## Comparative 80-person 30-day Study for Igni Cognition

(improvement of memory, performance, attention, and error reduction)
40 people Igni Cognition ("Charged"), 20 people exact same Igni Cognition without Igniton ("Uncharged"), 20 people Placebo

## Results before the intake (Series 1) and after one month of use (Series 2)

(October - November 2022)


Total time for all tests (minutes)

|  | Charged | Uncharged | Placebo |
| :--- | :---: | :---: | :---: |
| Result 1 | 44.8 | 45.8 | 44.7 |
| Result 2 | 33.7 | 38.8 | 43.7 |
|  |  |  |  |
| Delta $\% \%$ | -28.2 | -16.4 | -2.2 |

## 1. Schulte Tables (Number of Errors)

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


## 1. Number of errors in Schulte Tables

|  | Charged | Uncharged | Placebo |
| :--- | :---: | :---: | :---: |
| Result 1 | 9.1 | 11.2 | 11.2 |
| Result 2 | 3.0 | 9.1 | 11.3 |
|  |  |  |  |
| Delta \%\% | -100 | -20 | 0 |

## 2. Short Term Memory <br> (The maximum length of a quickly presented number that a person can memorize)

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

2. Short Term Memory

|  | Charged | Uncharged | Placebo |
| :--- | ---: | ---: | ---: |
| Result 1 | 6.48 | 7.3 | 7.5 |
| Result 2 | 8.57 | 8.1 | 7.6 |
|  |  |  |  |
| Delta $\% \%$ | 27.8 | 10.4 | 1.3 |

## 3. Operational Memory (Number of Correct Answers)

Participants were presented with digits from 1 to 9 . Each row (presentation) contains 5 digits. The task was to do the following with each row of 5 numbers: add the first number to the second, the second to the third, the third to the fourth, the fourth to the fifth, the addition results - four numbers should be added to the appearing 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 $11,10,5,7$. Test is repeated 10 times.

3. Number of correct answers in test 3 (Operational Memory):

|  | Charged | Uncharged | Placebo |
| :--- | ---: | ---: | ---: |
| Result 1 | 28.61 | 29.4 | 31.1 |
| Result 2 | 36.64 | 33.85 | 33.6 |
|  |  |  |  |
| Delta \%\% | 24.6 | 14.1 | 7.7 |

## 4. Quality of Performance - Thorndike's test

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

4. Quality of Performance - test 4 (Thorndike's test):

|  | Charged | Uncharged | Placebo |
| :--- | ---: | ---: | ---: |
| Result 1 | 4.02 | 4.45 | 7.3 |
| Result 2 | 9.75 | 4.9 | 4.9 |
|  |  |  |  |
| Delta $\% \%$ | 83.2 | 9.6 | -39.3 |

## 5. Kraepelin Counting Test (Number of Correct Answers)

Participants were presented with 20 rows of 15 pairs of numbers (max 300). 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.

5. Total number of correct answers (Kraepelin Counting)

|  | Charged | Uncharged | Placebo |
| :--- | ---: | ---: | ---: |
| Result 1 | 256.07 | 276.1 | 289.2 |
| Result 2 | 292.41 | 287.51 | 288.5 |
|  |  |  |  |
| Delta $\% \%$ | 13.3 | 4.0 | -0.2 |

## 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, find and mark with the mouse the digit indicated at the top.

6. Attention span index (Total amount of missing numbers in test 6)

|  | Charged | Uncharged | Placebo |
| :--- | ---: | ---: | ---: |
| Result 1 | 19.1 | 18.2 | 18.6 |
| Result 2 | 14.2 | 16.0 | 18.0 |
|  |  |  |  |
| Delta $\% \%$ | -13.3 | -4.0 | -0.2 |



## 6. Attention

|  | Charged | Uncharged | Placebo |
| :--- | ---: | ---: | ---: |
| Result 1 | 0.97 | 1.08 | 0.94 |
| Result 2 | 1.64 | 1.06 | 0.99 |
|  |  |  |  |
| Delta \%\% | 51.3 | -1.9 | 5.2 |



## 6. Attention Concentration

|  | Charged | Uncharged | Placebo |
| :--- | ---: | ---: | ---: |
| Result 1 | 96.78 | 96.1 | 99.99 |
| Result 2 | 132 | 72 | 72.86 |
|  |  |  |  |
| Delta \%\% | 30.8 | -28.7 | -31.4 |



## 6. Mental Efficiency

|  | Charged | Uncharged | Placebo |
| :--- | ---: | ---: | ---: |
| Result 1 | 851.71 | 766.46 | 900.15 |
| Result 2 | 999.7 | 740.07 | 901.59 |
|  |  |  |  |
| Delta \%\% | 16.0 | -3.5 | 0.2 |

