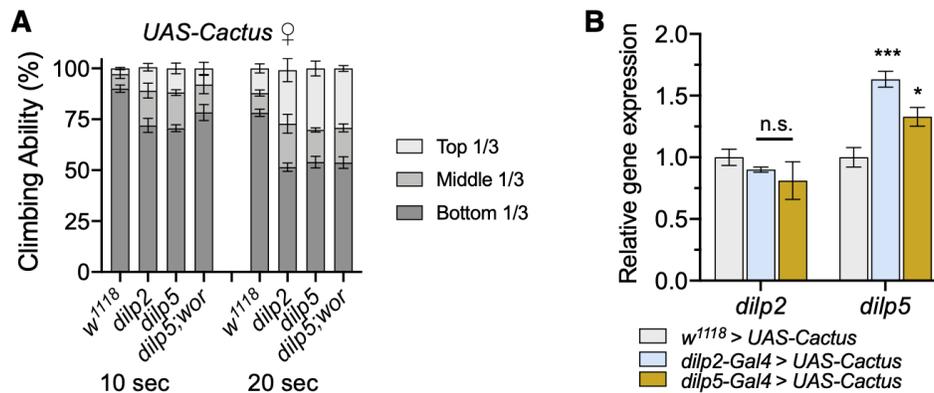
Supplementary Figure 2. Pan-neuronal constitutive Imd pathway activation shortens lifespan. (A–D) Survival, median lifespan, and 10% max lifespan (A) and bodyweight (B) of $elav-Gal4/UAS-Rel$ males (blue) and $UAS-Rel/+$ (black) control males. Corresponding lifespan analysis (C) and bodyweight (D) for females. Data information: statistics for curve comparisons are shown in the figure. Error bars represent mean \pm s.e.m. **** p < 0.0001 (log-rank test).



Supplementary Figure 3. Constitutive Imd pathway activation in IPCs or neuroblasts shortens lifespan. (A, B) Survival, median lifespan, and 10% max lifespan of $w^{1118};dilp2-Gal4/+$ males (blue), $w^{1118};dilp5-Gal4/+$ males (brown), $w^{1118};wor-Gal4/+$ males (orange), and $w^{1118};+/+$ (black) control males (A). Corresponding lifespan analysis for females (B). (C, D) Survival, median lifespan, and 10% max lifespan of $dilp2-Gal4/UAS-Rel$ males (blue), $dilp5-Gal4/UAS-Rel$ males (orange), $wor-Gal4/UAS-Rel$ males (brown), and $UAS-Rel/+$ (black) control males (C). Corresponding lifespan analysis for females (D). Data information: statistics for curve comparisons are shown in the figure. Error bars represent mean \pm s.e.m., n.s. not significant, * p < 0.05, **** p < 0.0001 (log-rank test).



Supplementary Figure 4. Pan-neuronal Toll pathway inhibition modestly increases lifespan. (A, D) Survival, median lifespan, and 10% max lifespan (A) and bodyweight (B) of *UAS-Cactus/+;elav-Gal4/+* males (blue) and *UAS-Cactus/+;+/+* (black) control males. Corresponding lifespan analysis (C) and bodyweight (D) for females. (E–H) Survival, median lifespan, and 10% max lifespan (E) and bodyweight (F) of *UAS-DifRNAi/elav-Gal4* males (blue) and *UAS-DifRNAi/+* (black) control males. Corresponding lifespan analysis (G) and bodyweight (H) for females. Data information: statistics for curve comparisons are shown in the figure. Error bars represent mean \pm s.e.m. **** $p < 0.0001$ (log-rank test).



Supplementary Figure 5. Toll pathway inhibition in IPCs increases climbing ability. (A) 70-day negative geotaxis for *dilp2-Gal4/UAS-Cactus*, *dilp5-Gal4/UAS-Cactus*, *dilp5-Gal4,wor-Gal4/UAS-Cactus*, and *UAS-Cactus/+* females. (B) Gene expression for *dilp2* and *dilp5* in flies with Cactus overexpression in IPCs versus controls (n = 4). Data information: statistics for curve comparisons are shown in the figure. Error bars represent mean \pm s.e.m. n.s., not significant, * $p < 0.01$, *** $p < 0.001$.