

Supplemental Material 4. Contrast Comparison for psychomotor, working memory, risk-taking, subjective, and physiological measures following controlled smoking of a 6.8% THC cannabis cigarette in 14 frequent and 11 occasional cannabis smokers

Effect of session on psychomotor tests

	Critical Tracking	Divided Attention				
Time	λ-c	Control Losses	Tracking Error	Hits	False Alarms	Reaction Time
1.5 h	$F(1,20)=0.001$ $p=0.974$	$F(1,23)=0.513$ $p=0.481$	$F(1,23)=0.075$ $p=0.787$	$F(1,23)=0.886$ $p=0.356$	$F(1,23)=1.50$ $p=0.234$	$F(1,23)=3.65$ $p=0.069$
3.5 h	$F(1,20)=1.14$ $p=0.298$	$F(1,23)=0.625$ $p=0.437$	$F(1,23)=1.35$ $p=0.257$	$F(1,23)=4.78$ $p<0.05$	$F(1,23)=0.170$ $p=0.684$	$F(1,23)=7.18$ $p<0.05$
5.5 h	$F(1,20)=1.09$ $p=0.310$	$F(1,23)=2.37$ $p=0.137$	$F(1,23)=0.227$ $p=0.638$	$F(1,23)=0.008$ $p=0.931$	$F(1,23)=1.04$ $p=0.318$	$F(1,23)=3.45$ $p=0.076$
22.5 h	$F(1,20)=1.21$ $p=0.284$	$F(1,23)=3.45$ $p=0.076$	$F(1,23)=0.075$ $p=0.786$	$F(1,23)=0.305$ $p=0.586$	$F(1,23)=5.91$ $p<0.05$	$F(1,23)=0.003$ $p=0.958$

Effect of session by group interaction on psychomotor tests

	Critical Tracking	Divided Attention				
Time	λ-c	Control Losses	Tracking Error	Hits	False Alarms	Reaction Time
1.5 h	$F(1,20)=5.22$ $p<0.05$	$F(1,23)=0.002$ $p=0.965$	$F(1,23)=5.81$ $p<0.05$	$F(1,23)=4.02$ $p=0.057$	$F(1,23)=4.67$ $p<0.05$	$F(1,23)=8.29$ $p<0.01$
3.5 h	$F(1,20)=2.33$ $p=0.143$	$F(1,23)=0.056$ $p=0.815$	$F(1,23)=0.073$ $p=0.789$	$F(1,23)=5.41$ $p<0.05$	$F(1,23)=0.321$ $p=0.577$	$F(1,23)=9.05$ $p<0.01$
5.5 h	$F(1,20)=0.444$ $p=0.513$	$F(1,23)=0.499$ $p=0.487$	$F(1,23)=0.537$ $p=0.471$	$F(1,23)=3.69$ $p=0.067$	$F(1,23)=2.08$ $p=0.163$	$F(1,23)=2.45$ $p=0.131$
22.5 h	$F(1,20)=3.09$ $p=0.094$	$F(1,23)=3.49$ $p=0.074$	$F(1,23)=1.07$ $p=0.313$	$F(1,23)=1.36$ $p=0.255$	$F(1,23)=1.26$ $p=0.274$	$F(1,23)=0.037$ $p=0.849$

Effect of session on n-back

Time	Accuracy			Reaction Time			Errors of Commission		
	1-back	2-back	3-back	1-back	2-back	3-back	1-back	2-back	3-back
1.5 h	$F(1,22)=0.007$ $p=0.936$	$F(1,22)=0.801$ $p=0.380$	$F(1,22)=2.35$ $p=0.140$	$F(1,22)=6.42$ $P<0.05$	$F(1,22)=0.306$ $p=0.585$	$F(1,22)=1.28$ $p=0.270$	$F(1,22)=0.393$ $p=0.537$	$F(1,22)=1.56$ $p=0.224$	$F(1,22)=2.40$ $p=0.136$
3.5 h	$F(1,22)=1.52$ $p=0.230$	$F(1,22)=3.50$ $p=0.075$	$F(1,22)=2.42$ $p=0.134$	$F(1,22)=3.20$ $p=0.087$	$F(1,22)=0.209$ $p=0.652$	$F(1,22)=0.147$ $p=0.705$	$F(1,22)=1.69$ $p=0.208$	$F(1,22)=0.334$ $p=0.569$	$F(1,22)=1.81$ $p=0.192$
5.5 h	$F(1,22)=1.04$ $p=0.319$	$F(1,22)=0.038$ $p=0.847$	$F(1,22)=0.241$ $p=0.629$	$F(1,22)=0.064$ $p=0.803$	$F(1,22)=2.08$ $p=0.163$	$F(1,22)=0.535$ $p=0.472$	$F(1,22)=0.083$ $p=0.776$	$F(1,22)=0.011$ $p=0.919$	$F(1,22)=1.32$ $p=0.264$
22.5 h	$F(1,22)=0.001$ $p=0.974$	$F(1,22)=0.409$ $p=0.529$	$F(1,22)=0.686$ $p=0.417$	$F(1,22)=0.673$ $p=0.421$	$F(1,22)=4.86$ $P<0.05$	$F(1,22)=0.051$ $p=0.824$	$F(1,22)=0$ $p=0.990$	$F(1,22)=0.449$ $p=0.510$	$F(1,22)=0.124$ $p=0.729$

Effect of session by group interaction on n-back

Time	Accuracy			Reaction Time			Errors of Commission		
	1-back	2-back	3-back	1-back	2-back	3-back	1-back	2-back	3-back
1.5 h	$F(1,22)=0.934$ $p=0.344$	$F(1,22)=0.397$ $p=0.535$	$F(1,22)=0.105$ $p=0.749$	$F(1,22)=2.24$ $p=0.148$	$F(1,22)=0.865$ $p=0.362$	$F(1,22)=1.89$ $p=0.183$	$F(1,22)=0.006$ $p=0.939$	$F(1,22)=0.652$ $p=0.428$	$F(1,22)=0.473$ $p=0.499$
3.5 h	$F(1,22)=0.023$ $p=0.880$	$F(1,22)=1.48$ $p=0.237$	$F(1,22)=0.175$ $p=0.680$	$F(1,22)=0.343$ $p=0.564$	$F(1,22)=3.26$ $p=0.085$	$F(1,22)=0.114$ $p=0.739$	$F(1,22)=0.270$ $p=0.609$	$F(1,22)=0.445$ $p=0.512$	$F(1,22)=0.364$ $p=0.552$
5.5 h	$F(1,22)=1.45$ $p=0.241$	$F(1,22)=0.415$ $p=0.526$	$F(1,22)=0$ $p=0.991$	$F(1,22)=0.636$ $p=0.434$	$F(1,22)=0$ $p=0.991$	$F(1,22)=1.46$ $p=0.240$	$F(1,22)=2.67$ $p=0.117$	$F(1,22)=0.047$ $p=0.830$	$F(1,22)=1.02$ $p=0.325$
22.5 h	$F(1,22)=0.020$ $p=0.889$	$F(1,22)=0.923$ $p=0.347$	$F(1,22)=0.013$ $p=0.910$	$F(1,22)=0.031$ $p=0.862$	$F(1,22)=4.49$ $P<0.05$	$F(1,22)=0.063$ $p=0.803$	$F(1,22)=0.886$ $p=0.357$	$F(1,22)=0.449$ $p=0.510$	$F(1,22)=0.061$ $p=0.807$

Effect of session on BART

Time	Adjusted Pumps
1.9 h	$F(1,22)=0.114$ $p=0.739$
3.9 h	$F(1,22)=0.574$ $p=0.457$
5.9 h	$F(1,22)=1.31$ $p=0.265$
22.9 h	$F(1,22)=4.03$ $p=0.057$

Effect of session by group interaction on BART

Time	Adjusted Pumps
1.9 h	$F(1,22)=0.057$ $p=0.814$
3.9 h	$F(1,22)=0.750$ $p=0.396$
5.9 h	$F(1,22)=0.065$ $p=0.802$
22.9 h	$F(1,22)=0.038$ $p=0.847$

Effect of session on VAS

Time	Good Drug Effect	Sedated	Stoned	Stimulated	High	Anxious	Restless
0.25 h	$F(1,23)=209$ $p<0.001$	$F(1,23)=19.5$ $p<0.001$	$F(1,23)=48.0$ $p<0.001$	$F(1,23)=74.1$ $p<0.001$	$F(1,23)=192$ $p<0.001$	$F(1,23)=1.57$ $p=0.223$	$F(1,23)=13.5$ $p<0.01$
0.5 h	$F(1,23)=103$ $p<0.001$	$F(1,23)=17.4$ $p<0.001$	$F(1,23)=38.0$ $p<0.001$	$F(1,23)=50.4$ $p<0.001$	$F(1,23)=99.7$ $p<0.001$	$F(1,23)=0.055$ $p=0.816$	$F(1,23)=4.96$ $p<0.05$
1 h	$F(1,23)=101$ $p<0.001$	$F(1,23)=15.4$ $p<0.001$	$F(1,23)=30.3$ $p<0.001$	$F(1,23)=38.1$ $p<0.001$	$F(1,23)=82.5$ $p<0.001$	$F(1,23)=0.574$ $p=0.456$	$F(1,23)=2.13$ $p=0.158$
2 h	$F(1,23)=60.4$ $p<0.001$	$F(1,23)=14.8$ $p<0.001$	$F(1,23)=30.4$ $p<0.001$	$F(1,23)=29.1$ $p<0.001$	$F(1,23)=37.7$ $p<0.001$	$F(1,23)=1.60$ $p=0.219$	$F(1,23)=2.40$ $p=0.135$
3 h	$F(1,23)=26.1$ $p<0.001$	$F(1,23)=8.90$ $p<0.01$	$F(1,23)=18.4$ $p<0.001$	$F(1,23)=14.3$ $p<0.001$	$F(1,23)=28.8$ $p<0.001$	$F(1,23)=3.73$ $p=0.066$	$F(1,23)=3.52$ $p=0.073$
4 h	$F(1,23)=14.1$ $p<0.01$	$F(1,23)=7.70$ $p<0.05$	$F(1,23)=8.42$ $p<0.01$	$F(1,23)=10.8$ $p<0.01$	$F(1,23)=15.7$ $p<0.001$	$F(1,23)=2.65$ $p=0.117$	$F(1,23)=4.60$ $p<0.05$
5 h	$F(1,23)=9.09$ $p<0.01$	$F(1,23)=6.09$ $p<0.05$	$F(1,23)=5.81$ $p<0.05$	$F(1,23)=7.78$ $p<0.05$	$F(1,23)=7.97$ $p<0.01$	$F(1,23)=3.50$ $p=0.074$	$F(1,23)=4.10$ $p=0.055$
6 h	$F(1,23)=4.59$ $p<0.05$	$F(1,23)=5.13$ $p<0.05$	$F(1,23)=6.00$ $p<0.05$	$F(1,23)=8.02$ $p<0.01$	$F(1,23)=7.45$ $p<0.05$	$F(1,23)=4.60$ $p<0.05$	$F(1,23)=4.24$ $p=0.051$

Effect of session by group interaction on VAS

Time	Good Drug Effect	Sedated	Stoned	Stimulated	High	Anxious	Restless
0.25 h	$F(1,23)=0.172$ $p=0.682$	$F(1,23)=0.282$ $p=0.600$	$F(1,23)=0.122$ $p=0.730$	$F(1,23)=0.115$ $p=0.738$	$F(1,23)=0.027$ $p=0.870$	$F(1,23)=2.65$ $p=0.117$	$F(1,23)=4.17$ $p=0.053$
0.5 h	$F(1,23)=0.013$ $p=0.910$	$F(1,23)=0$ $p=0.990$	$F(1,23)=0.063$ $p=0.804$	$F(1,23)=0.540$ $p=0.470$	$F(1,23)=0.134$ $p=0.718$	$F(1,23)=5.65$ $p<0.05$	$F(1,23)=0.008$ $p=0.928$
1 h	$F(1,23)=0.075$ $p=0.787$	$F(1,23)=0.110$ $p=0.743$	$F(1,23)=0.463$ $p=0.503$	$F(1,23)=0.574$ $p=0.456$	$F(1,23)=0.126$ $p=0.726$	$F(1,23)=5.89$ $p<0.05$	$F(1,23)=0.039$ $p=0.845$
2 h	$F(1,23)=5.10$ $p<0.05$	$F(1,23)=5.19$ $p<0.05$	$F(1,23)=8.69$ $p<0.01$	$F(1,23)=6.27$ $p<0.05$	$F(1,23)=5.28$ $p<0.05$	$F(1,23)=7.35$ $p<0.05$	$F(1,23)=0.001$ $p=0.973$
3 h	$F(1,23)=1.58$ $p=0.222$	$F(1,23)=3.23$ $p=0.085$	$F(1,23)=8.63$ $p<0.01$	$F(1,23)=8.18$ $p<0.01$	$F(1,23)=11.4$ $p<0.01$	$F(1,23)=4.76$ $p<0.05$	$F(1,23)=0.113$ $p=0.740$
4 h	$F(1,23)=2.04$ $p=0.167$	$F(1,23)=5.51$ $p<0.05$	$F(1,23)=5.97$ $p<0.05$	$F(1,23)=9.60$ $p<0.01$	$F(1,23)=10.6$ $p<0.01$	$F(1,23)=5.44$ $p<0.05$	$F(1,23)=0.053$ $p=0.821$
5 h	$F(1,23)=1.61$ $p=0.217$	$F(1,23)=4.69$ $p<0.05$	$F(1,23)=5.09$ $p<0.05$	$F(1,23)=6.42$ $p<0.05$	$F(1,23)=7.50$ $p<0.05$	$F(1,23)=5.05$ $p<0.05$	$F(1,23)=0.017$ $p=0.899$
6 h	$F(1,23)=2.37$ $p=0.137$	$F(1,23)=3.68$ $p=0.068$	$F(1,23)=4.69$ $p<0.05$	$F(1,23)=6.79$ $p<0.05$	$F(1,23)=6.02$ $p<0.05$	$F(1,23)=3.978$ $p=0.058$	$F(1,23)=0.002$ $p=0.964$

Effect of session on Physiological measures

Time	Heart Rate	Systolic Blood Pressure	Diastolic Blood Pressure	Respirations per Minute
0.5 h	$F(1,23)=47.8$ $p<0.001$	$F(1,23)=3.40$ $p=0.078$	$F(1,23)=0.587$ $p=0.451$	$F(1,23)=2.51$ $p=0.127$
1 h	$F(1,23)=35.6$ $p<0.001$	$F(1,23)=0.357$ $p=0.556$	$F(1,23)=1.20$ $p=0.285$	$F(1,23)=0.263$ $p=0.613$
1.5 h	$F(1,23)=17.4$ $p<0.001$	$F(1,23)=2.44$ $p=0.132$	$F(1,23)=2.64$ $p=0.118$	$F(1,23)=1.94$ $p=0.177$
2 h	$F(1,23)=7.45$ $p<0.05$	$F(1,23)=4.89$ $p<0.05$	$F(1,23)=7.60$ $p<0.05$	$F(1,23)=0.122$ $p=0.730$
2.5 h	$F(1,23)=2.92$ $p=0.101$	$F(1,23)=8.99$ $p<0.01$	$F(1,23)=7.69$ $p<0.05$	$F(1,23)=0.081$ $p=0.779$
3 h	$F(1,23)=11.5$ $p<0.01$	$F(1,23)=0.014$ $p=0.908$	$F(1,23)=11.9$ $p<0.01$	$F(1,23)=0.042$ $p=0.840$
4 h	$F(1,23)=6.20$ $p<0.05$	$F(1,23)=10.7$ $p<0.01$	$F(1,23)=54.8$ $p<0.001$	$F(1,23)=0.283$ $p=0.600$
5 h	$F(1,23)=14.5$ $p<0.001$	$F(1,23)=10.3$ $p<0.01$	$F(1,23)=31.5$ $p<0.001$	$F(1,23)=0.008$ $p=0.930$
6 h	$F(1,23)=2.75$ $p=0.111$	$F(1,23)=4.13$ $p=0.054$	$F(1,23)=17.3$ $p<0.001$	$F(1,23)=0.002$ $p=0.961$

Effect of session by group interaction on physiological measures

Time	Heart Rate	Systolic Blood Pressure	Diastolic Blood Pressure	Respirations per Minute
0.5 h	$F(1,23)=4.21$ $p=0.052$	$F(1,23)=12.2$ $p<0.01$	$F(1,23)=7.20$ $p<0.05$	$F(1,23)=0.217$ $p=0.646$
1 h	$F(1,23)=10.0$ $p<0.01$	$F(1,23)=8.20$ $p<0.01$	$F(1,23)=7.18$ $p<0.05$	$F(1,23)=0.050$ $p=0.825$
1.5 h	$F(1,23)=6.04$ $p<0.05$	$F(1,23)=3.98$ $p=0.058$	$F(1,23)=8.62$ $p<0.01$	$F(1,23)=0.048$ $p=0.828$
2 h	$F(1,23)=7.45$ $p<0.05$	$F(1,23)=2.47$ $p=0.130$	$F(1,23)=2.88$ $p=0.103$	$F(1,23)=0.832$ $p=0.371$
2.5 h	$F(1,23)=5.51$ $p<0.05$	$F(1,23)=2.43$ $p=0.133$	$F(1,23)=8.69$ $p<0.01$	$F(1,23)=1.33$ $p=0.261$
3 h	$F(1,23)=7.57$ $p<0.05$	$F(1,23)=0.007$ $p=0.933$	$F(1,23)=1.33$ $p=0.260$	$F(1,23)=0.008$ $p=0.928$
4 h	$F(1,23)=0.398$ $p=0.534$	$F(1,23)=0.001$ $p=0.973$	$F(1,23)=1.44$ $p=0.243$	$F(1,23)=0.283$ $p=0.600$
5 h	$F(1,23)=0.940$ $p=0.342$	$F(1,23)=0.001$ $p=0.973$	$F(1,23)=1.22$ $p=0.281$	$F(1,23)=0.039$ $p=0.844$
6 h	$F(1,23)=0.026$ $p=0.874$	$F(1,23)=0.013$ $p=0.910$	$F(1,23)=0.100$ $p=0.754$	$F(1,23)=0.251$ $p=0.621$