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## Report

### Comparative Study for *IgnCogni* (improvement of memory, performance, attention, and error reduction) Results before the intake and after the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> month of use (January 27– February 28 – March 28 – April 28 2022)

Directions: take two (2) capsules daily in the morning.

Do not exceed recommended dose.

Store tightly closed in a cool, dry place.

Warning: Keep out of reach of children.

# Ign Cogni

DIETARY SUPPLEMENT

FOR COGNITIVE FUNCTION

NON GMO GLUTEN FREE NO HEAVY METALS NO ADDITIVES NO PRESERVATIVES

60 VEGETARIAN CAPSULES

Supplement Facts	
Serving Size	2 Capsules
Amount Per Serving	2 Capsules
<i>Ign</i> NADH	20 mg
<i>Ign</i> Citicoline	500 mg
<i>Ign</i> Alpha-GPC	200 mg
<i>Ign</i> Phosphatidylserine	100 mg
<i>Ign</i> N-Acetyl L-Tyrosine	170 mg
L-Theanine	100 mg
CoQ10	100 mg
Capsule made of: Fermented Tapioca Starch, Distilled Water	

**Experimental Group 1** -- 34 people, age 25-70 years (intake initiated on January 27. 2022)  
The subjects took the original *Ign Cogni* during the first month, and the new *Ign Cogni* (the same ingredients, with *Ign Alpha GPC* added) during the second and third months.

After the three months study, **statistically significant positive changes on all indicators were observed.** Specifically the **improvements to short-term and operational memory as well as the speed of mental processing were significant.**

Comparing the 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> test batches (after the 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> month of intake), statistically significant positive changes on **all** indicators were observed.

**Experimental Group 2** – additional 15 people, age 26-70 years -- intake of new *Ign Cogni* (with *Ign Alpha GPC*) for two months -- initiated on February 26. 2022

**All indicators changed positively, not a single indicator demonstrated a negative trend.**

**Control Group** -- 20 people, 26-74 years, took a nootropic commercial product (selected by the academic team) without Igniton enhancements.

In the Control Group – comparing results after the 1<sup>st</sup>, 2<sup>nd</sup>, and the 3<sup>rd</sup> month, indicators mostly worsened. The changes overall were not statistically significant.

## **Experimental Group 1 (“EG1”) and Experimental Group 2 (“EG2”) vs Control Group (“CG”) in a three-month (EG2 for two month) comparative study -- results:**

**Description and results of the tests:** Participants were offered six tests selected for testing different cognitive abilities. For every test, the time of performance (as well as a total time for all 6 tests), and several parameters were calculated.

### **Total time of completion the tests**

EG1 22% improvement, EG2 26% improvement, CG 19% **decline**

### **Number of errors in test 1 (Schulte Tables – efficiency of work):**

EG1 77% improvement, EG2 94% improvement, CG 58% improvement

### **Maximum length of a quickly presented number that a person can memorize (short term memory):**

EG1 20% improvement, EG2 29% improvement, CG 18% **decline**

### **Number of errors in test 2 (short term memory):**

EG1 77% improvement, EG2 82% improvement, CG 82.5% **decline**

### **Number of correct answers in test 3 (operational memory):**

EG1 39% improvement, EG2 43% improvement, CG 2% **decline**

### **Quality of Performance - test 4 (Thorndike’s test):**

EG1 600% improvement, EG2 238% improvement, CG 65% **decline**

### **Number of correct answers in test 5 - max 300 (Krepelin test):**

Both EG1 and EG2 improved to 298, almost to 300 maximum. EG1 40% improvement (number of correct answers increased from 212 to 298), EG2 3.5% improvement (number of correct answers increased from 288 to 298), CG 11% **decline** (number of correct answers decreased from 282 to 250).

### **Attention span index - test 6 (amount of missing numbers):**

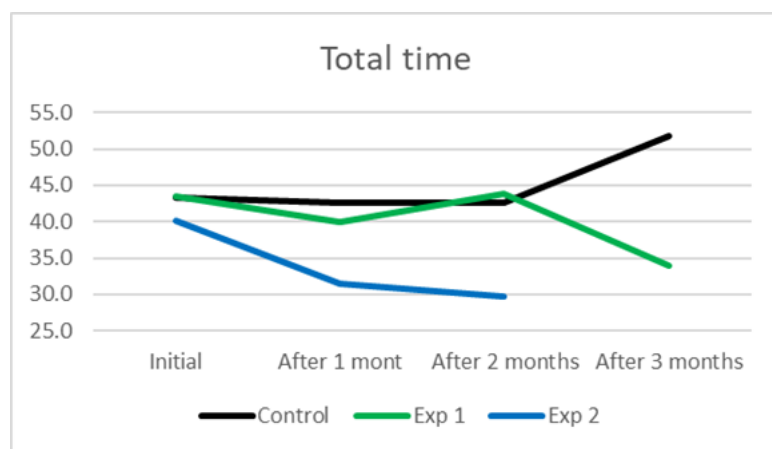
EG1 84% improvement (total amount of missing numbers decreased from 18.7 to 3), EG2 84% improvement (total amount of missing numbers decreased from 12.4 to 2), CG 50% **decline** (total amount of missing numbers increased from 18.6 to 28).

## Results:

### Total time for all 6 tests

	Control	Exp 1	Exp 2
Before test 1	43.3	43.5	40.1
After 1 month test 2	42.6	40.0	31.4
After 2 months test 3	42.6	43.9	29.7
After 3 months test 4	51.8	33.9	
delta %% 1-2	-1.7	-8.2	-21.7
delta %% 1-3	-1.7	0.9	-25.9
delta %% 1-4	19.6	-22.0	

- Statistical improvement
- Statistical decrease

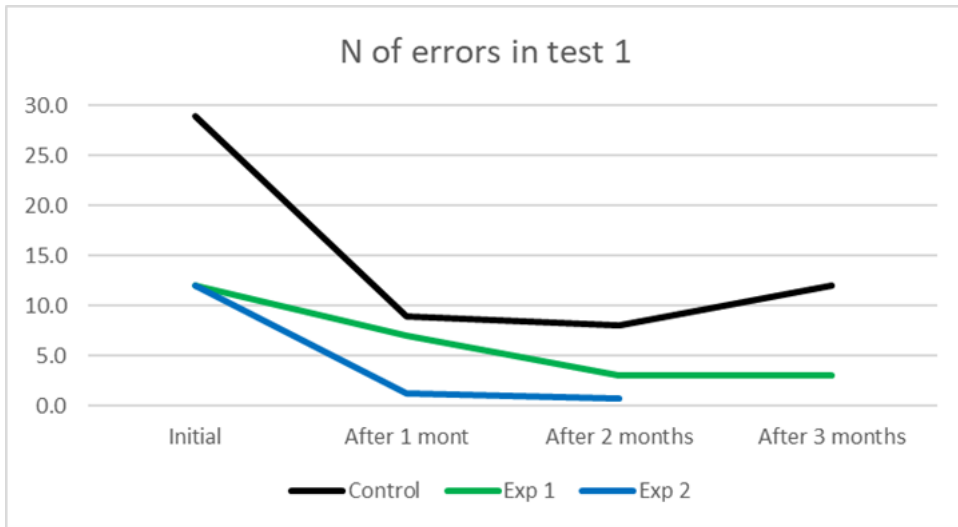


## 1. Schulte Tables

Participants were presented with a table in which the numbers from 1 to 25 were not in order. The task was as quickly as possible and without mistakes to find and mark with the mouse all the numbers in order from 1 to 25.

### Number of errors in Schulte Table

	Control	Exp 1	Exp 2
Before test 1	28.8	12.1	12.1
After 1 month test 2	8.7	7.4	1.3
After 2 months test 3	7.8	2.5	0.7
After 3 months test 4	12.0	2.8	
delta %% 1-2	-69.8	-39.3	-89.3
delta %% 1-3	-72.9	-79.3	-94.3
delta %% 1-4	-58.3	-76.9	

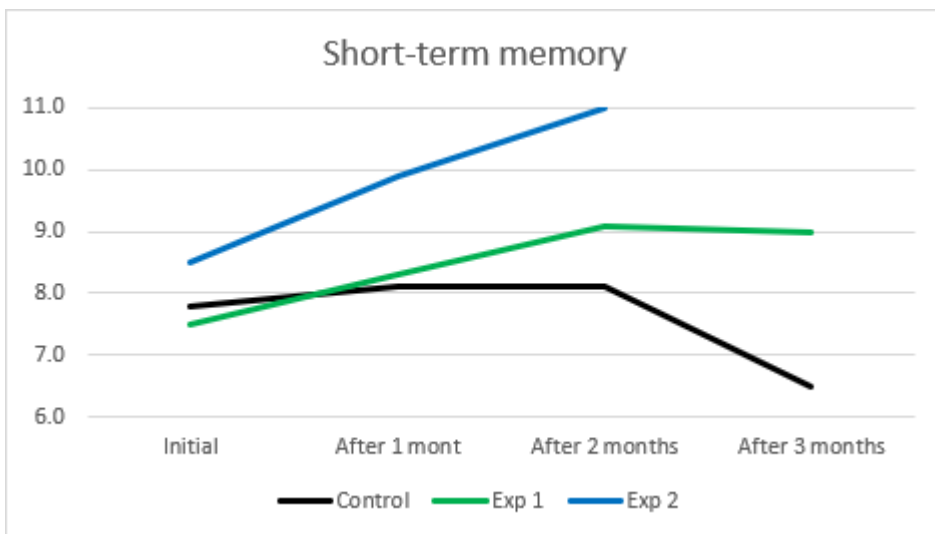


## 2. Short-Term Memory

Participants were consistently presented with multi-digit numbers on the screen. The task was to memorize the numbers, and enter them into the input field.

**The maximum length of a quickly presented number that a person can memorize**

	Control	Exp 1	Exp 2
Before test 1	7.8	7.5	8.5
After 1 month test 2	8.1	8.3	9.9
After 2 months test 3	8.1	9.1	11
After 3 months test 4	6.5	9.0	
delta %% 1-2	3.6	10.5	16.5
delta %% 1-3	3.9	21.6	29.4
delta %% 1-4	-17.9	20.2	



## Number of errors in test 2

	Control	Exp 1	Exp 2
Before test 1	22.9	8.7	12.4
After 1 month test 2	16.5	6.7	3.3
After 2 months test 3	23.9	4.4	2.2
After 3 months test 4	41.8	2	
delta %% 1-2	-27.8	-23	-73.4
delta %% 1-3	4.6	-49.8	-82.3
delta %% 1-4	82.5	-77.1	

## 3. Operational Memory

Participants were presented with digits from 1 to 9. Each row (presentation) contained 5 digits. For each row of 5 numbers, the task was the following: add the the first number the second, the second to the third, the third to the fourth and the fourth to the fifth. The four totals should be added to the presented table.

Example: displayed numbers 4, 7, 3, 2, 5. Calculation: 4+7=11, 7+3=10, 3+2=5, 2+5=7; you write in cells 11, 10, 5, 7. The test was repeated 10 times.

## Number of correct answers in the 3<sup>rd</sup> test

	Control	Exp 1	Exp 2
Before test 1	28.5	27.5	27.5
After 1 month test 2	30.1	30.8	38.9
After 2 months test 3	30.4	37.5	39.3
After 3 months test 4	27.9	38.3	
delta %% 1-2	5.5	11.6	41.5
delta %% 2-3	6.7	36.0	42.9
delta %% 1-4	-2.1	39.2	

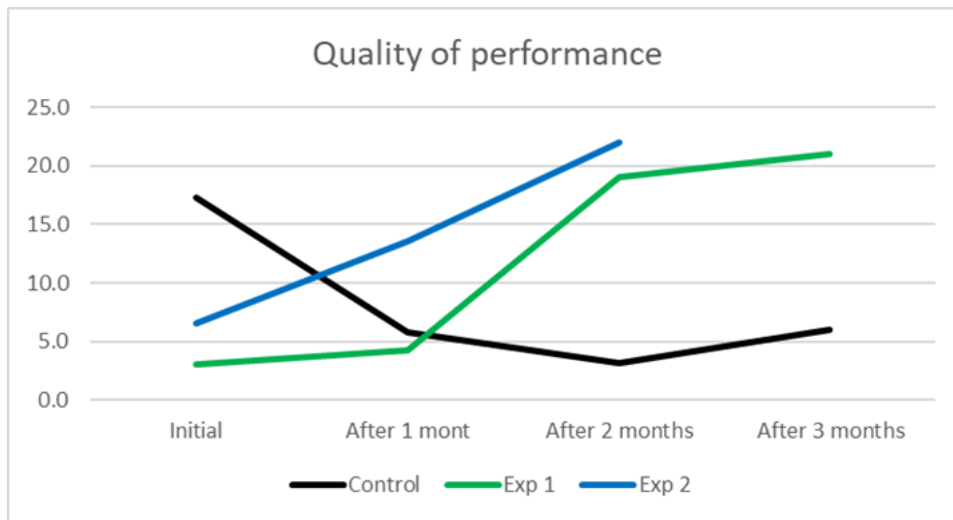
## 4. Thorndike's test

### Calculation of the result: Quality of performance

Calculation was done by the standard table, with each error or missing number subtracting 2 units from the total score (T).

### Quality of performance

	Control	Exp 1	Exp 2
Before test 1	17.3	3.0	6.5
After 1 month test 2	5.8	4.3	13.6
After 2 months test 3	3.1	19.3	22
After 3 months test 4	6.1	21	
delta %% 1-2	-66.4	43.3	109.2
delta %% 2-3	-82	543	238.5
delta %% 1-4	-64.7	600	



## 5. Krepelin Counting

Participants were presented with 20 rows of 15 pairs of numbers (300 total). The task was to add pairs of numbers in each row, one below the other, and enter the result of the addition in the box below them.

### Total number of correct answers in the 5<sup>th</sup> test

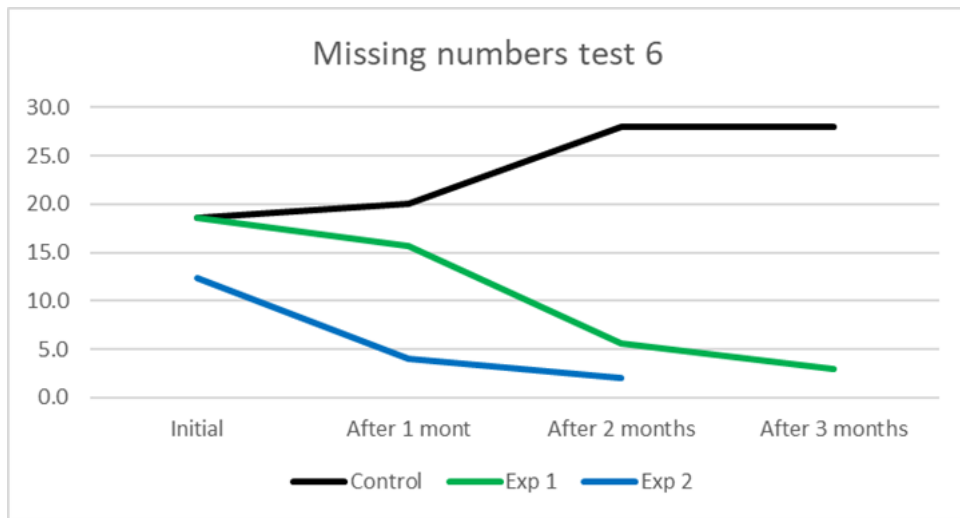
	Control	Exp 1	Exp 2
Before test 1	281.5	212.3	287.6
After 1 month test 2	279.7	244.3	295.9
After 2 months test 3	272.1	294.4	297.6
After 3 months test 4	249.9	298	
delta %% 1-2	-0.6	15.1	2.9
delta %% 1-3	-3.3	38.7	3.5
delta %% 1-4	-11.2	40.3	

## 6. Correction test with numbers

Participants were presented with a table of a random set of 1080 numbers: 36 lines of 30 characters each, and a digit at the top. The task was to look through the table as quickly as possible, and find and mark with the mouse the digit indicated at the top.

### Attention span index (total amount of missing numbers)

	Control	Exp 1	Exp 2
Before - test 1	18.6	18.7	12.4
After 1 month - test 2	20.3	15.7	4.1
After 2 months - test 3	27.9	5.6	2
After 3 months test 4	28.0	3	
delta %% 1-2	9.1	-16.0	-66.9
delta %% 1-3	50.0	-70.0	-83.8
delta %% 1-4	50.5	-84.0	



### Heads of the Research Group

Professor Maria Starchenko. PhD in psychology. Head of Department in the Federal Institute of Human Brain. St. Petersburg.

Professor Elena Gavrilova. PhD in medicine. Head of the Department of Therapeutic Physical Education and Sports Medicine of the Mechnikov North-Western Medical University. Chief Physician of the Krasnogvardeyskiy District Medical and Physical Education Center. St. Petersburg.

Professor Oleg Churganov. PhD in medicine. Professor of the Department of Therapeutic Physical Education and Sports Medicine of the North-Western Medical University named after I.I.Mechnikov in St. Petersburg.

Chuganov O.

05.20.2022