PNAS

How instructed knowledge modulates the neural systems of reward learning
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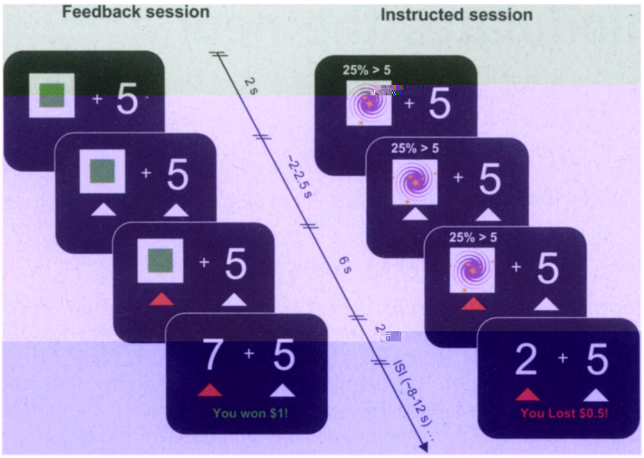
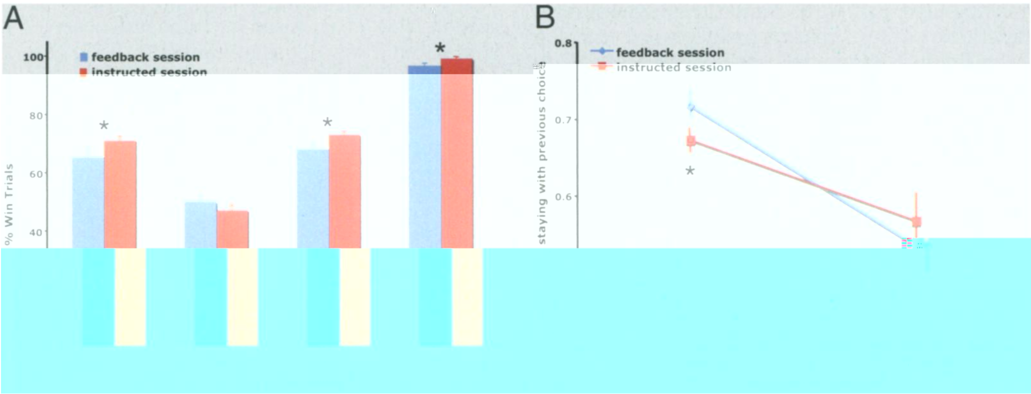
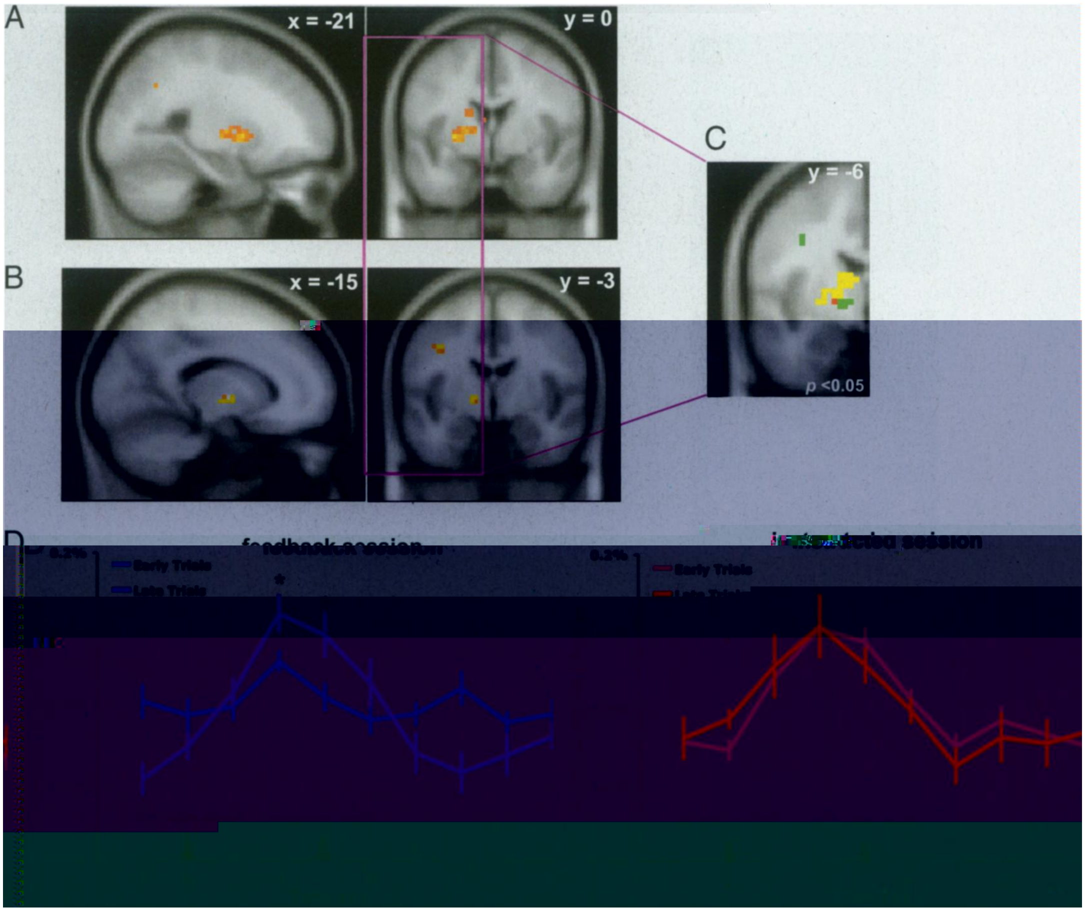
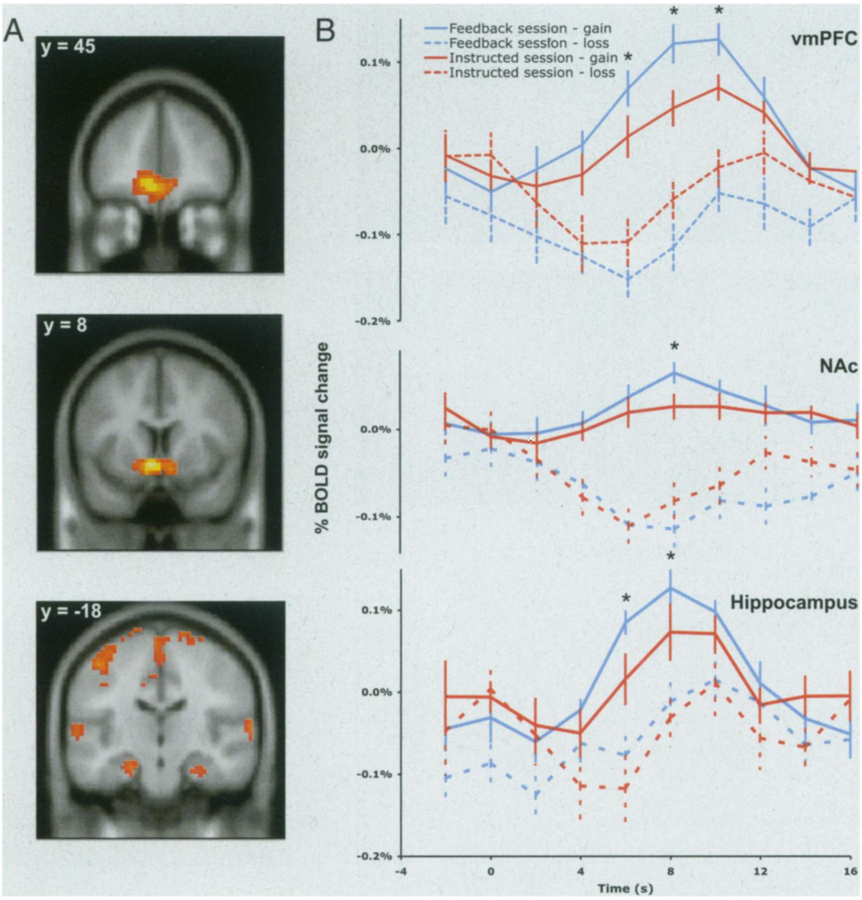
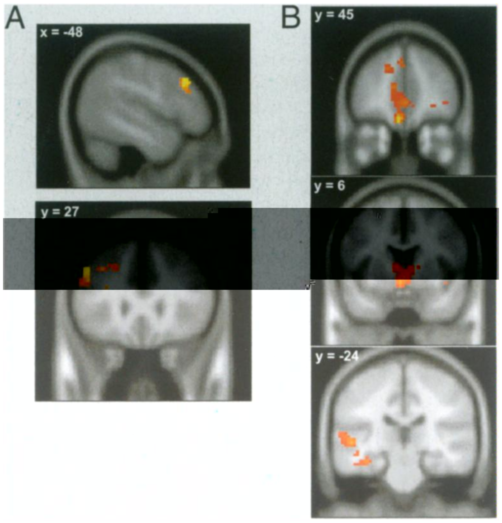

Feedback session
Instructed session
5
5
5
7
5
You won $1!
2 s
~2-2.5 s
6 s
2 s
ISI (~8-12 s) ...
25% > 5
5
25% > 5
5
25% > 5
5
2
5
You Lost $0.5!


A
100
80
60
40
% Win Trials
🟦 feedback session
🟥 instructed session
*
*
*
B
0.8
0.7
0.6
staying with previous choice
feedback session
instructed session
*



A
x = -21
y = 0
B
x = -15
y = -3
C
y = -6
p <0.05
D
feedback session
0.2%
Early Trials
Late Trials
*
instructed session
0.2%
Early Trials
Late Trials


A
y = 45
y = 8
y = -18
B
Feedback session - gain
Feedback session - loss
Instructed session - gain *
Instructed session - loss
vmPFC
NAc
Hippocampus
*
0.1%
0.0%
-0.1%
-0.2%
% BOLD signal change
-4
0
4
8
12
16
Time (s)



91W144 I 83 6 H Y L R X V Vj /F1

j /F1 8 Tf 1 0 0 1 291.6 635.16 H Z(457KH Q)L X1 6 Tf 1 0 0 1 342.48 721 4 F L U(45
U H 2 D U(,1 8 Tf 1 0 0 1 312.6 431.4 4 Tm 1 7 P R G X O Ej

R Q