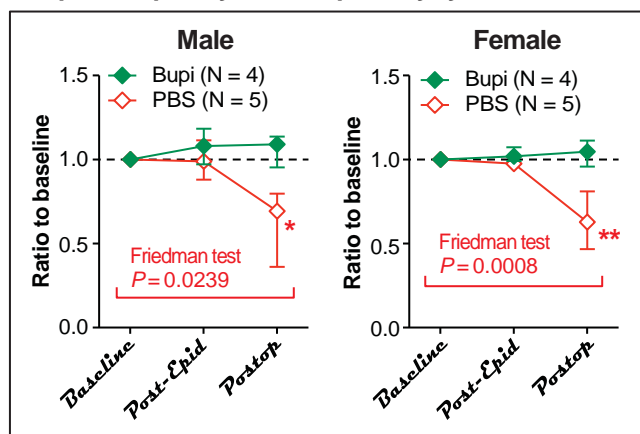
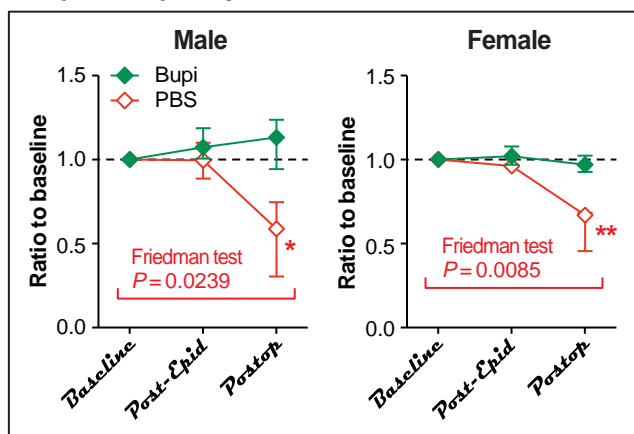


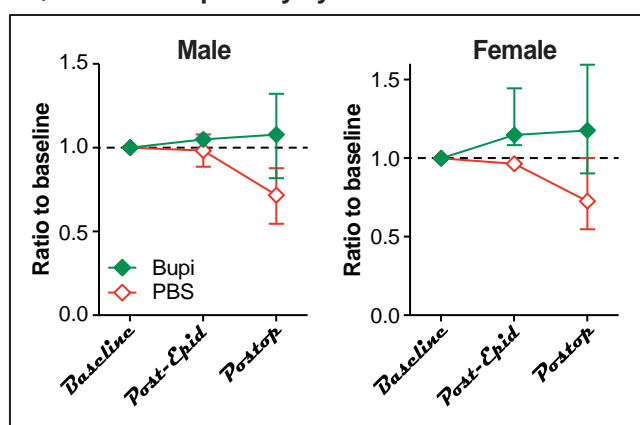
### A. Spike frequency AUC/respiratory cycle



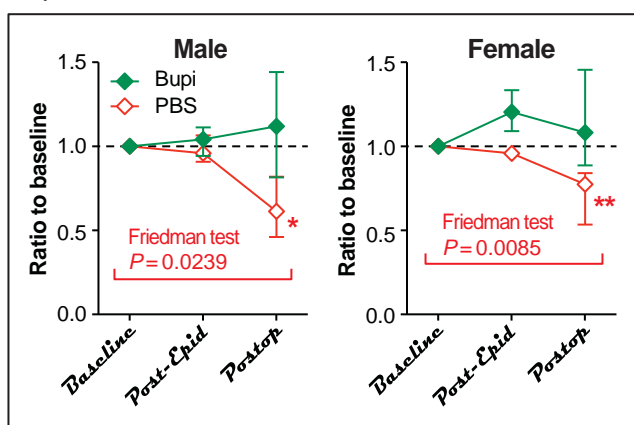
### B. Spike frequency AUC/minute



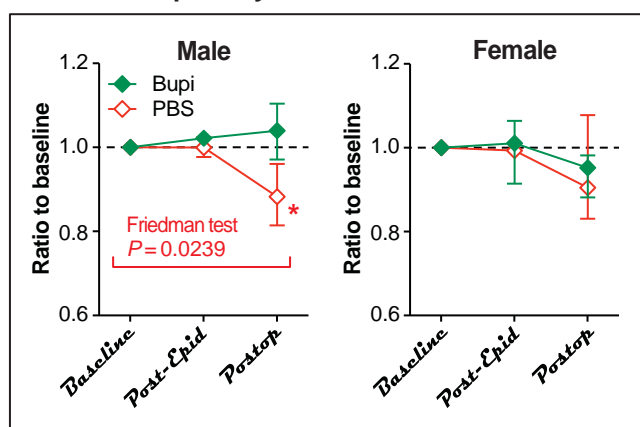
### C. ∫Phr AUC/respiratory cycle



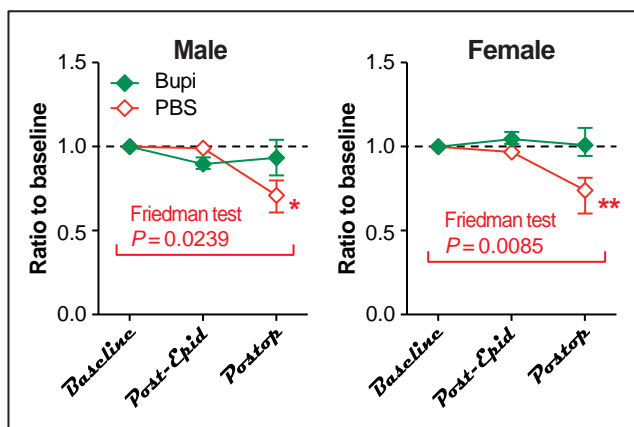
### D. ∫Phr AUC/minute



### E. Central respiratory rate



### F. T<sub>I</sub>:T<sub>E</sub>



**Figure S10.** Subgroup analysis by sex: the effect of epidural bupivacaine (“Bupi” group) vs. PBS (“PBS” group) on efferent phrenic nerve activity before and after the upper abdominal incision (Protocol D). **(A-F):** Spike frequency area-under-the-curve (AUC)/respiratory cycle (A), spike frequency AUC/minute (B), integrated phrenic neurogram (∫Phr) AUC/respiratory cycle (C), ∫Phr AUC/minute (D), central respiratory rate (E), and inspiratory-to-expiratory duration ratio (T<sub>I</sub>:T<sub>E</sub>; F) were evaluated after epidural injection (Post-Epid) and the abdominal incision (Postop). Data are presented as median with interquartile range. Sample sizes are given in (A). \**P* < 0.05; \*\**P* < 0.01 vs. Baseline by Friedman test followed by *post hoc* Dunn’s multiple comparison tests.