



In collaboration with International medical community

# HARDWARE AND SOFTWARE SYSTEM «NEURRO»

for reducing symptoms of ADHD and cognitive improvement in children aged 3 to 16



#### **DEVELOPED**

For effective work with any type of ADHD (impulsive/hyperactive, inattentive, combined)

#### **SUITABLE**

For kids and teenagers to improve working memory, concentration and focus, and to excel in academic studies

## MAININFORMATION AND USAGE



### PROFESSIONAL EQUIPMENT

With a cap and all necessary electrodes



### ACCESS TO MOBILE APPLICATION

With three types of training and a variety of neuro games



### STEP-BY-STEP INSTRUCTIONS

Detailed instructions and practical examples



# 3 MAIN WAYS OF USING THE HARDWARE AND SOFTWARE COMPLEX



No special skills are required to use the hardware and software complex. Detailed instructions for parents are provided, as well as all the necessary equipment.



Within the framework of a medical institution, it is possible to conduct individual and group correctional courses for children with ADHD.



#### IN SCHOOLS AND PRE-SCHOOLS

Using the hardware and software complex, correctional courses were implemented for 94 children aged 6 to 9 years.

For training sessions, you only need a phone with internet access and the ability to download a special application. The course duration is 20 sessions (16 minutes each)

#### **ADVANTAGES:**

- Teachers or medical workers can control sessions.
- ✓ The complex has no side effects.
- It is impossible to harm a child or make a mistake using a session.



# 3 KEY STAGES OF WORKING WITH CHILDREN AND TEENAGERS WITH ADHD

#### 1. PRE-DIAGNOSIS:

- To establish or confirm a diagnosis.
- To identify individual theta, alpha, and beta ranges that are shifted in children with ADHD and to build the process of the most effective training.
- Our experts provide detailed instructions on diagnostics—GoNoGo tests (six times in a row with the results saved), Delayed Gratification, and 21-channel EEG studies in a special format.
- After receiving the results, our experts notify about the possibility of moving on to the next stage the training stage.

#### 2. TRAINING AS PART OF THE CORRECTION COURSE

- Before training, a calibration process is implemented to identify current individual ranges and the average EMG value.
- Before the first training, two Schulte tests are performed. The results are recorded.
- Training is conducted 3-4 times a week. Optimally every other day.

The result of calibration is finding the Alpha peak, the alpha1 and alpha2 boundaries (a 20% drop in power of the OG against the CG), as well as the Theta (3 Hz - Alpha1 boundary) and beta (Alpha2 boundary - 20 Hz) ranges.

#### 3. POST-DIAGNOSIS: RESULTS CONTROL

- 20 training sessions of 16 minutes each are recommended, but individual programs are possible, taking into account alpha parameters.
- After completing the course, an interview is conducted with parents and school teachers to identify positive dynamics.
- Two Schulte tests are conducted to compare the results.
- The GoNoGo test is conducted six times in a row to identify changes and maintain individual results.

<sup>\*</sup> Calibration consists of 30 sec. in the closed-eye state plus 8 sec. in the open-eye state.

# HOW CORRECTIVE TRAINING HELP REDUCE ADHD SYMPTOMS

#### TRAINING SESSION

- The child or a medical professional selects a non-training session, which is a game.
- The child begins to play or control the game situation.
- The equipment monitors the EMG threshold and other indicators.
- If the parameters are exceeded, the game is suspended.
- The game is started only after the forehead relaxes and the indicators return to the acceptable range.

#### **CHILD**

- The child easily and happily attends the remedial course thanks to the game form of training.
- During training, the child learns to notice when the emotional state goes beyond the normal level.
- Learns to calm down in time, manage concentration and attention, relax and tense muscles.

#### **RESULTS**

- After the correction course, children can better manage their condition, stress and emotions in life.
- The child's concentration and attention improve.
- Social interaction and self-regulation skills are strengthened.
- The ability to follow established rules, requirements and regulations appears and develops.

### THREE TYPES OF TRAINING

#### AVAILABLE IN THE "NEURRO" MOBILE

#### TBR (THETA BETA RATIO) TRAINING

- Classical training takes into account the individual range and average EMG value of the child.
- Aimed at improving concentration.

Suitable for the first neuro training.
In the future, you can use enhanced training.

#### **ALPHA2 TRAINING**

- Advanced training, which takes into account the individual range and average EMG value of the child.
- Aimed at improving concentration.

Showed the highest efficiency in the course of practical studies.

#### **ALPHA2/ALPHA1 TRAINING**

- Intensive training takes into account the individual range and average EMG value of the child.
- Aimed at improving concentration and attention.

Showed the highest efficiency in the course of practical studies



### CONNECTING

#### 'NEURRO" DEVICE



#### **Download**

the mobile app to any device



#### Register

using your email or Google account



#### Put professional equipment

on your child according to the instructions - cap, electrodes



#### Select

training and game from the list of suggested ones



#### Training has started

Follow the instructions and prompts in the app.



# THE HARDWARE AND SOFTWARE COMPLEX "NEURRO"

# APPROVED BY THE RUSSIAN SCIENTIFIC AND MEDICAL COMMUNITY

#### **DEVELOPED BY**

Russian and International scientists. Based on the research work of Olga Mikhailovna Bazanova (professor of the Moscow Institute of Physics and Technology) entitled: "On the Efficiency of Individualized Theta/Beta Ratio Neurofeedback Combined with Forehead EMG Training in ADHD Children".

#### **GUIDED BY**

- The Medical Ethics Committee of the "Academy of Medical Sciences" (Siberian Branch)
- The Helsinki Declaration of the "World Medical Association"
- The American Psychiatric Association (the criteria established for ADHD within the DSM-IV)

#### **IMPLEMENTED**

By a scientific and medical company that has been producing professional medical equipment since 1992: Neurotech LLC.

#### CONTACT

BrainBit Europe

Site: neurro.ru/en

Adress: ul. Farmaceutyczna 13,

Lublin, Poland

E-mail: info@neurro.com

Opening hours: Mon-Fri, 9:00 – 18:00

