	Sessions		Neurons	
Rat	*Control*	*eNpHR*	*Control*	*eNpHR*
1	13	11	59	62
2	12	7	38	19
3	5	6	6	3
4	5	6	21	21
Total	35	30	124	105

Table S1 (related to STAR methods). Number of cells and sessions for each rat. The table displays the number of control and eNpHR behavioral sessions each subject in the study completed, and the number of single units recorded from each rat during each type of session.

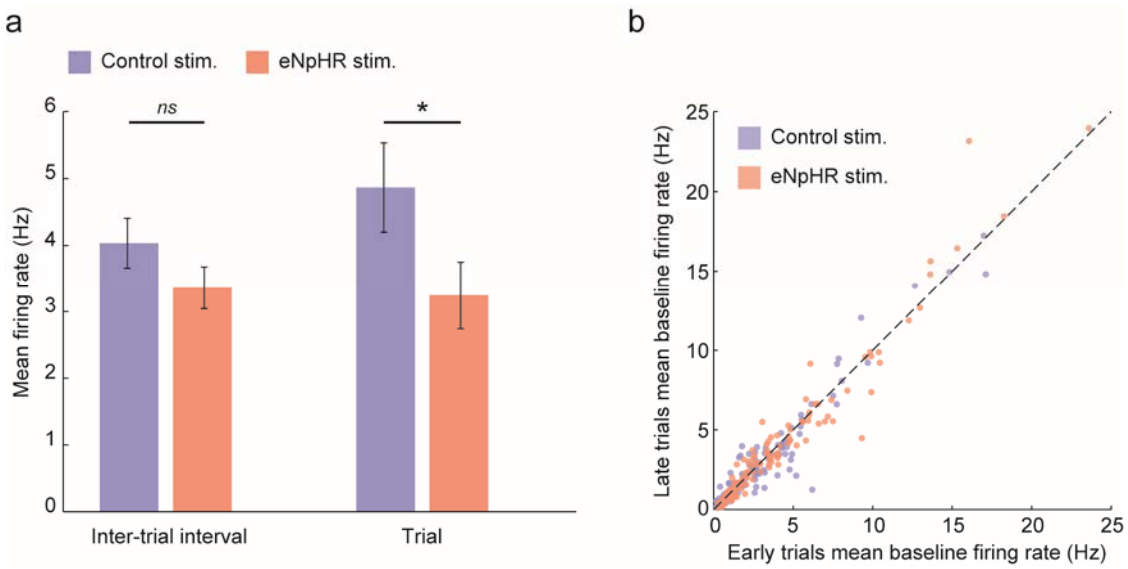

Figure S1 (related to Figure 3). OFC firing rate properties. a) During the intertrial interval, when no light stimulation was applied, mean OFC neuron firing rates did not differ between control and eNpHR sessions (P = 0.33; W = 1.15 × 104; rank sum test). However, during trials (when light stimulation was active), OFC neuron firing rates were significantly lower in eNpHR sessions relative to control sessions (P = 0.03; W = 1.10 × 104; rank sum test). b) To test the stability of OFC neuron firing rates over the course of sessions, we computed the baseline, intertrial interval firing rate of each cell separately for the first and second halves of sessions. Neurons with no change in firing rate over the course of sessions should fall along the dashed unity line. We did not detect a significant shift in firing rates across session for either control (P = 0.10; W = 4533; signed rank test) or eNpHR (P = 0.61; W = 2831.5; signed rank test) neurons.

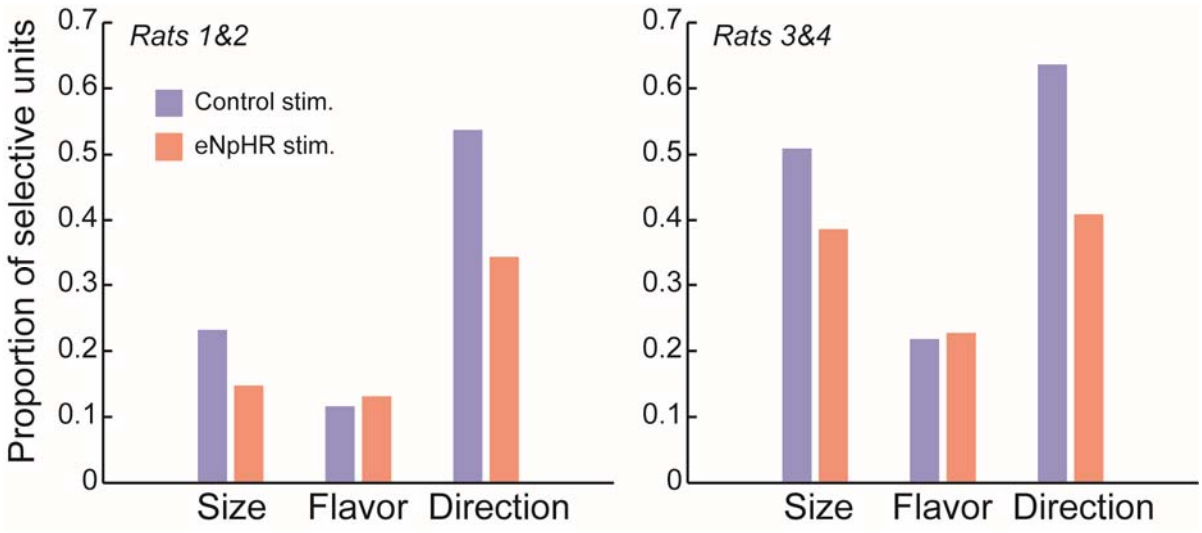

Figure S2 (related to Figure 5). Similarity of single cell selectivity across cohorts. To assess consistency of single unit correlates across cohorts of rats, we computed the fraction of neurons responsive for outcome size, outcome flavor, and response direction separately for rats 1–2 and rats 3–4. Similar proportions of neurons encoded each of these variables across cohorts. Notably, the pronounced reduction in response direction encoding during eNpHR sessions was also consistent across pairs of rats.