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The *Drosophila* gene, *glaikit (gkt)*, is orthologous to human TDP1 which plays a role in DNA repair by removing DNA protein crosslinks. *gkt* mutants show phenotypes commonly associated with TDP1 mutations such as decreased motor abilities, shorter lifespan, and sensitivity to DNA damage reagents. Recent studies have demonstrated that excess night-time light, from sources like shiftwork and photopollution, alter circadian rhythms and may enhance levels of oxidative stress, leading to DNA damage. In order to better understand the interaction between DNA repair and circadian rhythm, *gkt* mutants and wild-type (w^{1118}) Drosophila were placed under different lighting conditions in order to assess changes in circadian and locomotor behavior. When comparing *gkt* mutants to w^{1118} under different lighting conditions (12L:12D, constant darkness (DD) and 14L:14D), we do not see significant changes in behavior and circadian rhythmicity in *gkt* mutants. Assessing longevity in *gkt* mutants will allow us to better understand the relationship between circadian rhythmicity, TDP1, DNA repair, and cancer.