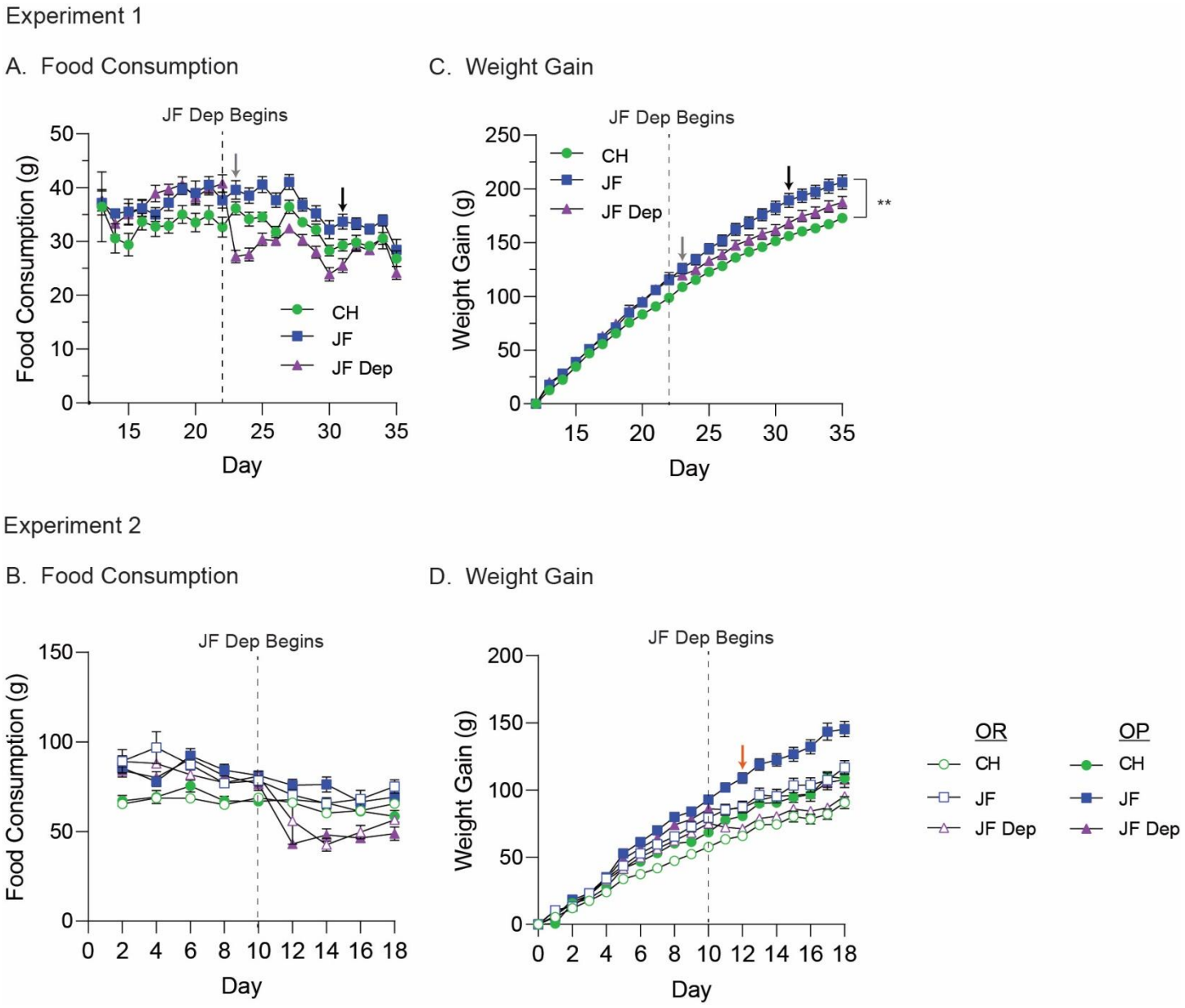
Supplemental Info

Supplemental Figures

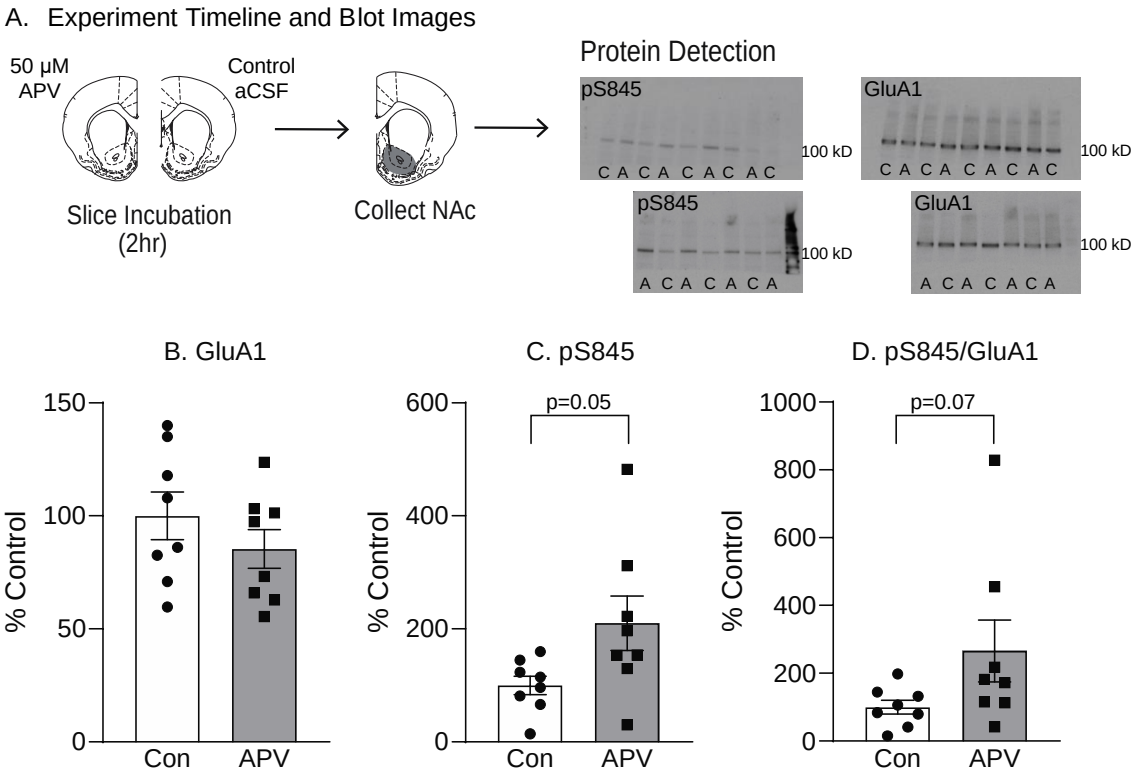
Figure S1



Supplemental Figure 1. Weight gain and food consumption throughout behavioral experiments.
A-B) Food consumption for rats in Experiment 1 (N=13 rats/group) and 2 (N=12 rats/group), respectively. For both experiments, rats given free access to JF consumed more than those given free access to CH (panel A: two-way RM ANOVA; main effect of diet, $F_{(2,36)}$=6.81; panel B: two-way RM ANOVA; main effect of diet, OR: $F_{(2,33)}$=13.50, p<0.0001, OP: $F_{(2,33)}$=16.53, p<0.0001). There were no differences in food intake between OP-JF

and OR-JF groups across 10 days of JF exposure (panel B: two-way RM ANOVA; no effect of strain, CH: $F_{(1,22)}$=0.51, p=0.48, JF: $F_{(1,22)}$=0.13, p=0.72, JF-Dep: $F_{(1,22)}$=0.086, p=0.77). In addition, food intake dropped briefly when rats in the JF groups were placed back on chow. C-D) Weight gain of rats in Experiment 1 and 2, respectively. For both experiments, rats in the JF group gained significantly more weight than those in CH groups (panel C: two-way RM ANOVA; main effect of diet group, $F_{(2,36)}$=6.65, p=0.0035; diet group x time interaction, $F_{(46,828)}$=10.17, p<0.0001; panel D: two-way RM ANOVA; main effect of diet group, OR: $F_{(2,33)}$=10.70, p=0.003, OP: $F_{(2,33)}$=16.65, p<0.0001; main effect of time, OR: $F_{(1.378,45.46)}$=810.2, p<0.0001, OP: $F_{(1.435,47.37)}$=937.0, p<0.0001; diet group x time interaction, OR: $F_{(36,594)}$=7.61, p<0.0001, OP: $F_{(36,594)}$=13.06, p<0.0001). As expected, weight gain in the OP-JF-Dep group was similar to OP-CH controls by the end of the study (panel C: Sidak's post-test; Day 35, CH vs. JF-Dep, p=0.13), whereas the OP-JF group gained more weight than OP-CH (**=Sidak's post-test, Day 35, CH vs JF, p=0.0013). Finally, in experiment 2, OPs gained more weight than ORs, regardless of diet group (panel D: two-way RM ANOVA; main effect of diet, CH: $F_{(1,22)}$=13.00, p=0.0016, JF: $F_{(1,22)}$=12.56, p=0.0018, JF-Dep: $F_{(1,22)}$=6.02, p=0.023; : Sidak's post-test Day 18: OP-CH vs OP-JF: p<0.0001), although the OR-JF group did gain more weight than the OR-CH group (panel D: Sidak's post-test Day 18: OR-CH vs OR-JF p=0.0024). The dashed line in each panel indicates when the JF-Dep group was returned to ad lib CH. Arrows indicate the conditioned reinforcement test (gray), the first day of progressive ratio testing (black), and the first day of instrumental training (orange). Overall, differences in food-intake and weight gain did not correspond to behavioral differences between experimental groups and chow controls, or OP vs OR strains.

Figure S2



Supplemental Figure 2: Ex vivo NMDA receptor blockade in slices from OPs is sufficient to enhance phosphorylation of S845 on the AMPAR GluA1 subunit. A) Schematic of experimental timeline and images of blots for GluA1 S845 (left) and total GluA1 (right). Slices were incubated in either aCSF (Control) or aCSF with APV (50 µM) for 2 hours prior to collection of NAc tissue. Control (C) and APV (A) treated samples are labeled on each blot. B) Total GluA1 expression normalized to total protein in the lane and graphed as % of control. C) pS845 GluA1 expression normalized to total protein in the lane and graphed as % of control. D) The proportion of phosphorylated to total GluA1 protein normalized to total protein in the lane and graphed as % of control. N=16 samples (8 control, 8 APV treated) from 8 rats.