VERSUS

CASE STUDY | PERFORMANCE BRAIN TRAINING FOR UCLA GOLF

RESULTS

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Number of greens in
regulation increased:

12

Percent

Number of putts per
round decreased:

9.7

Percent

Performance
improvements sustained:

8

Weeks

UCLA GOLF

"Our men's and women's golf teams saw significant improvements
in individual performance that showed up as major statistical
improvements in their games.

"A young woman on our team went from being a so-so number six
(on a traveling roster of five) to having the best individual score at
the NCAA Championship. All of our athletes improved their stats,
but she really stood out."

CARRIE FORSYTH

Head Women's Golf Coach, UCLA

Performance Brain Training for UCLA Golf
Sherlin, Ford, Baker, Troesch

The goal of this study was to report the effect of Performance Brain Training™ as it pertains to specific measures of golf performance.

The 16 participants, randomized into two groups, were Division I collegiate athletes between the ages of 18 and 20. Each participant underwent a baseline QEEG/CPT assessment and a Neuroperformance Profile was generated (time point 1). Each participant in Group 1 began Performance Brain Training™ and continued with practice as normal. After Group 1 completed training (M=20.7) sessions both groups completed another QEEG/CPT analysis (time point 2). Group 2 then began the same regiment. Both groups were then assessed in a final QEEG/CPT producing a final Neuroperformance Profile (time point 3).

At time point 1 there were no signification differences between the groups with regard to performance measures. When comparing time points 1 and 2, Group 1 significantly increased the number of greens in regulation, significantly decreased the average number of putts per round and the average number of 3 putts per round (see table1). It is important to note that between time point 1 and 2, Group 2 did not show any significant changes in any of the performance metrics. When comparing time points 2 and 3, Group 2 significantly increased fairways in regulation and greens in regulation, decreased putting average and average number of 3 putts per round (see table 2).

The results demonstrated that after completing the Performance Brain Training™ the athletes were able to significantly improve a number of golf performance metrics and an 8 week follow up suggests these improvements were sustained.

Additionally, the effects of Performance Brain Training™ are highlighted by the lack of significant changes during the "training as usual" periods of this study. Specifically, if Group 2 had improved between time points 1 and 2, the improvements for Group 1 would be less impressive as they would more likely be the influence of some other covariate; furthermore, if Group 1 had continued to make significant progress along with Group 2 between time points 2 and 3, it would likely be the result of a covariate. Ultimately, the results here support the hypothesis that Performance Brain Training™ would contribute to significant improvements and that those improvements would be additive and beyond the improvements that might be made during "training as usual" periods.

This study had some limitations, which included non-standardized data collection, post hoc data analysis and variations in number of tournaments/rounds played. In order for neurofeedback to be considered a legitimate and valuable service to athlete populations, performance data must be directly correlated with improvements generated by neurofeedback alone. This study offers a model for future studies to design a priori tests of the effectiveness of neurofeedback paradigms in improving sport performance.

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COMPARISON OF TIME 1 TO TIME 2

Table 1

Group	Variable	Mean T1	Mean T2	t.statistic	p.value
1	Fairways	74.6	80.1	1.930	0.075
	Greens	58.2	70.3	10.442	**0.001***
	Putting Avg.	31.2	27.9	5.228	**0.007***
	3 Putts Avg.	6.2	4.7	3.361	**0.022**
	Score Avg.	71.4	71.3	0.517	0.311
2	Fairways	73.7	74.9	1.611	0.124
	Greens	69.9	61.7	1.911	0.098
	Putting Avg.	31.1	32.8	2.231	0.078
	3 Putts Avg.	6.2	7.9	1.174	0.181
	Score Avg.	72.8	72.6	0.290	0.391

Note: Significant p values are in bold; *=Significant p values when adjusted for multiple comparisons (False Discovery Rate)

COMPARISON OF TIME 2 TO TIME 3

Table 2

Group	Variable	Mean T2	Mean T3	t.statistic	p.value
1	Fairways	85.7	86.0	0.089	0.469
	Greens	68.8	58.3	5.931	**0.014**
	Putting Avg.	27.7	29.7	1.219	0.174
	3 Putts Avg.	3.3	3.4	0.086	0.470
	Score Avg.	72.0	72.3	0.363	0.367
2	Fairways	74.9	84.0	54.514	**0.001***
	Greens	61.7	72.7	3.102	**0.045**
	Putting Avg.	32.8	29.8	24.131	**0.001***
	3 Putts Avg.	7.9	5.9	3.203	**0.043**
	Score Avg.	72.3	73.5	1.508	0.096

Note: Significant p values are in bold; *=Significant p values when adjusted for multiple comparisons (False Discovery Rate)