Supplemental Data

Separate results for the anteroventral striatum and the ventral putamen:

Raclopride binding ratios:

Anteroventral striatum (AVS): In the entire sample no effect was significant in the AVS: main effect of condition ($F_{1,23}$ =0.96, $p < 0.33$), main effect of lateralization ($F_{1,23}$ = 0.42, $p< 0.52$), interaction between condition and lateralization ($F_{1,23}$ = 2.76, $p <0.11$). Adding gender as a between-subject factor did not yield any significant results.

Ventral putamen: The main effect of condition ($F_{1,23}$ = 4.11, $p< 0.05$) and the lateralization factor ($F_{1,23}$ = 64.8, $p < 0.001$) were significant, but not the interaction between condition and lateralization ($F_{1,23}$ = 2.58, p = 0.12). Subsequent tests showed a significant decrease in [^{11}C]raclopride BP_{ND} during the reward task versus the sensorimotor task conditions on the right side ($p< 0.05$), but not the left side (p= 0.24), as well as significantly lower mean [^{11}C]raclopride BP_{ND} values on the right side versus the left during the sensorimotor ($p< 0.001$) and the reward ($p< 0.001$) conditions.

Using gender as a between-subjects factor in the ANOVA's yielded significant results in the ventral putamen for the condition x gender x laterality interaction ($F_{1,21}$= 21, $p<0.01$). The ΔBP during the reward condition relative to the control condition was greater in women than in men in *left* ventral putamen (mean ΔBP= -4.3 + 5.4 % and 0.60 + 5.7%, respectively; unpaired t = 2.18; $p< 0.04$) but did not differ between men and women in the *right* ventral putamen (mean ΔBP women= -5 + 10.9 % and -3.3 ± 7.3 for men; unpaired t= 0.42, $p< 0.67$). These ΔBP values between conditions were significant only in the left ventral putamen and only in women ($p<0.02$). The difference in mean ΔBP values between the right and left ventral putamen was significant in men ($p<0.001$) but not in women ($p<0.76$).