

A) Orexin positive cells in whole LH and in the selected four levels

| | M-CON (MEAN±SEM) | M-GEN (MEAN±SEM) | F-CON (MEAN±SEM) | F-GEN (MEAN±SEM) | ANOVA 1 WAY | |
|-----------------------|---------------------|---------------------|---------------------|---------------------|-------------|-------|
| | | | | | F | p |
| Average number | 313.7±18.21 | 253.4±14.70 | 189.9±19.29 | 260.70±10.90 | 8.904 | 0.001 |
| Level 1 | 293.2±15.59 | 218.17±13.52 | 146.4±16.59 | 176.17±13.73 | 14.907 | 0.001 |
| Level 2 | 402.8±23.14 | 339.33±16.69 | 189.8±21.20 | 278.17±14.01 | 19.866 | 0.001 |
| Level 3 | 322.4±27.12 | 282.00±22.65 | 232.0±28.60 | 368.30±29.40 | 3.98 | 0.024 |
| Level 4 | 236.6±14.93 | 174.17±27.11 | 191.4±21.67 | 220.17±19.42 | 1.652 | 0.213 |

B) Orexin-ir (Fractional Area) in PVN

| | M-CON (MEAN±SEM) | M-GEN (MEAN±SEM) | F-CON (MEAN±SEM) | F-GEN (MEAN±SEM) | ANOVA 1 WAY | |
|------------------|---------------------|---------------------|---------------------|---------------------|-------------|-------|
| | | | | | F | p |
| FA in PVN | 4.64±0.35 | 3.29±0.30 | 3.84±0.46 | 5.18±0.18 | 6.390 | 0.008 |
| DL | 4.35±0.54 | 3.66±0.27 | 3.60±0.38 | 4.32±0.56 | 0.801 | 0.517 |
| DM | 5.99±0.80 | 4.01±0.67 | 3.87±0.57 | 5.49±0.48 | 2.705 | 0.092 |
| VL | 4.06±0.22 | 2.26±0.71 | 3.78 ±0.62 | 4.71±0.82 | 2.649 | 0.096 |
| VM | 4.02±0.19 | 2.61±0.13 | 4.30±0.50 | 5.65±0.68 | 8.127 | 0.003 |

Table S8: Orexin system in adult mice (PND60):

A) The first row shows the average number of orexin-positive cells in the LH. The following rows show the mean amount of positive cells in the selected four levels of LH.

B) Quantitative data for Orexin-ir fibers (FA) within PVN [divided in DorsoLateral (DL), DorsoMedial (DM), VentroLateral (VL), and VentroMedial (VM)] are reported in the corresponding columns (Mean±SEM) for different groups of adult CD1 mice. The results of the one-way ANOVA (F and p values) are reported at the right.