

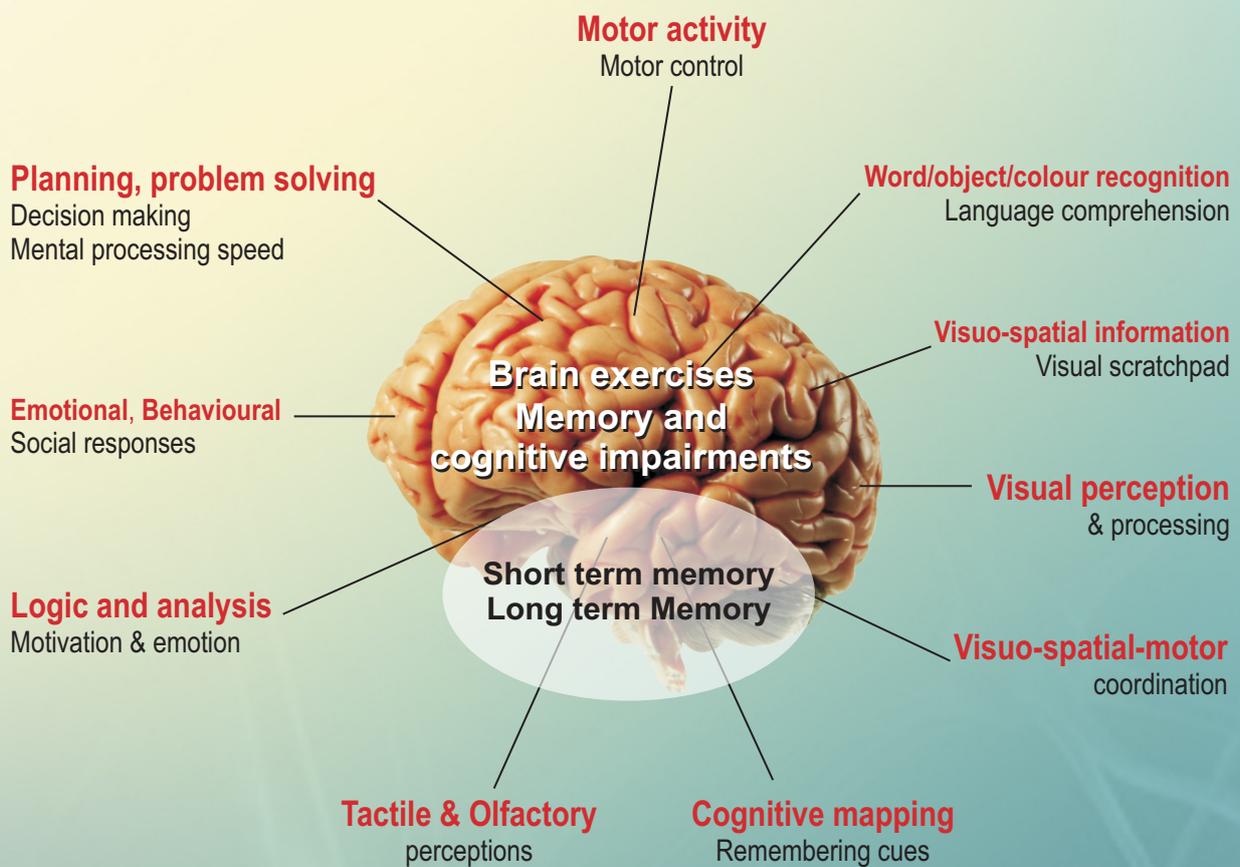
first ever!

**BrainNext**

Memory and Rehabilitation exercises

## Brain exercises manual

(a holistic approach towards cognitive rehabilitation)



**Dr.Mangal Kardile**

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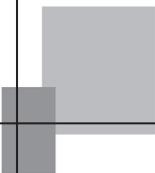


Memory & Cognitive exercises for all ages

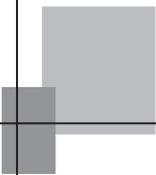
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This work is dedicated to the revered memory of my late parents,  
grandparents and great-grandparents for nurturing me in this beautiful world with  
unconditional love, care, and compassion,  
so as to inspire me to serve humanity, to the best of my abilities.



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**Dr. Mangal Kardile**

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Research/Work attention: Neuropsychology

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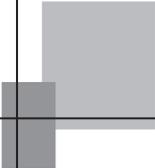
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## Forward - Key messages from Doctors

### 1. Dr Anand Diwan DNB (Neurology), Mumbai, MRCP (UK) Neurology SCE



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(२४ तास / इमर्जन्सी) मो. ८३८००३२०३३

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Clinic  
9001 - 2008

वेळ : ११ ते ८ (रविवार बंद)

क्लिनिक : शॉप नं. ११, याशिका प्लाझा, ग्राउंड फ्लोअर, सत्यम स्वीटजवळ, मुंबई नाक्याजवळ, गोविंद नगर, नाशिक-९

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मेंदु व मणकेविकार तज्ञ

दूरध्वनी : ०२५३ - २४७२१११ / ९९६०००५०८८

Rx

2/12/2015

It's my great pleasure to compliment & recommend "Brain-Next" Neurocognitive tests for memory and Cognitive rehabilitation. More than 500 different tasks divided into 20 sets of Cognitive assessment & rehabilitation covers all ages & all Neuro-cognitive domains. Moreover, it can be done at home with help of free videos.

I feel, most of our patients will be definitely benefitted from this. Keep it up!

Best regards,

Anand

Dr. Anand Diwan

Dr. ANAND G. DIWAN  
D.N.B. (Neurology)  
Consultant Neurophysician  
Reg. No. 88279.

## Key messages from Doctors

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|   |  |   |
|---|--|---|
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| वेलनेस न्यूरो सेंटर - पहिला मजला, ऑक्सिजन प्लाझा, जी शॉपी समोर, चांडक सर्कल जवळ, होळकर मार्ग, तिडके कॉलनी, नाशिक-२.<br>(अपॉईंटमेंटसाठी) फोन : (०२५३) २२३२३९०, मो. : ९५२७३२९९२० E-mail -drpranav.neuro@gmail.com |  |   |
| उपलब्ध सुविधा - ई.ई.जी, NCV, EMG, कान/डोळ्यांच्या तंतुची तपासणी - VEP, BERA, (न्यूरोसायकोलॉजिकल काऊन्सिलिंग), पॅथॉलॉजी लॅब  |  |   |

I compliment Dr Mrs Mangal Kardite,  
for developing "Brain Next" Memory &  
Cognitive Rehabilitation" kit - I have  
gone through the subheading of the  
kit and I am assured that the  
kit will be very useful for  
any patient who has cognitive impairment  
of any cause like stroke, Trauma,  
Meningoencephalitis, Birth related trauma.  
I recommend the kit for all such  
patients which is indigenous developed  
and very useful in our region.

## Key messages from Doctors

### 3. Dr. Rahul Baviskar MD Medicine, DM Neurology

|   |   |  |
|---|---|--|
| <b>डॉ. राहुल बाविस्कर</b><br>एम. बी. (मेडि.) डी. एम. (न्यूरो.)<br>कन्सल्टंट न्यूरोफिजीशियन<br><b>न्यू रो के अर</b><br>गजानन अँडेन्सु, जुन्हा महानगर पालिकेजवळ, जुनी वडीत कॉलनी,<br>नाशिक ४२२ ००२. ☎ : ०२५३-२२३२६६०, ८३९०८९६३५४.<br>वेळ : स. ११ ते दु. ३ व सायं. ६ ते ९ रविवार बंद   |  | <b>DR. RAHUL BAVISKAR</b><br>M.D. (Med.), D.M. (Neuro)<br>CONSULTANT NEUROLOGIST<br><b>NEUROCARE</b><br>Gajanan Avenue, Near Old Municipal Corporation, Old Pandit Colony,<br>Nashik 422 002. ☎ : 0253 - 2232660, 8390816354.<br>E-mail : rbaviskar@gmail.com<br>Time : 11 am to 3 pm & 6 pm to 9 pm. Sunday Closed. |
| No. :   | Date : 31/10/2015   |  |
| Name :  | Age :   | Sex :  |
| Address :   |   |  |
| <p>It is my pleasure to recommend Dr. Mrs. Mangal Kardile for her extensive research work done in the memory &amp; cognitive impairment since last five years. Her specific work areas include developing diagnostic tool to detect early symptoms of memory &amp; cognitive deficit in all adult population above 18 years.</p> <p>Based on more than 450 clinical case studies her new research development about brain exercises kit could prove to be beneficial for neurocognitive</p> |   |  |
| <b>हॉस्पिटल अँडमिशन सुविधा</b>  |   |  |
| <ul style="list-style-type: none"><li>◆ सुश्रुत हॉस्पिटल, नविन पंडित कॉलनी, जुन्हा महानगरपालिके शेजारी, नाशिक. फोन : (०२५३) २५७६४८९.</li><li>◆ मॅग्नम हार्ट इन्स्टिट्यूट, पाटील लेन नं. १, कॅनडा कॉर्नर, फोन : (०२५३) २३९६२००</li><li>◆ वोक्वार्ट हॉस्पिटल, बाणी हाऊस, वडाळा नाका, मुंबई-आग्रा रोड, नाशिक. फोन : (०२५३) ६६२४४४४</li><li>◆ सोहम हॉस्पिटल, राजीव गांधी भवन शेजारी, नाशिक. फोन : (०२५३) २३९५६६९<br/>(ईमर्जन्सी असल्यास या हॉस्पिटलमध्ये संपर्क साधावा)</li></ul>               |   |  |

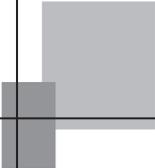
## Key messages from Doctors

Dr. Rahul Baviskar (continued)

rehabilitation. The meticulously  
designed exercises kit considers  
all age groups from children to  
elderly.

I highly recommend the  
"Brain Next" neurocognitive rehabilitation  
brain exercises kit that may have  
a significant role to a better  
quality of life for all  
neurologically disabled population.

Ravish



## Key messages from Doctors

### **1. Dr. Anand Diwan DNB (Neurology), Mumbai, MRCP (UK) Neurology SCE**

It's my great pleasure to compliment & recommend "Brain-Next" Neuro-cognitive tests for memory and cognitive rehabilitation.

More than 500 different tasks divided into 20 sets of cognitive assessment & rehabilitation covers all ages & all Neuro-cognitive domains. More so, it can be done at home with the help of free videos.

I feel, most of our patients will be benefitted from this. Keep it up!

Best regards,

Dr. Anand Diwan

### **2. Dr. Pranav Shinde MD Medicine, Mumbai, DM Neurology**

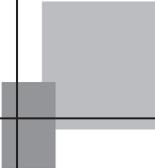
I compliment Dr. Mrs. Mangal Kardile for developing "Brain Next Memory & Cognitive Rehabilitation" kit. I have gone through the subheading of the kit and I am assured that the kit will be very useful for any patient who have cognitive impairment of any cause like Stroke, Trauma, Meningoencephalitis, Birth related trauma. I recommend the kit for all such patients which is indigenously developed and very useful in our region.

### **3. Dr. Rahul Baviskar MD Medicine, DM Neurology**

It is my pleasure to recommend Dr. Mrs. Mangal Kardile for her extensive research work done in the memory & cognitive impairment since last five years. Her specific work areas include developing diagnostic tool to detect early symptoms of memory & cognitive deficit in all adult population above 18 years.

Based on more than 450 clinical case studies her new research development about brain exercises kit could prove to be beneficial for neuro-cognitive rehabilitation. The meticulously designed exercises kit considers all age groups from children to elderly.

I highly recommend the "Brain Next" neuro-cognitive rehabilitation brain exercises kit that may have a significant role to a better quality of life for all neurologically disabled population.



## Acknowledgments

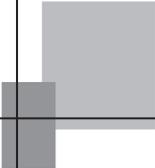
I sincerely wish to express my gratitude to all involved in bringing out the “BrainNext” memory and cognitive brain exercises kit. First and foremost heartfelt gratitude to the participants and clinical patients involved in the research work for their kind cooperation, faith and patience; without their invaluable contribution it was not possible to help millions of people around the world.

I would like to express my gratitude to my clinical patients and the caregivers for their valuable time by discussing their needs giving me that insight to work on this wonderful concept.

My deepest gratitude to Dr. Anand Diwan DNB (Neurology), Mumbai, MRCP (UK) Neurology SCE, Dr. Pranav Shide MD Medicine, Mumbai, DM Neurology and Dr. Rahul Baviskar MD Medicine, DM Neurology eminent neurologists of Nasik city for supporting me with the clinical and research work to develop the “BrainNext” kit. I sincerely thank them for giving their thoughtful forward.

I also thank Mr. Sunil Patil and Mr. Vikas Kulkarni, of Nasik for helping with their creative graphic design support for helping me bringing out my ideas onto paper to complete this complicated task.

I wish to express my deepest gratitude to all who have given their indirect valuable input in making of this work. And finally I thank my family for extending their support throughout my critical research journey.



## Preface

### Introduction

The **“BrainNext”** cognitive exercises kit has been developed looking at the enormous need of the neurologically disabled global population. Current research into the neurological population indicates exponential increment in the number of neurologically disabled population around the world.

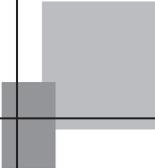
Rehabilitation programs for the disabled have progressively been designed in developed countries while simultaneously developing supportive mechanism for the inclusion of the disabled in the main stream of society. On the other hand many developing nation’s governments have not been able to develop supportive mechanism for their disabled population. Hence the caregiver has to consume time, money and energy besides balancing his/her personal life, career and other responsibilities. There are scarce resources available in most of the nations regarding the number of skilled people, good clinical help, availability of better and affordable clinical treatments and rehabilitation facilities. Disabilities occurred due to neurological reasons need long term rehabilitation for memory retrieval and for developing cognitive skills required for better life skill support.

**“BrainNext”** has been designed on the basis of research sample data and clinical case studies done over the past 5 years. The individual person’s requirement having been observed, more than 500 exercises have been designed comprising 18 sets. The **“BrainNext”** kit is applicable to all age groups.

The **“BrainNext”** exercises kit is very helpful for children suffering from various developmental disorders, giving broad spectrum cognitive rehabilitation training. Simultaneously it is very useful for the adolescent, adult and elderly population suffering from numerous neurological disorders providing the means of recovering memory and cognitive skills.

Additionally the **“BrainNext”** exercises kit is suitable for normal children to understand their age-specific developments and to notice any subtle changes in their cognitive development in early childhood. This kit could facilitate the marking of cognitive deficit early among normal children below the age of 6 years and for taking corrective measures at the right time.

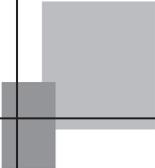
In clinical practice it has been observed that early childhood cognitive deficit are overlooked due to the prejudice that it will cover as the age advances. Most of the time parents are misguided by other medical fraternity that lack information regarding brain cognitive development as compared to the specialized professions such as neurology, psychology and psychiatry. It is very important to understand and accept brain deficit in early childhood in order to get the utmost benefit from rehabilitation.



The necessity for starting neuro-cognitive brain exercises at the earliest lies in the foundation of **“Synaptic plasticity”**. The neurobiological concept of creating more neural connections for the existing neurons to increase their network of communication and ultimately support the brain cognitive mechanism of information acquiring, processing and storing.

**Neurons in the human brain are created in the child development process and cannot be recreated again. Only the connecting mechanisms between neurons can be increased infinitely with the help of providing more stimulation for the human brain for the entire lifetime - NORMAL OR AFFECTED!!! And that is the key concept of “BrainNext” !**

In short “The earlier the better!” The earliest start of the rehabilitation process could fetch the best results showing faster improvement.



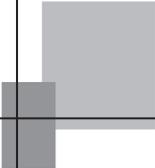
## Suitable and Useful for All Population

### Normal Population

- \* Normal Children – enhancing normal brain capacity and Understanding subtle cognitive changes in early stage for better recovery (ages 2 to 5 years)
- \* Normal adults and elders – Early detection for memory and cognitive incapacity enhancing memory and cognitions for healthy brain

### Special Population

- \* Special children (having Attention, concentration, learning disability and any other clinically defined developmental disorders)
- \* Children having Epilepsy & Seizure disorder due to neurological dysfunctions since birth or due to trauma in prenatal, perinatal, neonatal and developmental stage.
- \* Adolescent and Adult population having history of Migraine, Epilepsy & Seizure disorder more than 5 years
- \* Adults and elders having Alzheimer's and any other type of Dementia
- \* Adults and elders having post-stroke and post brain-trauma disabilities
- \* Adults and elders having brain diseases for e.g. Motor neuron disease, Cauda equina syndrome, Fibromyalgia and Demyelinating disease
- \* Adults and elders having chronic psychiatric conditions e.g. Clinical depression, Schizophrenia spectrum disorders and Mood disorders



## The need for developing “BrainNext” Kit

### Background

#### **\*Research work regarding developing the brain exercise kit**

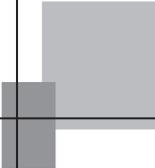
The need for the development of the “BrainNext” brain exercise kit emerged from present limitations for cure of neurodegenerative diseases such as Alzheimer’s and various forms of Dementia, developmental disorders in children and a variety of neurological disorders among all age groups. Considering the neural complexities of brain functions it is desirable to nourish the human brain with continuous sensory input to keep the neurons as active as possible for the entire life span after the person has been diagnosed with certain neural disability. The children who suffer from developmental disorders such as Autism spectrum, ADHD and various other clinically significant cognitive deficits regarding attention, general concentration and various degrees of mentally challenged population need long term cognitive rehabilitation.

The researcher has been working on the diagnostic tool for understanding memory and cognitive impairments at an early stage for 18 + ages population since 2011 and has completed the research work recently with the assessment of more than 350 Normal, Psychiatric and Neurological patient samples. The standardization process was completed in 2015 with the funding award from Australian NGO, “Capacity Australia” Sydney.

Understanding the utmost need for developing such an instrument that would diagnose cognitive impairments at an early stage and be applicable to all population directed towards developing UMACE. The available diagnostic tools such as MMSE have laid the foundations for neuropsychological testing and UMACE has been structured on the same foundation.

Simultaneously, while dealing with the clinical neurological population the researcher has identified the need for specially designed brain exercise kit for long term rehabilitation support. Based on continuous research work, specific exercises have been designed to create, enhance and supply sensory nourishment for the less affected neurons to enable the affected brain to continue to be normal as long as possible.

At present we need to understand that the memory and cognitive activities required by the brain can only be fulfilled by supplying the utmost possible neural boost with the help of the care giver as the affected individual would not be able to do the exercise by himself/herself. Furthermore we need to know that at present neither is there any single clinical solution to stop or cure the neurodegeneration process nor is there any methodology that can act on all the memory and cognitive activities of the human brain at a time. We need to have multidimensional approach for better quality of life for the affected population.



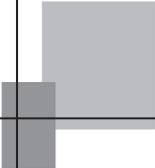
The BrainNext brain exercises kit has all the possible exercise solutions which any normal human brain may perform and can be used for the entire life span of the affected person. The affected brain has to be exercised by another normal human brain as interaction between two human brains is the key to train and guide the affected neurons by healthy neurons. The particular deficits in the neural responses can only be judged by another healthy human brain to make the best of the “BrainNext” brain exercises.

The “BrainNext” kit comprises total 18 sets and any single set can be purchased individually or can be purchased as a single unit of 18 sets together.

I hope the “BrainNext” neuro-cognitive rehabilitation kit will certainly create positive impact for all populations around the world and relief for the caregivers by enhancing the quality of life of an affected individual.

**Dr. Mrs. Mangal Kardile**

9th June 2016



## Description

### Part 1

#### Background

- \* Nature and purpose of the Brain exercises
- \* Parts of the Human brain involved in different memory and cognitions.
- \* Difference between psychological dysfunctions developed in persons with psychiatric disorders and persons with neurological disorders
- \* Normal Brain functions and dysfunctions

### Part 2

#### Guide to using “BrainNext” brain exercises -

- \* Cognitive domains covered in each of the sets
- \* Information on how to use the sets in “BrainNext” cognitive exercises kit

### Part 3

- \* **Research work regarding developing the brain exercise kit**
- \* References
- \* All Sets Photographs



## Researcher and Clinical Professional

### Dr. Mangal Kardile

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(Clinical Psychology)  
Research/Work attention: Neuropsychology

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- \* "Asia Consortium" (with auspice under the Capacity Taskforce and IPA),
- \* ARDSI (Alzheimer's & Related Disorders association of India)
- \* Editorial board member - "International Journal of Health Sciences and Research"

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Phone: +91 - 253 - 2642132  
email : info.mentalhealthaims@gmail.com

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Slideshare : <http://www.slideshare.net/MangalKardile>

### Brief introduction of the researcher

Dr. Mangal Kardile (Founder & Director "Mental Health Aims"), former name as Mangal Deshpande from Belgaum, Karnataka, (D/O Late Shri. Vasant B. Deshpande, Hydraulic Eng. & Late Smt. Shanta V.Deshpande, high school teacher) moved to Maharashtra in 1980 to pursue her specialization in advertising, but being passionate about Human Psychology, shifted her focus to clinical psychology in the year 1997. Changing her entire academic stream from IT Multimedia to Philosophy, Clinical Psychology, Mental Health Law & Human Rights, Neuropsychology and recently into Medical Neuroscience.....the journey was full of enthusiasm and discovery!

She presented her first research paper in USA in 2011 by combining visual effects technology with philosophy and psychology, titled "Using visual effects technology for treating psychiatric problems", presented in the "17th International conference organized by "Society for Philosophy and Technology, University of North Texas, Denton, USA.....this global golden opportunity was a successful step into future mental health research!.....and the untiring mission in mental health began.

Various projects and research papers presented by the researcher in various countries could be found on the website as follows - **Website: [www.mentalhealthaims.com](http://www.mentalhealthaims.com)**

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**BrainNext**

**Neuro-rehabilitation**

Memory & Cognitive Brain exercises  
(Clinically recommended)

**18 sets - 500+ exercises**

*for mild to severe cognitive  
impairments all ages*

**Diagnostics**

**UMACE**

Universal Memory And Cognitive Exam  
(Standardized)

**UMACEVIP**

Universal Memory And Cognitive Exam  
(for Visually Impaired)

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