Habitual Alcohol Seeking: Time Course and the Contribution of Subregions of the Dorsal Striatum

Supplemental Information

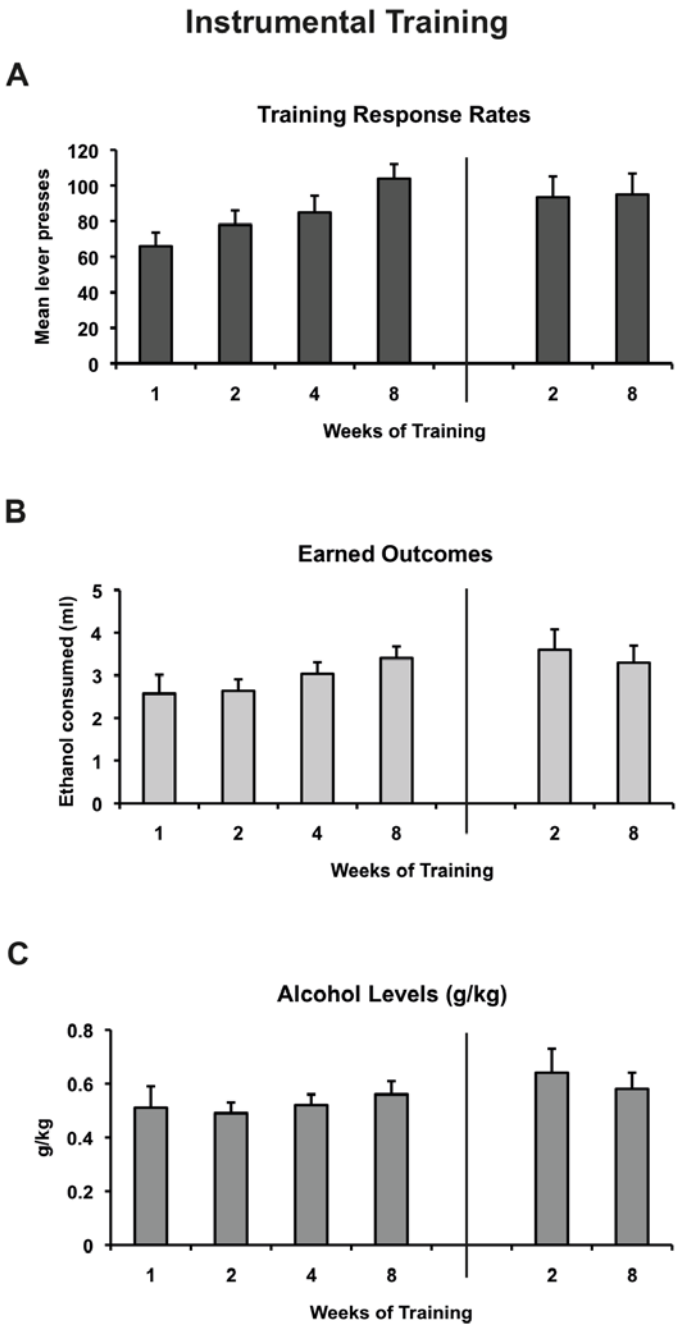

Figure S1. Response rates and ethanol consumed during training (Experiments 1a & 1b). **(A)** Mean lever presses per session for the three training days prior to devaluation testing conducted following 1, 2, 4 and 8 weeks of training for Experiment 1a (left), or following either 2 or 8

weeks for Experiment 1b (right). **(B)** Mean volume of ethanol earned and consumed during the same training sessions. **(C)** Mean alcohol levels (g/kg) achieved as a result of consumption of the earned ethanol outcomes. When rats underwent repeated testing (Experiment 1a) there was an increase in response rates and earned outcomes across training [$F(3,48) = 23.7$, $p < .01$; $F(3,48) = 3.7$, $p < .05$] but there was no significant change in g/kg [$F(3,48) = .8$, $p > .05$] suggesting rats earned more alcohol to compensate for increasing body weight. No differences were found in any of these measures when separate groups of rats underwent a single set of tests at either 2 or 8 weeks [response rate: $F(1,21) = 2.1$, $p > .05$; earned outcomes: $F(1,21) = 2.0$, $p > .05$; g/kg: $F(1,21) = 3.0$, $p > .05$].

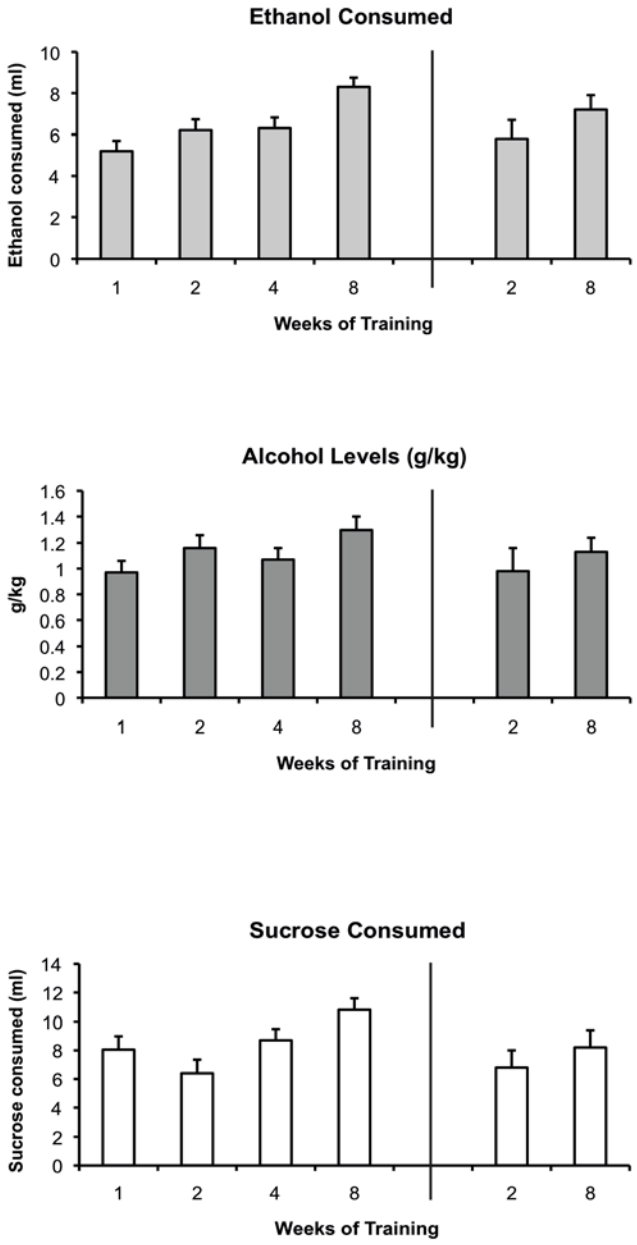

Figure S2. Ethanol and sucrose consumed during pre-feeding for devaluation testing (Experiments 1a & 1b). **(A)** Mean ethanol consumed (mls) during the pre-feeding for devaluation tests conducted following 1, 2, 4 and 8 weeks of training for Experiment 1a (left), or following either 2 or 8 weeks for Experiment 1b (right). **(B)** Mean alcohol levels (g/kg) achieved as a result of consumption during pre-feeding. **(C)** Mean sucrose consumed (mls) as the control pre-feeding condition for tests conducted following 1, 2, 4 and 8 weeks of training for Experiment 1a (left), or following either 2 or 8 weeks for Experiment 1b (right). When rats underwent repeated testing (Experiment 1a) there was an increase in consumption of both ethanol [$F(3,48) = 6.6$, $p < .01$] and sucrose [$F(3,48) = 9.9$, $p < .01$] during pre-feeding for devaluation testing but the alcohol level achieved (g/kg) did not increase significantly [$F(3,48) = 2.7$, $p > .05$]. No differences in consumption of ethanol [$F(1,21) = 2.3$, $p > .05$] or sucrose [$F(1,21) = .5$, $p > .05$] were found when separate groups of rats underwent a single pair of tests at either 2 or 8 weeks.

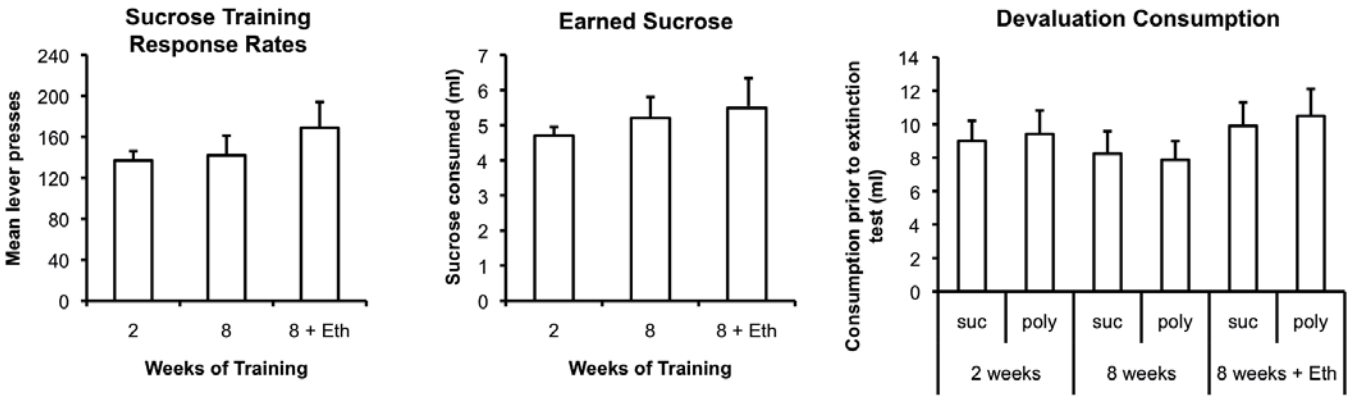

Figure S3. Response rates and earned sucrose (Experiment 1c). **(A)** Mean lever presses per session for the three training days prior to devaluation testing conducted following either 2 or 8 weeks of training or 8 weeks with homecage ethanol. **(B)** Mean volume of sucrose earned and consumed during the same training sessions. **(C)** Mean consumption of sucrose or polycose during the pre-feeding for devaluation tests conducted following either 2 or 8 weeks of training. There were no differences in response rates or sucrose earned between the groups [$F(2,29) = 1.7$, $p > .05$; $F(2,29) = .1.3$, $p > .05$]. Rats consumed similar volumes of sucrose and polycose during devaluation testing [$F(2,29) = .38$, $p > .05$].

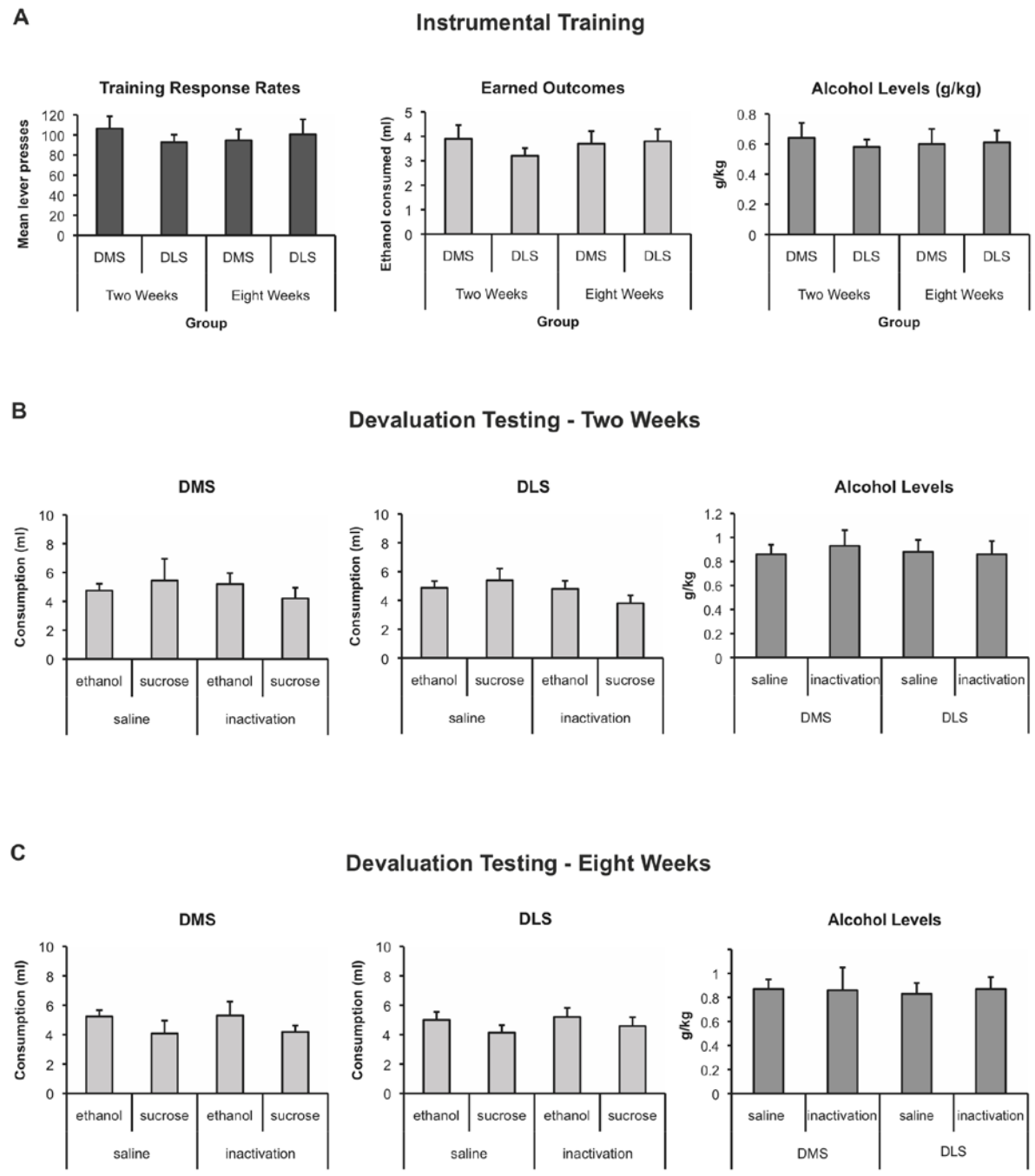

Figure S4. Training data and pre-feeding consumption for inactivation studies (Experiment 2). **(A)** Mean training response rates (left), earned outcomes (middle) and alcohol levels (g/kg; right) achieved during the three training days prior to devaluation testing for rats in either the dorsomedial striatum (DMS) or dorsolateral striatum (DLS) groups tested following either 2 or 8 weeks of training. There were no group differences in any of these measures [response rate: $F(3,42) = .42$, $p > .05$; earned outcomes: $F(3,42) = .35$, $p > .05$; g/kg: $F(3,42) = .23$, $p > .05$]. **(B)** Consumption of ethanol or sucrose during the devaluation testing for rats in the DMS (left) and DLS (middle) groups and alcohol levels achieved as a result of this consumption (right) for rats tested after 2 weeks of training. For ethanol consumption, there was no effect of group [$F(1,20)$

= .01, $p > .05$], no effect of inactivation [$F(1,20) = .49$, $p > .05$] and no interaction [$F(1,20) = .17$, $p > .05$]. Similarly, there were no differences for sucrose consumption or g/kg [Fs < 1]. **(C)** Consumption or ethanol or sucrose during the devaluation testing for rats in the DMS (left) and DLS (middle) groups and alcohol levels achieved as a result of this consumption (right) for rats tested after 8 weeks of training. There were no group differences in any of these measures [ethanol: $F(1,22) = .53$, $p > .05$; sucrose: $F(1,22) = .4$, $p > .05$; g/kg: $F(1,22) = .13$, $p > .05$]. For ethanol consumption, there was no effect of group [$F(1,22) = .04$, $p > .05$], no effect of inactivation [$F(1,20) = .22$, $p > .05$] and no interaction [$F(1,20) = .48$, $p > .05$]. Similarly, there were no differences for sucrose consumption or g/kg [Fs < 1].