

Introduction

We tested the ability of bonded arginine silicate + inositol to alter cognitive functioning in eSports gamers. We assessed performance on an array of computer based cognitive tests prior to, or 1 and 7 days after supplementation.

Methods

- nooLVL® (600mg arginine, 105mg silicon, 385mg inositol and 60mg potassium) 1600mg per day for seven days
- Healthy adult males and females (age 18-32; n=9)
- Computer based cognitive assessment at baseline, day 1 & day 7
- **Cambridge Brain Sciences** computer based assessments:
 - **Double Trouble** (Stroop Test for attention/concentration)
 - **Mental Rotations** (visual representation)
 - **Spatial Planning** (forethought and sequencing)
 - **Feature Match** (visual perception)
 - **Polygons** (object relationship)
 - **Odd One Out** (deductive reasoning)

References

1. Kalman DS, Feldman S, Samson A, Krieger DR. A clinical evaluation to determine the safety, pharmacokinetics, and pharmacodynamics of an inositol-stabilized arginine silicate dietary supplement in healthy adult males. Clin Pharmacol. 2015;7:103-9.
2. Sowinski R, Gonzalez D, Xing D, Yoo C, Jenkins V, Nottingham K, et al. Effects of Inositol-Enhanced Bonded Arginine Silicate Ingestion on Cognitive and Executive Function in Gamers. Nutrients. 2021;13(11):3758.

Results

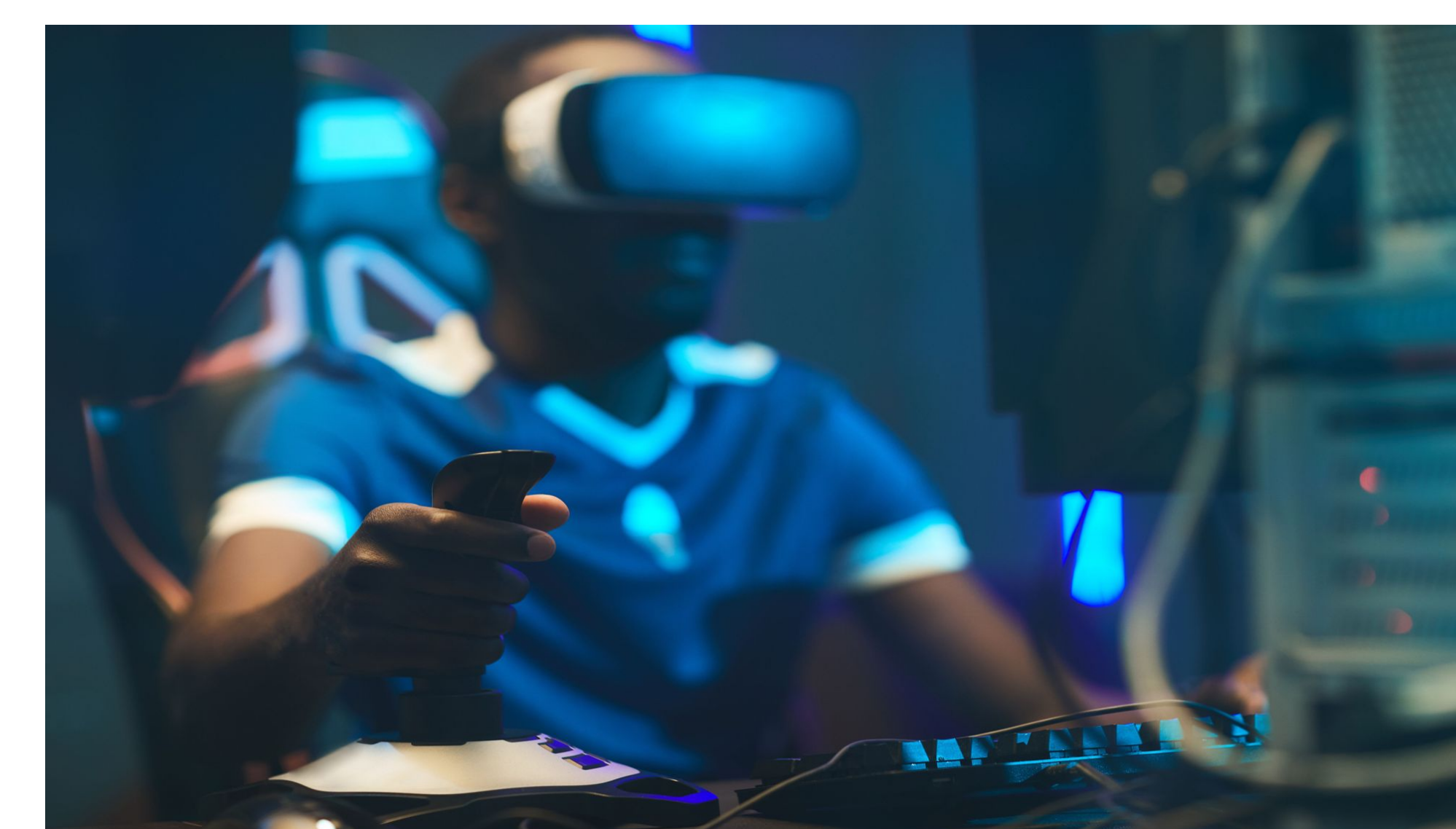
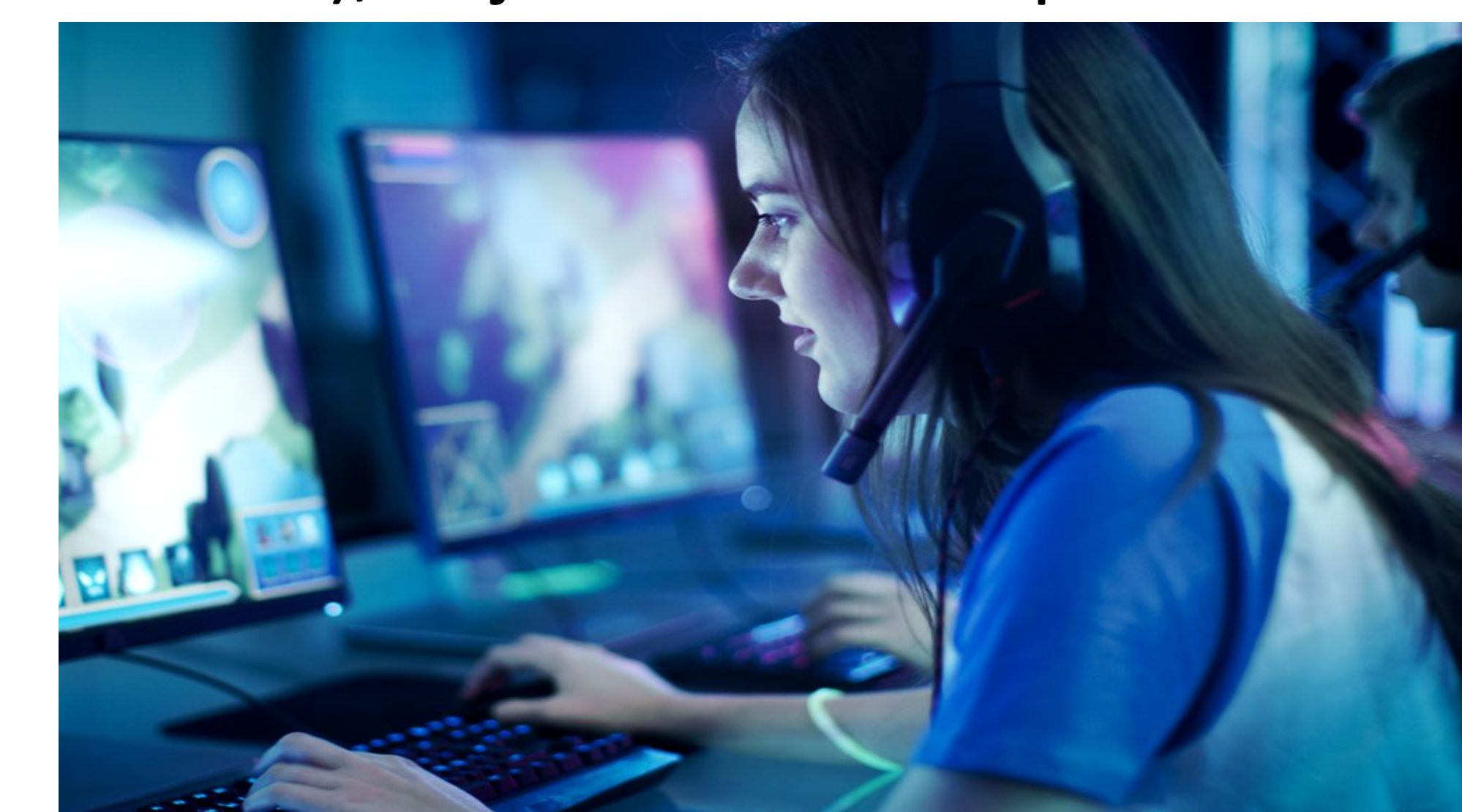
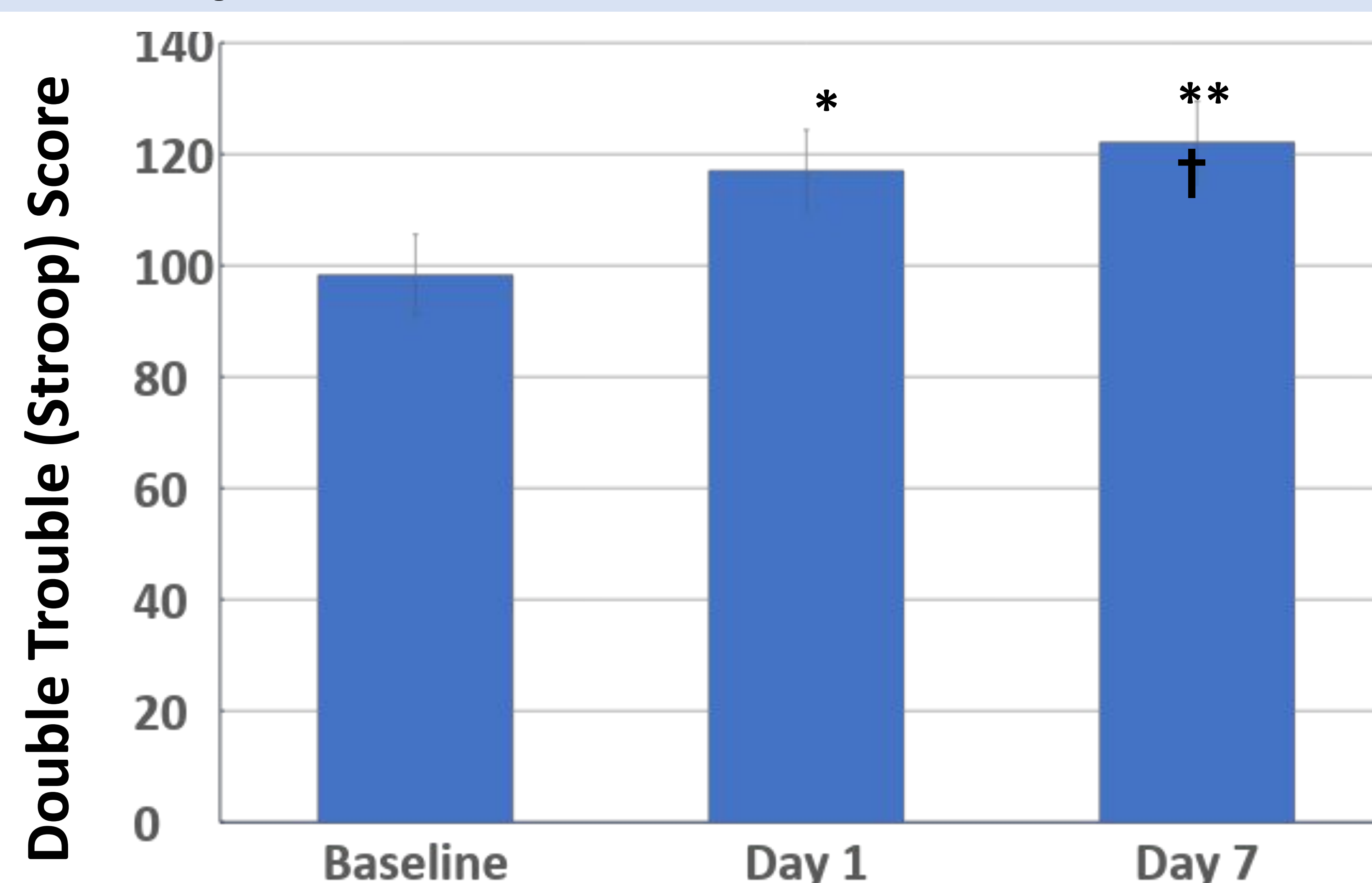
Significant improvement: baseline to day 1 was found with bonded arginine silicate + inositol on measures of attention/concentration (Double Trouble Stroop test; *Figure 1*) and visual representation (Mental Rotations; *Figure 2*).

Significant improvement: baseline to day 7 were found with bonded arginine silicate + inositol on attention/concentration, visual representation (*Figures 1 and 2*), as well as for forethought/sequencing (Spatial Planning test; *Figure 3*).

Significant improvement : day 1 to day 7 was found with bonded arginine silicate + inositol on attention/concentration (Double Trouble Stroop test; *Figure 1*).

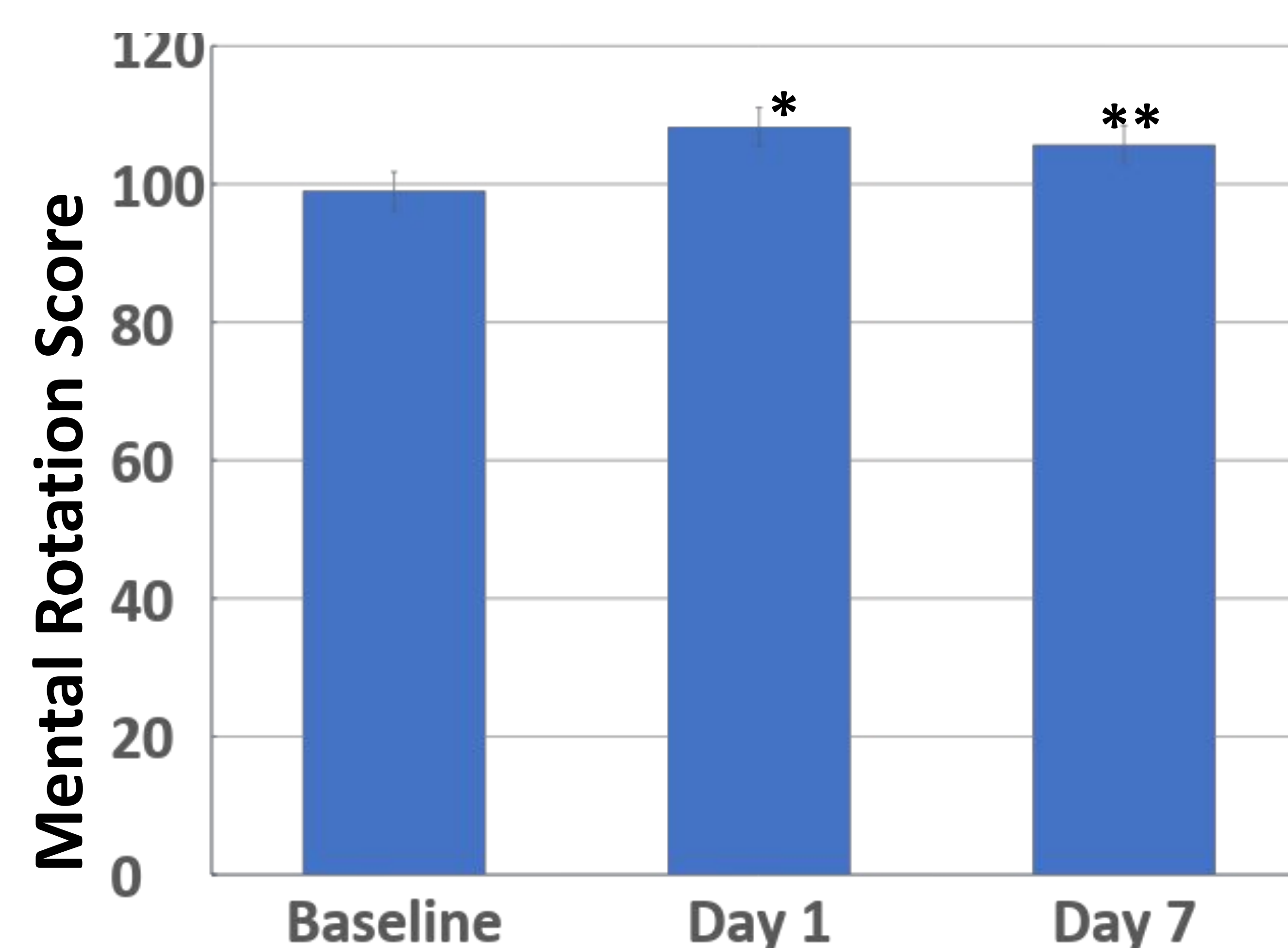
No significant differences were found on any day in visual perception (Feature Match), object relationship

Stroop test: Attention and Concentration



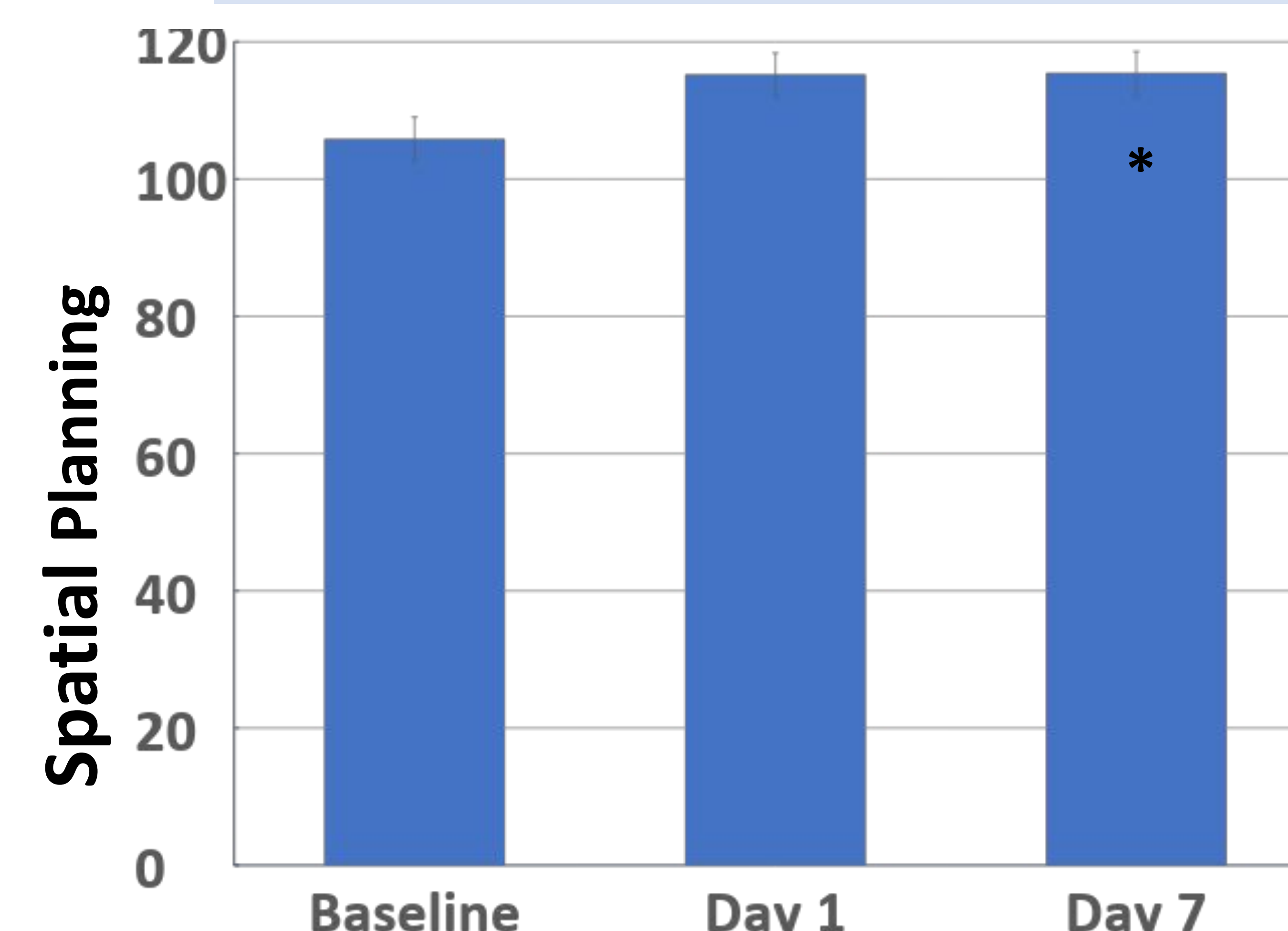
*Figure 1. Double Trouble Stroop test. (Cambridge brain sciences) *Baseline to day 1 ($p < 0.0019$), **baseline to day 7 ($p < 0.0006$), †day 1 to day 7 ($p < 0.03$).*

Visual Representation



*Figure 2. Mental rotations. (Cambridge brain sciences) *Baseline to day 1 $p < 0.05$, **Baseline to day 7 $p < 0.019$*

Forethought/Sequencing



*Figure 3. Spatial planning. (Cambridge brain sciences) *Baseline to day 7 $p < 0.03$.*

Conclusions

Based on this open label study in eSports gamers, we conclude that a single dose of bonded arginine silicate complexed with inositol (noolVL®), improved performance on concentration and visual representation tests. In addition, 7 days of exposure to the complex also improved performance on forethought and sequencing tests. We believe that these performance enhancements may be beneficial for eSports gamers.