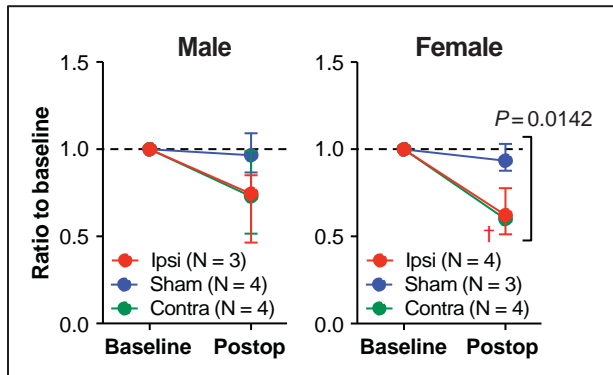
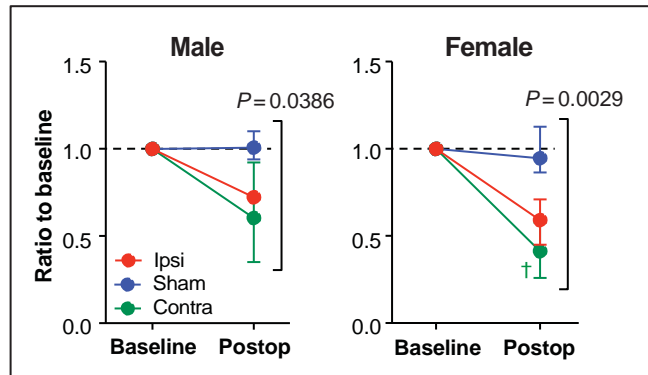


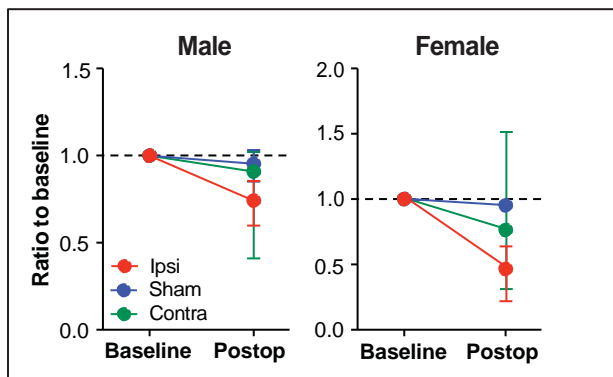
### A. Spike frequency AUC/respiratory cycle



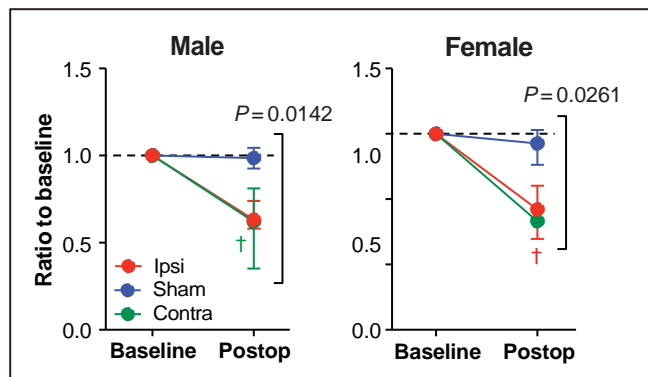
### B. Spike frequency AUC/minute



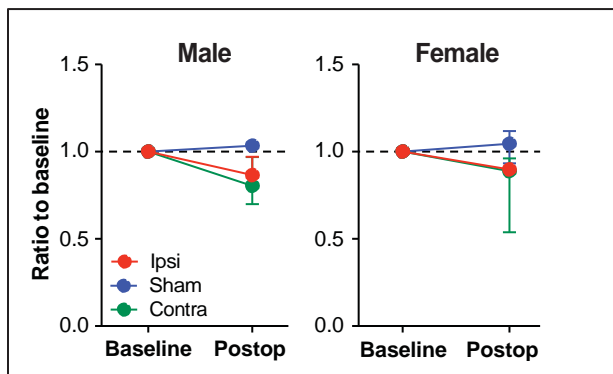
### C. ∫Phr AUC/respiratory cycle



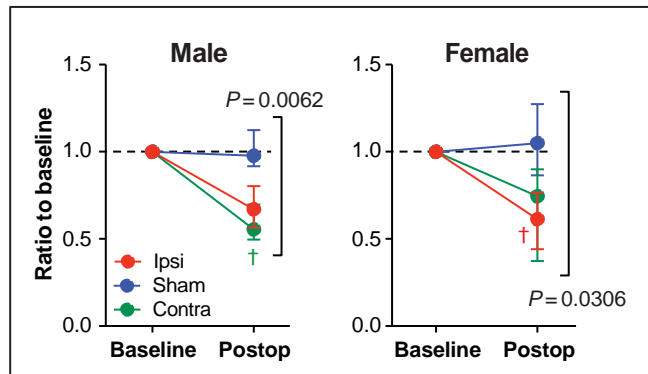
### D. ∫Phr AUC/minute



### E. Central respiratory rate



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



**Figure S7.** Subgroup analysis by sex: the short-term effect of the upper abdominal incision on efferent phrenic nerve activity (Protocol A). **(A-F):** Spike frequency area-under-the-curve (AUC)/respiratory cycle (A), spike frequency AUC/minute (B), integrated phrenic neurogram ( $\int$ Phr) AUC/respiratory cycle (C),  $\int$ Phr AUC/minute (D), central respiratory rate (E), and inspiratory-to-expiratory duration ratio ( $T_i:T_E$ ; F) were evaluated one hour after the upper abdominal incision (Postop). The “Ipsi” and the “Contra” group respectively represent nerve activity recorded from the phrenic nerves on the same side and the opposite side of the abdominal incision. The control group underwent the sham incision (“Sham” group). Data are presented as median with interquartile range. Sample sizes are given in (A). † $P < 0.05$  vs. Sham by Kruskal-Wallis test followed by *post hoc* Dunn’s multiple comparison tests.