



NP *İSTANBUL*
Brain Hospital
Neuropsychiatry | Addiction | Neurosurgery



WE ARE INSPIRED BY THE BRAIN
TO ACHIEVE EXCELLENCE

EUROPE'S 2nd BRAIN HOSPITAL



Science Partner





We are in NPİSTANBUL Brain Hospital...

We are proud that we have been leading the way and serve our patients in Psychiatry, Psychology, Neurology and Addiction fields for 19 years by leaving our marks along the way. We took our multidisciplinary approach a major step forward and were inspired to achieve perfectionism through understanding what brain stands for.

As our journey in Neuropsychiatry started by establishing a hospital specialized in this subject, we made the decision to provide further comprehensive services to our patients and implement a technologically advanced hospital to complete the mission. Therefore, we have added 10 branches to our facilities to our brain-focused hospital capabilities.

We have started our service to our patients in NPİSTANBUL Brain Hospital's new address in where we execute a hospital management approach that foregrounds our patients' comfort and combine it with the modern scientific methods & provisions.

As Europe's 2nd Brain Hospital, we offer a full-fledged diagnostic and treatment center with technological substructure and expert staff.

In our hospital, we offer the first and only 1A Ultra Clean operating room equipment of Turkey approved by an independent accredited organization, that obtain superior technological infrastructure facilities that support surgical operations in all branches.

There are 2 laminar flow digital operating rooms, one of which is 1A and the other is 1B, and the 16 bed intensive care units that operate Robotic Surgery, Tumor, Spinal Cord and Aneurysm Surgery, Parkinson, Ocd, Depression and Epilepsy operations that are applied in many areas of the battery operations. Intensive care unit can fully service up to Level 3 to all intensive care patients.



We should state that our neuromodulation center is the first example in Turkey. 'Sensation Makeup Clinic' that we facilitated for autism, will attract your interest. We are in NPİSTANBUL Brain Hospital where we have more branches, more bed capacities that are equipped with the latest technology and expanding team members.

Prof. Nevzat Tarhan
Chairman of the Board



Why NPİSTANBUL Brain Hospital?

Europe's
2nd Brain Hospital

1. NPİSTANBUL Brain Hospital; the first special neuropsychiatric hospital in Turkey established with the aim of providing effective treatment services with the most sophisticated treatment possibilities provided by contemporary medicine to the diseases that are soul / brain health related, is the 2nd Brain Hospital in Europe.
2. NPİSTANBUL Brain Hospital; has the JCI (Joint Commission International) accreditation document, which is the world's largest and prestigious medical accreditation body. This accreditation is a special document that is presented to only three hospitals, including us that operate outside the United States.
3. Apart from providing brain-related services, there are services also for neurosurgery, general surgery, otorhinolaryngology, internal medicine, child health and illness etc.
4. It is the first private hospital in the field of psychiatry that responds to all the needs of its patients with its special ambulance, 7/24 emergency psychiatric service.
5. It has Class A operating room and intensive care services for neurosurgeries. It has the first and only 1A Ultra Clean operating room equipment of Turkey approved by the independent accredited organization and has a superior technological infrastructure that assists the surgical operations.
6. It is the pioneer in Turkey of applying the news approaches such as "treatment by measuring brain functions" and "thought-focused medicine."
7. It is the first and only hospital in Turkey that clinically adopts the pharmacogenetic approach (therapeutic drug blood level monitoring (TDM), Phenotyping and Genotyping) in diagnosis and treatment processes as well as implementation.
8. It is the science partner of Üsküdar University. Also has various collaborations with the university in the technological, academic and scientific fields.
9. It is the first to provide neuromodulation treatments in Turkey. This center aims to measure and treat brain functions by brain stimulation.
10. It provides telepsychiatry (online therapy) services for out-of-town and overseas patients.
11. It is a hospital that focuses on health perfection by focusing on the comfort of the treatment that will affect the treatment processes as well as the science.
12. In the addiction clinic (NPAMATEM), Advanced Toxicology Verification Laboratory service is provided.
13. **Evidence-based treatment** is our basic principle.
 - a) Conducting preliminary and final tests
 - b) Use of bio-markers such as brain mapping
 - c) Reporting of the result



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▶ Europe's 2nd Brain Hospital

NPİSTANBUL Brain Hospital; the first special neuropsychiatric hospital in Turkey established with the aim of providing effective treatment services with the most sophisticated treatment possibilities provided by contemporary medicine to the diseases that are soul / brain health related, is the 2nd Brain hospital in Europe.

NPİSTANBUL Brain Hospital has become one of the leading hospitals in the world that focuses on brain and serve with general hospital facilities by adding a new building to its complex that serves Psychiatry, Psychology, Neurology branches through maintaining a multidisciplinary approach. We are the 2nd brain hospital in Europe and we offer a full-fledged health center where patients and physicians can benefit

from the most advanced technologies available. While we provide full-fledged services in psychiatry, addiction and neurology in our hospital; we have also added different branches such as fully equipped operating room, intensive care, neurosurgery, otorhinolaryngology, general surgery. We continue our focus on the brain field and with our general hospital facilities.



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“One of the ways to harm a patient is to leave them without treatment.”

Prof. Nevzat Tarhan

“Perfect Service” approach in health

Through this vision, globally accepted techniques from neuromodulation therapies such as ECT, neuronavigation TMU / TMS, tDCS to functional surgery and electronic implant (battery) therapy have been created to form an infrastructure. There are 2 operating theaters, one of which is 1A and the other 1B, and a 16 bed intensive care unit in NPİSTANBUL Brain Hospital in order to perform robotic surgery, aneurysm surgery, Parkinson and Epilepsy operations as well as many other operations.

Intensive care unit can fully service up to Level 3 to all intensive care patients.

We offer a fully-fledged brain hospital where our patients and our physicians can benefit from the most advanced technology available. We offer our services with the first and only 1A Ultra Clean operating room equipment in Turkey which is approved by the independent accredited organization and a superior technological subassembly assisting the surgical operations.

NEUROMODULATION CENTER

WE ARE INSPIRED BY THE BRAIN TO ACHIEVE EXCELLENCE

TOPOGRAPHIC BRAIN MAPPING
(QEEG/TBH)



CHILD QEEG



ANESTHETIC
ECT TREATMENT



DEEP TMS



TDCS, CES
BRAIN STIMULATION
TREATMENTS



NEURONAVIGATION
TTMU/RTMS



FUNCTIONAL
NEUROSURGERY
(BRAIN BATTERY)



NEUROBIOFEEDBACK
WITH
NEUROPSYCHIATRY



NPİSTANBUL Brain Hospital Neuromodulation Center Facilities:

THE LATEST TECHNOLOGY IN NEUROPSYCHIATRY:

- 1. Topographic Brain Mapping (QEEG/TBH):** It is used as a biomarker in psychiatric diseases. The FDA (US) officially approved in 2013 that attention deficit is a diagnostic value.
- 2. Deep TMS: a first in Turkey;** TMS can be applied to affect the deep structures of the brain. Due to the characteristics of the head device used, more stimulation can be given to different brain regions for different diseases.
- 3. Neuronavigation tTMU/ rTMS:** Being the first private hospital applying the system, it is a method that enables TMS to be applied in different diseases, focusing on different regions of the brain, precisely the desired spot, and thus increase the efficiency of the treatment significantly.
- 4. Anesthetic ECT Treatment:** Electroconvulsive Therapy (ECT) is a safe and effective medical treatment for certain psychiatric disorders. ECT therapy is also referred as “brain electrical stimulation”, “electroshock therapy” or “shock therapy”. It is administered under anesthesia in our hospital with the safest ultra-brief method.
- 5. Neurobiofeedback / Neuropsychiatry:** In neurofeedback training, information about the brain waves coming from the EEG of the person is reported through visual and / or auditory signals and it is asked from the person to control certain aspects of it. Depending on the problem or the need of a person, a learning environment is created by arranging a treatment protocol through knowing which region of your brain’s frequency is needed to be increased / decreased accordingly. The person witnesses how the frequency waves change instantly according to the thoughts of that time and learn to control the process in the desired direction.
- 6. tDCS, CES Brain Stimulation Treatments:** tDCS is one of the neuromodulation techniques used for the treatment of neuropsychiatric illness. It is also referred to microstimulation treatment. Treatment is applied only at the request of the physician in cases of resistant neuropsychiatric conditions. In general, the brain works with the stimulation principle that gives direct current at low intensity through two electrodes from the forehead region. It is targeted to rejuvenate some brain electrical activities and to suppress some activities in the outer shell of the brain where the direct current is stimulated. Many studies have shown that with this method neuropsychological and psychophysiological changes are present in the targeted brain areas.
CES (Cranial Electrotherapy Stimulation) treatment is one of the latest treatment methods developed under electro medicine. CES Stimulation therapy aims to be applied to the targeted brain regions with specially produced micro currents that are performed through the electrodes placed to the ear.
- 7. Functional Neurosurgery (Brain Battery):** “Brain battery” used in Parkinson’s patients who did not respond to medication and had severe shivers, is the most advantageous option as it is a controllable, programmable and adjustable treatment method. Also; it can be used in depression, OCD, Alzheimer’s disease, epilepsy and obesity.

▶ Brain “Check Up”

Brain Check Up is performed at NPİSTANBUL Brain Hospital by a psychiatrist, psychologist, neurologist and radiologist through sustaining multidisciplinary approach.

What methods are applied in Brain “Check Up”?

Brain Check Up assesses the brain’s mental activity and performance. Using the computerized EEG devices, it is checked whether the brain works properly; memory and attention tests are used to detect functional disorders. In Brain Check Up; Computerized EEG (CEEG) device is used to monitor brain functions and brain mapping. In addition, computer-assisted cognitive tests are applied to measure memory and attention. Treatment and rehabilitation programs are being implemented according to the problem confirmed.

What do we measure with Brain “Check Up”?

We check if the brain functions well by conducting functional “Check Up” to the brain. In Brain “Check Up” where mental activities are evaluated; anatomical examination of the brain is done by magnetic resonance or computed tomography, functional evaluation. To the person applying for Brain “Check Up”: Neurological and psychiatric examination, blood tests, brain imaging, attention, memory, intelligence measurements are conducted.

Why should we get Brain “Check Up”?

- Brain “Check Up” is very important for early diagnosis and treatment of Alzheimer’s. Alzheimer’s, which starts sneaky and leads to severe memory loss, can be detected through Brain “Check Up” in the early stages. Therefore, the treatments can start in the early stages.
- Every now and then, forgetfulness can worsen in some cases and cause permanent problems. In case of early diagnosis with Brain Check-Up, special mental development and rehabilitation programs can be applied.

Due to early diagnosis, attention and concentration can be increased with on time treatment. The abilities of learning and understanding are being improved. The memory is being strengthened. Medication can be offered, if necessary.

- We recommend Brain “Check Up” to the managers and students who have forgetfulness and distraction. Our experts recommend juvenescence and brain stress-regulating drugs. Also brain exercises that enhance attention, memory, logical thinking, learning and remembering skills are being performed with computers.
- It is now known that depression is a disease that holds a biological dimension. There is a correlation between biochemical dysfunction in the brain and depression. It is being searched whether there are irregular, inoperative areas in the brain. This is specifically used in depressed patients that are treatment-resistant (about 30 percent of depressed patients). In other words, the psychological and social dimension of depression as well as the biological dimension can be monitored.
- Stress can also be determined by a method. Brain is being monitored at stress hormone levels. In case; stress which upsets the balance of people is detected, then the mental power to relieve tension and body & mind relaxation exercises are being taught.
- The effects of the drugs used in the human brain can also be detected the same way. The bioavailability of the drug is being measured.

**For further information on Brain “Check Up”:
+90 216 633 06 33**







Operating Rooms and Intensive Care Units

Turkey's first and only 1A Ultra Clean operating room

There are operating rooms, one of which is 1A and the other is 1B, and the 16-bed intensive care units that operate robotic and Aneurysm surgery, Parkinson, and Epilepsy operations. Intensive care unit can fully service up to Level 3 to all intensive care patients.

We offer a fully-fledged brain hospital where our clients and our physicians can benefit from the most advanced technology available. In our hospital, we offer the first and only 1A Ultra Clean operating room equipment of Turkey approved by an independent accredited organization, that obtain superior technological

infrastructure facilities that support surgical operations in all branches.

OUR PROMINENT MEDICAL DEVICES:

Philips / Ingenuity Elite, Medtronic / O-Arm 2, Medtronic / S7, Zeiss / Pentero 900, Hitachi-Aloka / Alpha 7, S-Cape / Multiconsol, Ultra Clean, Surgical Instrument Tracking System, Philips / TC 20, Philips / VSI 2, GE / R 860, GE / B 650, Linet Multicare.



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Infection Monitoring System: In our hospital, there is a hardware and a follow-up system that can minimize the risk of infection in brain surgery operations.

Brain Mapping: The most important issue during resection of the brain tumors, is to proceed without harming the ancillary tissues. Many patients may experience some damage in the tissues that are on the way to the tumor, while the tumor is being removed. When the operation is continued with conducting brain mapping, it can be reached to the tumor without affecting the critical areas in the brain. NPİSTANBUL Brain Hospital's operating rooms have the infrastructure that allows performing brain mapping.

Robotic Surgery: Another critical issue in tumor surgery is to determine the size. Measurements performed prior to the surgery may be misleading as edema exists during operation. To avoid this issue, we offer a hardware navigation system (a kind of robotic system) in our hospital to provide the surgeon with the opportunity to be guided throughout the surgery. In this case, the

comparison of the images taken before the operation and during the operation is conducted during the operation. Thus, the patient will leave the operation room; knowing whether the tumor has been completely removed from the operation.

Interventional Radiology: Prior to operating the aneurism, there is a chance of getting rid of the vascular anomalies in the patient's brain by the method of entering the vascular and closing the aneurysm. Our hospital has the radiological infrastructure used in this method.

O-Arm and MR Imaging During Surgery: Imaging that can measure the success of the surgery right away, can be used in the operating room, while the operation is ongoing. O-Arm and MR Imaging that are conducted during the operation, enables the battery insertion surgery and stimulation that signals the brain to stimulate the patients of Parkinson, gait abnormality and some psychiatric disorders and continue their lives. Our hospital holds the necessary equipment and infrastructure for these surgeries.



Anesthesia Safety: In our hospital, you do not have to worry about whether anesthesia is safely applied. Because in NPİSTANBUL Brain Hospital operating rooms; through the devices, depth of anesthesia and pain can be observed and tracked in every deviation of the patient.

Automatic Registration System: Thanks to our automated registration system we do not need manual registering in the operating room. Through this system, the monitor automatically transfers all records to patient files therefore our authorized personnel and doctors can access the records from their monitors.

Operating Room Teleconference System: Teleconference can be done from our operating rooms. Thus, operations can be screened to any physician or a conference hall from around the world and also to the lectures in our university.

Smart Operating Room System: The monitors and devices in our operating rooms are integrated with

each other to facilitate the mobility and operation of the surgeon. Also, all our surgeries are being recorded.

Surgical Instrument Tracking System: In our hospital, a surveillance system that controls the sterilization of surgical instruments from the operating room is in use.

Vital Data Filing System: ECG data and vital data (blood pressure, amount of oxygen in blood, fever etc.) of our inpatient and outpatients are automatically transferred to the file after being measured by a software method.

Information Technologies: Our hospital has a central system that can be changed from the air conditioning of the building to the electrical components and to the pressure of the operating room according to the living conditions inside. The air conditioning and pressure in the operating room can be changed according to the need.

Therapeutic Beds: All beds in NPİSTANBUL Brain Hospital intensive care unit are automatic and



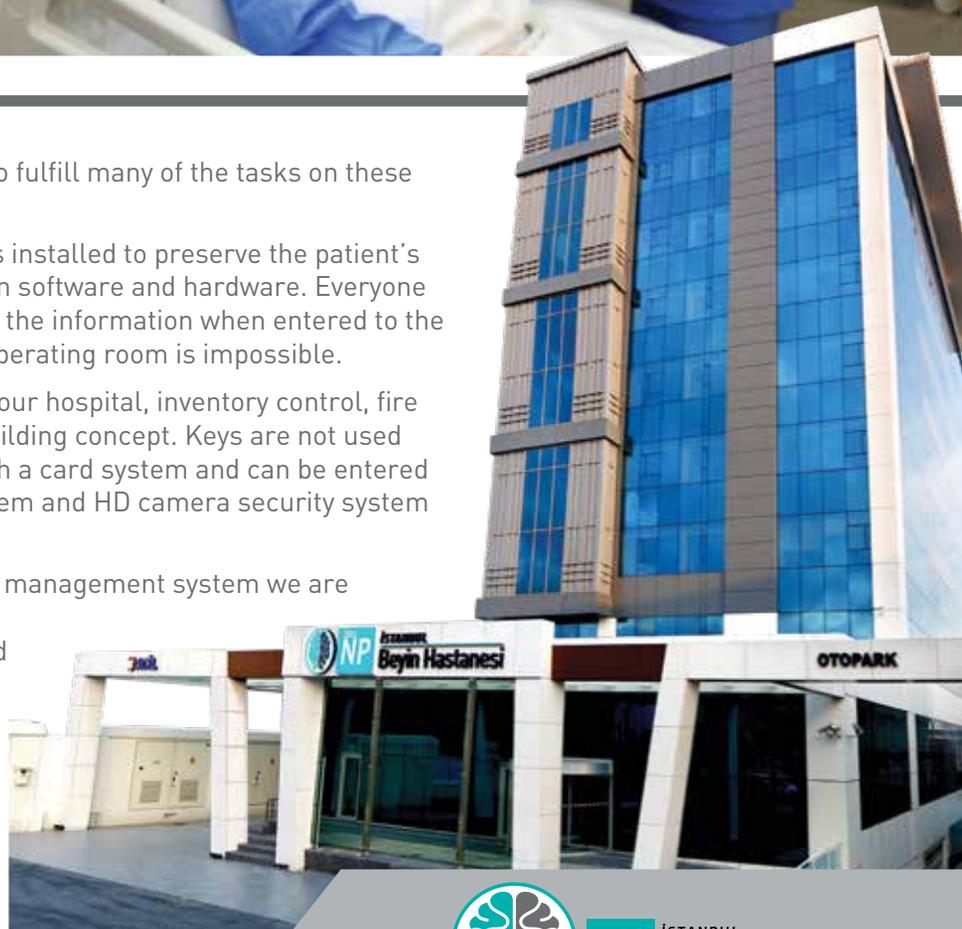


therapeutical. In this respect, nurses are able to fulfill many of the tasks on these beds in regards to patient care.

Information Security: A technological system is installed to preserve the patient's privacy by protecting the patient's information in software and hardware. Everyone who has access to the system, is able to access the information when entered to the system. However, unauthorized access to the operating room is impossible.

Smart Building Concept: Entrance and exit to your hospital, inventory control, fire detection system is designed with intelligent building concept. Keys are not used in psychiatry floors. All rooms are equipped with a card system and can be entered with authorization. All buildings have IP TV system and HD camera security system installed.

Drug Management System: Thanks to the drug management system we are practicing, unauthorized people cannot procure medicines. With this system, drugs are provided on time and accurately.



THE LATEST TECHNOLOGY IN NEUROSURGERY

Operational risks are minimized thanks to our advanced technology systems.

■ In our hospital; Pediatric neurosurgery, tumor, aneurysm operations are performed. O-Arm MR CT navigation and frame technologies are applied for such operations.

■ The whole spine can be visualized in a short time, thanks to our digital x-ray **which can make automatic scoliosis screening.**

■ Vascular / oncologic surgery can be performed under the guidance of sodium fluorescence with a **neuronavigation assisted high-level neurosurgical microscope.**

■ Surgical operation is progressed in a controlled manner with an advanced imaging quality, calculation, measurement and reporting ability of high-level intraoperative, color doppler ultrasonography device supported by neuronavigation. At the same time, this system is known as the flagship of neurosurgery screening.

■ The target can be reached from the shortest and fastest manner with the **3D screening system supported by neuronavigation**, and images of before and during operation can be combined by fusion and thus with minimum incision.

■ **3D Screening during operations:** We also validate the success of the operation with our multidimensional CT imaging devices in the operating room, offering the advantage of minimizing the need for second surgery.

■ **Surgical Success:** During the surgical interventions that we use such as computer aided navigation systems; the relationship with adjacent tissues is determined and the surgical incision required to reach the mass is



made from the most accurate location. The lesion that is targeted during surgery is approached with great accuracy (1 mm accuracy), and the damage that can occur in the healthy tissue during operation is reduced to the minimum. If a surgical procedure is to be performed for biopsy, our navigation system will provide the shortest and least damage to the mass by making the necessary calculations so that it can be entered into the center of the mass.



PROF. MADJID SAMII
NEUROSURGERY
OPERATING ROOMS



Diagnostic Methods for Neurosurgery

Neurodiagnostic Methods

- » Direct Roentgenogram
- » Computerized Tomography (CT)
- » Magnetic Resonance Imaging (MRI)
- » Lumbar Puncture (LP)
- » Electroencephalography (EEG)
- » Electromyography / Nerve Conduction Study (ENCS)
- » Ultrasonography (USG)
- » Neuroendocrine Studies
- » Biopsy

Diagnostic method in Neurosurgery

NPİSTANBUL Brain Hospital, Europe's 2nd Brain Hospital, offers a fully-fledged diagnostic and treatment center for its technologic infrastructure with expert staff and advisors. We are on the way to be the neurosurgical center of Turkey in the field of brain and neurosurgery as well as Spinal Surgery, Parkinson and Movement Disorders Surgery, Peripheral Nerve Surgery.

TREATMENT OF FUNCTIONAL DISEASES

In diseases that lower the quality of life, such as Parkinson's and other involuntary movements, brain battery is especially performed. Epilepsy surgeries are planned in case when the drug treatments are unsuccessful. For all functional diseases, the patient is assessed with a multidisciplinary approach as to whether surgical treatment is necessary or not.

SPINAL DISEASES

Surgical interventions are conducted to the spleen; in case of traumatic injuries such as accidents and injuries, narrowing of the spinal canal and slipped disc and in congenital diseases.

VASCULAR DISEASES

There is an endovascular, interventional neuroradiology and surgery (microsurgical) study group for the treatment of cerebrovascular diseases.

BRAIN AND SPINAL TUMORS

Surgical interventions are performed with microsurgery and endoscopic techniques in both adults and childhood brain and nerve tumors.

With our specialist team in Pediatric Brain and Nerve Surgery, all operations including extensive operations, can be performed successfully in our hospital.

DIAGNOSIS AND TREATMENT FACILITIES IN BARIATRIC AND GENERAL SURGERY:

In NPİSTANBUL Brain Hospital, operations are performed using laparoscopic (videoendoscopic) and open surgical methods in the operating rooms equipped with the latest technology. According to the type and degree of the patient's disease, the most suitable open or closed method should be applied to patients, which is jointly decided. Applying the most appropriate open and closed surgery method according to the patient's disease



type and degree, is consulted with the patient.

IN LAPAROSCOPY OPERATIONS; Obesity treatment, gall bladder, inguinal hernia, appendicitis, reflux and stomach pains, as well as many other general surgery operations are conducted successfully.

We are serving in a registered hospital with JCI accreditation certificate, expert staff and an infrastructure equipped with the latest technological facilities. Modern contemporary surgical operations can be done in our hospital by using open and closed methods. Thyroid, breast, stomach, liver, pancreas, spleen, intestines, intestinal mass, stomach, abdomen and inguinal hernia are the first to come to mind.





“Doctors are not only responsible for the treated patients but are also responsible for the untreated ones.”

Prof. Nevzat Tarhan

Diagnosis and Treatment Services in NPİSTANBUL Brain Hospital

Services:

- » Adult Psychiatry Service
- » NPAMATEM (Addiction Clinic)
- » Child, Adolescent and Adult Psychiatry
- » Geriatric Psychiatry
- » Neurology and Pediatric Neurology
- » Neurosurgery
- » Bariatric and General Surgery
- » Orthopedics and Traumatology

- » Otorhinolaryngology
- » Internal Medicine Unit
- » Infection
- » Cardiology
- » Pulmonology
- » Physical Therapy and Rehabilitation
- » Physiotherapy
- » Pediatrics
- » Psychotherapy Services



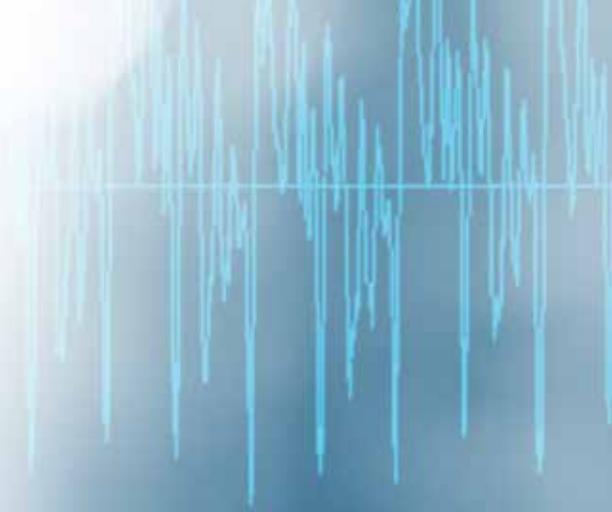
Diagnostic Procedures:

- » Brain Monitoring Techniques and Brain “Check Up”
- » Computerized Tomography / Angio 128-section / X-Ray
- » Digital X-Ray, Mobile X-Ray
- » MR Imaging
- » Intraoperative USG
- » Neurocognitive Tests, TOVA
- » QEEG/ EMG
- » O/C Armed Scopi (3D Monitoring)
- » Clinical Pharmacogenetic Laboratory
- » Advanced Toxicology Validation Laboratory
- » Psychiatric Genetic Counseling
- » Biochemistry Laboratory
- » Sleep Laboratory
- » Neuropsychiatry Laboratory
- » Gastroduodenoscopy and Colonoscopy (Soon)

Psychiatry Treatment Methods:

- » ECT (Electroconvulsive Therapy)
- » TMS (Transcranial Magnetic Stimulation Treatment) / TMS with Neuronavigation
- » Direct Current Stimulation (tDCS)
- » Neurobiofeedback
- » Micro Stimulation Treatments (CES/KET)
- » Personalized Treatment (Clinical Pharmacogenetic)
- » Rehacom, Play Attention, Rehabil
- » Ergotherapy, Sensory Integration Clinic
- » Psychotherapy and Positive Psychology Practices
- » Computerized Attention Training
- » Bright Light Therapy (Phototherapy)
- » School Maturity Studies
- » 7 / 24 Service in Emergency Unit





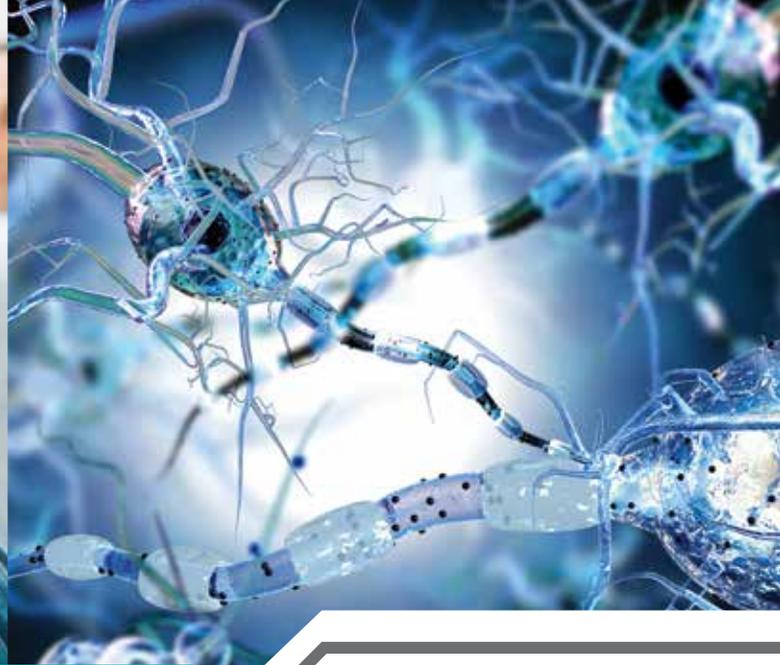
General Branches

Cardiology

Heart diseases are one of the most common causes of death. Health checkup is valuable in early diagnosis, especially if people with risk factors do not complain. Among the leading risk factors for cardiovascular diseases are the use of alcohol and cigarettes, diabetes, hypertension, disorder of lipid levels, obesity, immobility, intense stress. Particularly in people with first-degree relatives who have cardiovascular disease, one or more of these risk factors are at high risk after age 40. Coronary CT angiography can be performed in our hospital for the diagnosis of cardiovascular diseases (echocardiography, exertion test, Holter).

Ear Nose Throat

Our aim as Ear Nose Throat Head and Neck Surgery Department; is to help our patients by working in ethical rules, respecting patient rights by using modern diagnosis and treatment methods related to our surgical field. In our ear nose throat section; In addition to hearing and speaking, nose and sinus, balance disorders, diagnosis and treatment of throat diseases, we perform the surgery of head and neck cancers and tumor structures in this region. The main diseases we treat are; ear diseases and surgery, nose, sinus (rhinology) diseases and surgery, oral, throat diseases and surgery, treatment of congenital cysts and fistulas, saliva glands diseases and surgery, fractures of jaw and facial bones. All treatments within the Otorhinolaryngology are performed in our hospital.



▶ General Branches

Orthopedics and Traumatology

Department of Orthopedics and Traumatology; the muscular and skeletal system provides services related to traumatic, congenital or post-traumatic deformities.

Diseases that we treat in our hospital; Arthroplasty Surgery (joint prostheses), Arthrosis (calcification), foot shape disorders, length lengthening and leg inequalities, pediatric orthopedics and traumatology, scoliosis, hand surgery and microsurgery, trauma, sports traumatology, knee surgery and arthroscopic surgery, orthopedic oncology, osteomyelitis are performed.

Neurology

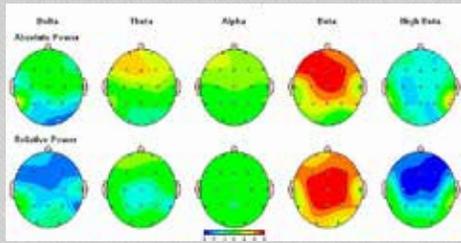
Neurology is a specialty that provides the management of the diagnosis and treatment of diseases related to the peripheral nervous system along with brain-spinal cord and muscle diseases. NPİSTANBUL Brain Hospital provides a fully equipped service in the field of neurology by keeping up with today's technologies and developments.

Epilepsy Center

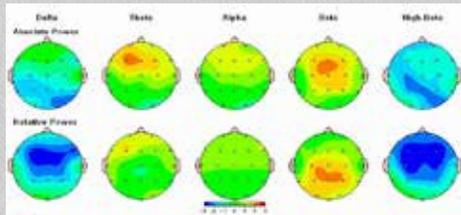
Epilepsy is among the primary diseases in which neurology is concerned. The most important step in the



Z-scored topographical brain mapping of Case-3 before the treatment



Z-scored topographical brain mapping of Case-3 after the treatment



treatment is accurate and definitive diagnosis. After diagnosis, the drug is selected according to the type of seizure. In other words, the same medication is not selected for each type of seizure. The age, gender, or fertility age of the person who will receive the treatment is selected according to the illness and other disease conditions.

Epilepsy surgery is also an alternative method of treating epilepsy. Epilepsy surgery; is an old surgical method. With the advancement of technology, the risk of patients has fallen to 3 percent. If the patient has a very frequent attack, if these attacks disrupt the patient's quality of life or even if the person cannot go out, epilepsy surgery should be kept in mind. If the center of the charge is found in the examinations, surgery can be applied to the patient

Alzheimer's Center

Preventive medicine and early diagnosis are very important in Alzheimer's disease. For differential diagnosis in our Alzheimer's center, neuropsychological tests, brain imaging (MRI and QEEG mapping) are applied. After being diagnosed with Alzheimer's disease, we adopt a multidisciplinary conception of treatment and disease management. Our understanding of the disease is as important as the diagnosis and treatment of the disease; we have neurologists, psychiatrists, psychologists and brain surgeons with opinions and suggestions. With about 20 years of experience in psychiatry and neurology in our hospital, we care about delaying the process with early intervention when the preventive medicine in Alzheimer's disease is related to the risk factors that are based on dementia. Our goal in the management of treatment and disease is to delay



▶ General Branches

the traumatic consequences of our patient as late as possible and slow down the process.

Headache Center

Our hospital is adopting a multidisciplinary approach for headache in our headache center. If you apply to our hospital for headache, primarily neurology and psychiatry/psychology specialists will evaluate you.

The purpose of this evaluation; to diagnose the disease causing your headache and to identify the psychological factors accompanying the situation. Many patients are experiencing headaches (e.g. tension, depression, constant anxiety) due to psychological causes and these mental conditions are not possible to cure headaches without treatment of these mood states.





Stroke Center

What is stroke?

Stroke; the condition is that the body cannot fulfill cognitive functions because of obstruction in the arteries that feed the brain.

What branches does the stroke center cooperate with?

It works with major radiology, cardiology, internal medicine/endocrinology and Physical therapy departments.

Physical therapy and rehabilitation;

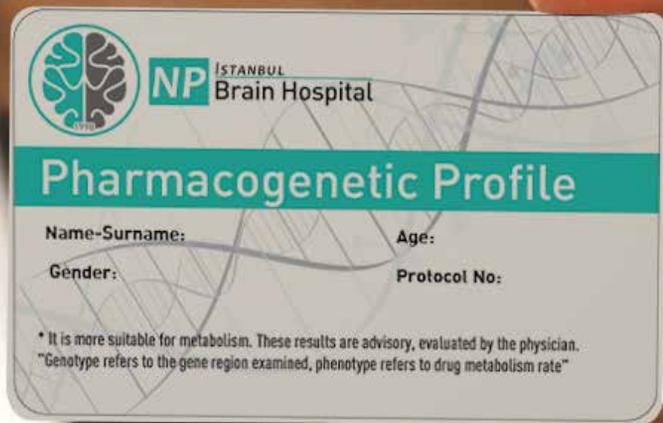
Physical therapy and rehabilitation; individuals who are experiencing disability and are likely to live; target and interact with the environment.

The Neurorehabilitation; new method TMU is used in

post-stroke treatment.

FTR; It is the area of expertise that is concerned with the diagnosis and treatment of diseases in the society, ranging from preventive medicine to acute hospital care and chronic disability treatment.

Evaluation of the medical evaluation, functional capacity and change ability to identify the diagnosis, evaluation of activity, participation and personal capacity, the creation of the rehabilitation plan, information on medical and physical treatments, experience and practice, prevention and treatment of complications, determination of disease/health condition and rehabilitation results, information on rehabilitation technologies, cooperation of close medical specialties, education, disability Information about social system and regulatory studies.



▶ Adult Psychiatry Service

At NPİSTANBUL Brain Hospital; Effective therapy services are offered to the diseases that concern the soul / brain health with the most advanced treatment facilities of contemporary medicine.

In our hospital; diagnosis and treatments are offered in psychology, psychiatry and neurology fields. We offer personalized special treatments for the following illnesses; **depression, masked depression, OCD (Obsessive Compulsive Disorder), social phobia, personality disorders, bipolar disorder,**

schizophrenia, manic depressive disorder, impulse control disorders, marital - relationship problems, eating disorders, addiction problems, sleep disorders, generalized anxiety. Our hospital is the forerunner in Turkey in treating by measuring brain functions among our treatment options, and **“Thought Focused Medicine”**. It is the first hospital in Turkey to adopt the **pharmacogenetic approach (therapeutic drug blood level monitoring (TDM), Phenotyping and Genotyping)** in the diagnosis and treatment processes



NP İSTANBUL
Brain Hospital



“Brain-focused interdisciplinary approach enhances effectiveness of the treatment.”

Prof. Nevzat Tarhan

and implement it clinically. NPİSTANBUL Brain Hospital is the first to adopt new treatment approaches such as DNA Analysis. Neuromodulation therapies, psychiatry are new technological treatments.

Ketamine Infusion Therapy, neuromodulation therapies, psychiatric treatment, and psychotherapy used in the treatment of psychiatric disorders such as major depression, bipolar disorder-depressive episode, postpartum depression, Post Traumatic Stress Disorder (PTSD), Obsessive Compulsive Disorder (OCD), Anxiety disorders and fibromyalgia approaches. Ketamine Infusion Therapy gives meaningful results especially in patients with refractory depression. KETAMER Center is available in our hospital.

In the treatment of all brain-based diseases, the protection and improvement of mental health of individuals; we always aim to move the treatments in behavioral health one step forward and improve respecting patients' rights and ethical values, adopting preventive medicine as well as therapeutic applications, university collaborations and international accreditation standards and developments in the international arena as a health institution. For the last 19 years, we offer our patients excellence based treatments in all brain derived illnesses through using technology in therapeutic medicine and the **“Check Up”** program in the early diagnosis department as well as conducting social activities in the preventive mental health unit.



NPAMATEM (Addiction Clinic)

- » NPAMATEM (Addiction Clinic) serves patients with multidisciplinary treatment approach,
- » Therapy that is based on evidence, patient-centered, individualized is applied,
- » A combining treatment of psychiatry, psychology and social worker specialists is applied,
- » Serves with Turkey's some of the best specialists of addiction field,
- » Aside of treatment, preventive services and understanding of rehabilitation are also important,
- » Drug treatment, individual and group therapy as well as family and marriage therapy are applied to every treated patient,
- » It is the only center in Turkey where additional psychiatric illnesses with addiction are treated at the same time in a separate service,
- » **In the Advanced Toxicology Laboratory**, the most advanced technology in the world is used to determine whether the patient is using the substance in accordance with the treatment,
- » **Advanced Toxicology Laboratory** is accepted as the reference institution in Turkey,





NPAMATEM (ADDICTION CLINIC) offers inpatient and outpatient services with advanced treatment facilities.

- » Long-acting drugs (**implant/chip**) are used to improve treatment compliance in the patient's addiction treatment,
- » After inpatient treatment, preparation of treatment plans, follow-up, structured, personalized drug treatment as well as psychosocial treatment and rehabilitation continue,
- » Depending on the genetic condition of the patient, drug treatment, drug selection and dosage are adjusted,
- » 24/7 patient follow-up is possible and the patient is provided with immediate intervention when necessary,
- » In the context of evidence-based medicine, neuromodulation therapies for the first time in Turkey such as substance addiction and/or gambling addiction, transcranial magnetic stimulation (rTMS), Deep TMS (dTMS) techniques are used.
- » Inpatient treatment is offered in behavioral addictions,
- » Clinical and preclinical studies have contributed to the literature on national and international medicine in the field of addiction with various publications and articles,
- » Educational and treatment cooperation with many international institutions are executed in the field of addiction,



Child Neurology

Childhood (0-18 years); It deals with neurological disorders involving brain, muscle and nervous system. Child Neurology provides a multidisciplinary approach to investigate the causes of the child's brain development process, to diagnose, to treat them if possible, and to ensure that neurological problem children live better.

Areas of interest of child neurology;

1. Neurological monitoring of risky babies (all premature babies, infants with various problems that can affect the brain during birth and neonatal period).

2. Backwardness in the developmental stages (thin and rough motor, language and personal social areas),

3. Loose baby (Hypotonia),

4. Headache (migraine type, tension type, mixed type, etc.) migraine variants,

5. Fever transmission (febrile convulsion),

6. Attendance (breath holding) watch,

7. Fire free Transfer (Afebrile convulsion),





8. Situations mimicking the seizure,
9. Epilepsy (Sara's disease),
10. Cerebral Palsy (Brain worm),
11. Mental tensions and accompanying situations,
12. Speech and language specific developmental disorders
13. Muscle and muscle-nerve diseases,
14. Neurometabolic diseases,
15. Motion disorders and tics,
16. Syncope fainting,
17. Dizziness,
18. Congenital or emerging strokes,
19. Sleep disorders, sleep terror,
20. Learning difficulties,
21. Neurodegenerative diseases,
22. Autism-widespread developmental disorder spectrum,
23. Neurogenetic Disorders,



In what circumstances should you get an expert opinion?

Some infections that the mother has during pregnancy, premature births, difficult birth history, intensive care unit stay in neonatal period, past central boundary systemic infections, absence of developmental stages in expected time interval (mental, motor, language, social and emotional) patients should be evaluated by child neurology.

The main target of risky baby follow-up is; detection of neurological problems at the earliest possible time, taking precautions, and ensuring that the baby has a normal neurological development.

Epilepsy: It can occur in children for various reasons and can manifest itself in different clinical forms.

Diagnostic Methods: Electroencephalography (EEG) and magnetic resonance imaging (MRI) are used in the

evaluation of epilepsy and other neurological diseases.

EEG (electroencephalography)

It is an examination aimed at evaluating the electrical activity of the brain. EEG can also evaluate epilepsy and differential diagnosis. In the EEG section of our hospital, EEG is performed in sleep and wakefulness under ideal conditions. In the Child Neurology EEG unit, 22-channel digital Electroencephalography device is used for recording the wakefulness - sleep and short time hourly monitoring.

MRI

Due to the immobility of the MRI, Anesthesia can be performed in infants, young children (0-6 years), patients with autism and mental retardation. In these patients, anesthetized MR is taken with the approval of the doctor. Anesthesia and anesthesia-free MRI are performed in our hospital.







Pediatric and Adolescent Psychiatry Service

NPİSTANBUL Brain Hospital Pediatric and Adult Psychiatry unit provides services on diagnosis and treatment of children between ages of 0 – 18 and adults in terms of their developmental, psychological, cognitive, academic and social areas. Our diagnostic measures by **measuring brain functions** include: Personality, Attention, Memory, Psychosocial tests and scanning.

Specialists in the field of Child and Adolescent Psychiatry ensure to provide healthy development from birth until the end of the adolescence period and also to diagnose and treat the existing disorders.

Our fields of treatment include: **Pervasive Development Disorder, Childhood Depression, Behavioral Disorders, Autism, Special Learning Difficulties, School Failure, Test Anxiety, Teak and Obsession in Children, Phonological Disorders, Stuttering, Aphasia, Attention Deficit and Hyperactivity.** Our treatment options also include brain stimulation and Sensory Integration therapy as a new special education technique.





Autism Spectrum Disorder Treatment Using TMS

What is autism spectrum disorder?

Autism is an important disorder called Spectrum Disorders or formerly known as Developmental Disorders.

What are the symptoms of autism?

Autism is an important neurodevelopmental disorder in which symptoms occur in early childhood. While symptoms of autism begin in the early stages of development in some children, some children primarily experience regression or setbacks in normal development. Autism comes with the suspicion of delaying the child's speech or being unrelated and unresponsive. In some cases, autism may develop disruptions or symptoms from early childhood, while in some cases there are symptoms around the average age of 2 years after a purely normal development. The family applies to the doctor because the child has never spoken to his peers or has forgotten words like "mother,

father" in the last few months. Sensory problems are evident among the symptoms of autism.

TMU/Advanced applications in the treatment of autism

- 1) Neuropsychological tests, neurobiological and neuroinflammatory screening for diagnosis first.
- 2) Sensory Integrative measurement performed by the ergotherapist.
- 3) Initiation of brain stimulation technique, such as the simultaneous neurotechnological application (rTMS, tdcS), if there is an indication of sensory integrity treatment
- 4) Re-measuring the skill development after intensive 20-30 days of treatment, treatment is continued if progress is more than 20%.



▶ Advanced Level Diagnostic Vehicles

QEEG

A technique analyzes the electrical activity record of the brain taken by the scalp, shows the distribution of the different frequency waves on the brain, and thus gives indirect information about the brain's operation. The QEEG can show the positive change provided by the treatment when it is repeated. As it can be understood from the pre-treatment and post-treatment profiles in the samples, the bioelectrical activity of the treatment

of the brain chemistry irregularity can be observed by recording.

CAS (Cognitive Assessment System)

CAS Test for the (5-17) age group is an intelligence and ability battery that evaluates the competence of children in cognitive processes. It consists of 4 scales and 12 subtests. In the individual being tested; planning, attention, concurrency and consecutive cognitive



processes are evaluated. CAS is organized in two forms, 5-7 and 8-17 years of age. The application lasts for one to two hours.

CAS Application Areas

- » Assessment of children with attention deficit and hyperactivity impairment.
- » Assessing those with learning disabilities.
- » Prediction of Success
- » Assessment of people with mental disabilities
- » Assessment of traumatic brain injury
- » Assessment of gifted children
- » Identifying those with planning problems

MOXO CONTINUOUS PERFORMANCE TEST

MOXO Continuous Performance Test; It is a computerized "online" attention measurement test that has been developed for children (6-12 years) and adults and helps to diagnose ADHD (Attention Deficit Hyperactivity Disorder). MOXO test; Attention, timing, hyperactivity, impulsivity is measured. The MOXO Continuous Performance Test takes 15 minutes for the child form and 18.5 minutes for the young and adult form.

WHOM DOES MOXO CONTINUOUS PERFORMANCE TEST APPLY?

For children;

- » Not successful in their courses, despite their desire and hard work,
- » Those who have been moving when they were small but suffering from frequent injuries and loss,
- » Those who have a problem with timing in the examinations and daily life (late from home, unable to complete the questions within the exam period),

» Those who always leave assignments till the deadline, cannot work programmatically,

» Reacting suddenly and excessively to incidents and people,

» Individuals who have difficulty in paying attention despite being seen as calm-hypoactive by the teacher or the parent.

For adults:

» More often than normal, those who change home, work, partner or spouse,

» Forgetfulness, difficulty in paying attention in meetings or lectures,

» Frequent traffic accidents,

» Not showing the expected performance in business life,

» The implementation of the MOXO continuous performance test is very useful for individuals who work in demanding jobs.

T.O.V.A: (Test of Variables of Attention Continuous Performance Test)

A computerized, continuous performance test measures attention and impulsivity. The language does not affect it. There are two sections of 10.3 minutes, totaling 21.6 minutes. There is a normative database for ages 4-80. It can be applied to a group of patients of all ages with attention deficit and impulse control disorder.

ATTENTION DEFICIENCY AND LEARNING FAUCET

Attention Deficit Hyperactivity Disorder (ADHD) is a life-long illness that can lead to extremely important academic, social and psychiatric problems and adverse effects. Drug use is important in the treatment of the disease.



▶ Attention Deficit Hyperactivity Disability (AHDH) Treatment Tool

Attention Training

PLAY ATTENTION

Edufeedback (play attention: attention game) is used in children. In children, feedback treatment is used to prolong the attention span with psychiatric disorders such as hyperactivity, attention deficit, learning difficulties, impulse control disorders, depression,

emotional disturbances and behavioral disturbances.

REHACOM

It is a technique used in therapy in the treatment of cognitive disorders without medication. It consists of different sections. These sections are used in the treatment of the following diseases;

Attention and Concentration Disorders: This module





consists of 24 sections. Level detection is applied for children and adults. The visual attention of the individual completing the module and the sharpness of the vision is increased.

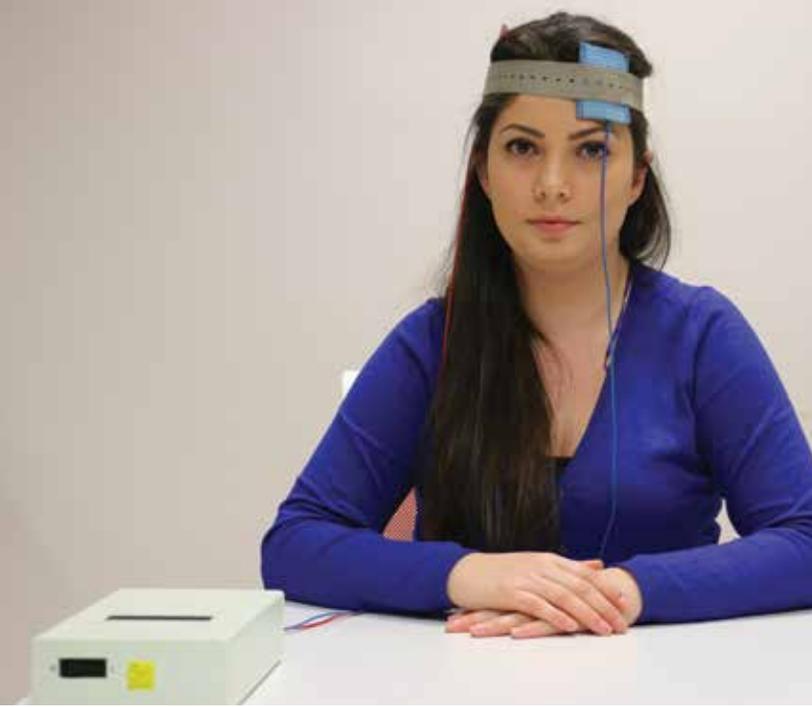
Memory disorders: This module consists of 30 sections. It is used for level determination in individuals who have difficulty in learning and speaking and those who have stuttering problems. Provides flexibility and fluency in memory and speech.

Logical reasoning and planning disorders: Consists of 24 sections. It teaches the increasingly challenging thought and provides an increase in logic intelligence.

Response Ability Disorders: This module consists

of 15 sections. It provides support for the treatment of impulse control disorder. The program also has modules related to hearing perception and space perception.

Rehacom does not only aim to reduce the loss of performance in the level of cognitive performance of patients who have had a severe head trauma, but in every individual, who intends to improve their mental performance. During the study, the individual develops a new learning strategy and enhances his brain use capacity. As with all rehabilitation work, the aim of Rehacom is to bring the person to the same level of trauma as possible or to continue the daily life alone if it is not possible.



REHABIL

The aim of “Rehabil”, which is among the Cognitive Repair Therapies Studies; to fix the targeted area and make it reusable within its own system. It provides improvement in the areas targeted by the repeated implementation of several computer or paper, pen exercises. It is used in psychiatric disorders that cause schizophrenia, autism, developmental disorders and other cognitive problems.

REHABIL OR REHACOM TESTS WITH ITS tDCS APPLICATION

In children, attention deficit hyperactivity disorder, pervasive developmental disorder, autism spectrum disorders have been found to deteriorate in areas of general cognitive domain skills such as attention, memory and reasoning at different levels. Today, it is

possible to treat and improve cognitive disorders in children with computer aided cognitive rehabilitation programs. In children with cognitive disorders identified by neuropsychological tests, this was found in clinical trials in which cognitive skills increased by 30% when 20 sessions of an average of 30 to 40 minutes of session alone were administered.

Cognitive disorders in children and adolescents have been associated with the decrease in the activity of brain cells called neurons in the anterior region of the brain. In this regard, there are brain stimulation therapies that can be used to increase the firing of cells in the anterior section of the brain simultaneously while applying cognitive rehabilitation exercises. This stimulation that allows the brain cells to fire increases the efficiency taken from the cognitive rehabilitation method in a positive way. Direct current treatment (tDCS) works with the principle of direct current





stimulation, which does not harm human health, through two electrodes of the forehead region, with low intensity of the brain. Recent scientific studies have demonstrated that the use of direct current treatments during cognitive rehabilitation exercises in children and adolescents facilitates cognitive development and increases the success rate in memory, attention, and executive functioning. Simultaneous use of tDCS therapy with computerized cognitive rehabilitation exercises in all children and adolescents aged over 6 years is increasingly becoming common throughout the world and fulfilling the promise of future treatment. In the light of scientific researches, direct current therapy (tDCS) taken simultaneously with computer cognitive rehabilitation, which is 20 sessions on average in children and adolescents in the age range of 6-15 years, increases positively in the cognitive capacity of children and adolescents.

ADVANCED BLOOD TESTS

Tests performed outside of routine blood tests;

- » Neuroinflammatory panel
- » Neuroimmune panel
- » TDM: Treatment tracking with blood level of medication
- » Pharmacogenetics review: Diagnosis and treatment monitoring with DNA analysis
- » Advanced Toxicology Analysis: When substance use is suspected; samples from blood, urine or hair is used.
- » Blood and urine amino acid profile: Congenital metabolism is made in the suspicion of disease
- » Acyl carnitine profile: Congenital metabolic disease is suspected
- » Genetic tests: Work in cases where congenital genetic disease is considered.



NP İSTANBUL
Brain Hospital

Neuropsychiatry | Addiction | Neurosurgery



Ergotherapy, Sensory Integration Clinic

Ergotherapy studies are carried out to reduce the pathology of psychiatric illnesses of the clients, help them to maintain their health and socialize, develop their self-confidence, various skills and abilities, encourage them to use these skills and abilities in their daily lives, make music, art therapies, sports and ebru art to enable them gain awareness on how to evaluate their time efficiently and increase their quality of life. It aims to increase children and young people's (age range of 0 – 14) quality of daily lives that have growth deficiency

and special needs through play and artistic methods. Rehabilitation is applied depending on the personalized development program. Sensory integration therapy, behavior development, social skills development, basic language skills and fine - gross motor skills are targeted to be developed through personalized ergotherapy treatments. **In Pediatric Ergotherapy Center;** studies are being conducted for the treatment of diseases such as Autism, Cerebral Palsy, Down Syndrome, Mental Problems, Learning Strength and Hyperactivity.



We keep the comfort of our clients and the safety in the front panel

Our Technical Facilities:

- » We have a total area of 30,000 square meters and an area of 160 bed capacity, with 75 beds in the first phase.
- » There are two types of room options designed in NPİSTANBUL Brain Hospital where the comfort of the patient and his / her relatives is kept on the forefront according to their different needs. Standard and A type suites are available. Type A suite rooms and corner suite rooms are aimed to provide high comfort and safety.
- » In order to ensure the comfort and safety of our clients; all furniture in every room has been selected and designed specifically for this purpose.
- » The VIP services are offered in all our rooms including domestic and international TV channels to increase the comfort of the patients and their relatives.

A capacity of 160 beds, total area of 30 thousand m²





Focused on **brain** and obtain a multidisciplinary approach on Psychiatry, Psychology, Neurology

» In our hospital we have interview rooms aiming to protect the confidentiality of the patients and their relatives in the physician interviews, waiting areas in each clinic and also daytime halls as well as winter gardens designed to make patients feel comfortable and feel at home.

» Our cafeteria located at NPİSTANBUL Brain Hospital has a rich variety of Turkish and World cuisines with our renewed menu. We offer spacious living area, design, service quality and service with our cheerful employees.

» The prayer room is located on B1.

Daytime halls as well as winter gardens in every clinic and patient rooms are designed to make patients feel comfortable and feel at home.



▶ OUR AMENITIES

1. The latest technological features are included in our operating rooms. The intensive care services are not just brain surgery, but have the infrastructure suited to all surgical services.

2. The imaging systems include a wide range of devices including MR, Angio CT, intraoperative applications, and mobile x-ray, intraoperative USG.

3. In the Neuromodulation Center, brain stimulation treatments are applied with the newest methods.

4. Psychotherapies: The aim is to eliminate deficiencies and losses, provide emotional support, applicable knowledge and skills for life threatening events, and replace incompatible behaviors with compatible behaviors. Neurobiofeedback, EMDR, psychoanalytic psychotherapy, cognitive behavioral therapy, hypnotherapy are some of the therapy methods offered in NPGROUP.

5. Inpatient Treatments: It is an effective choice to have inpatient treatment when the surroundings are risking



NP İSTANBUL
Brain Hospital

Neuropsychiatry | Addiction | Neurosurgery



the safety of the patient, the life is in danger and the treatment is resistant.

6. General Medical Process: Being a brain-focused hospital, we offer our infrastructure in connection with general medical services.

7. Implant Applications: Naltrexone Implant and Disulfiram Implant applications are performed in our hospital. The implants that are used, vary according to the type of material used.

8. Family Information Trainings: Addiction does not only affect the person who uses it, but the whole family. Therefore, the treatment is aimed to change the family as a whole. For this reason, trainings are organized to inform about the appropriate behaviors and attitudes that parents need to apply during and after the treatment.

9. Clinical Pharmacogenetics Laboratory (Drug Blood Level and DNA Analysis): In patients who use medicines, drug blood levels may rise above therapeutic values or drug interactions may lead to impaired brain function. In order to detect this, therapeutic drug monitoring (TDM) are used to measure. The chance of success can be increased by monitoring the blood levels of the drugs used and determining the drug according to the genetic profile. The treatment of the individual can be changed rationally by pre-determining the possible side-effects with the medications. "DNA Analysis" can be conducted if necessary.

10. Electroconvulsive Therapy: Anesthetized ECT can be performed to the patient in inflammatory periods. Very low electrical currents are generated to the brain and regulates the electrochemical processes of the brain.



11. Transcranial Magnetic Stimulation (TMS): It is a new treatment method used in psychiatric and neurological diseases. The electrical activity of the brain is regulated through the magnetic field applied to the regions of the brain that are thought to be affected by the disease. Provides faster and more powerful treatment compared to drugs. It is used in cases of depression that are treatment-resistant. In some cases, where electroconvulsive therapy is not feasible (patient and family preference, risk of anesthesia), it is administered at low frequencies during manic attacks.

12. EMDR: One of the specific psychotherapy techniques developed in recent years is the EMDR, which is a method that usually relies on reprocessing negative emotions and thoughts about the traumatic experiences.

13. Hypnotherapy: Through interacting with the subconscious during the hypnosis; positive, significant and permanent changes in life can be achieved in accordance with the aim of the treatment.

14. Neurofeedback: In neurofeedback training, data about brain waves coming from the EEG of the patient is reported to him / her through visual and / or auditory signals and patient is asked to control certain aspects of it. A learning environment is formed, depending on the problem or need of the patient as it may be necessary to increase / decrease the frequency of the targeted region of the brain. The connection between the mind and the brain waves and how to control it in the desired direction can be learned.

15. Biofeedback: It is a system that visualizes the relationship between somatosenses and thoughts





by measuring body heat, skin resistance, breathing, muscle tension and heart rate with special electrodes.

16. Biofeedback Assisted Virtual Reality Therapy:

Psychotherapy biofeedback-assisted virtual reality therapy and external stimuli are being delivered in the therapy room. While the person is experiencing anxiety due to the virtual reality glasses, the changes in the autonomic nervous system are monitored through the biological feedback method. Thus, it is ensured to confront and cope with fear, anxiety and obsession. The person wears glasses. A person can experience himself in a three-dimensional environment. The therapist sees what the person sees at that moment from the computer screen in two dimensions.

17. Rehacom (Computerized Education Modules): A personal attention training program can be developed

to re-acquire mental skills or increase existing skills. Rehabilitation of cognitive skills such as planning, organization and attention management is carried out using computerized training modules.

18. Sleep Laboratory: The sleeping room, the phototherapy room, the sleep deprivation room and the central digital examination system are established. Sleep laboratories are a facility area that requires to have a joint disciplinary approach of neurology, otorhinolaryngology, chest and psychiatric specialists. A psychiatric approach is often needed in treatment. Laboratory responsibility is carried out with this awareness.

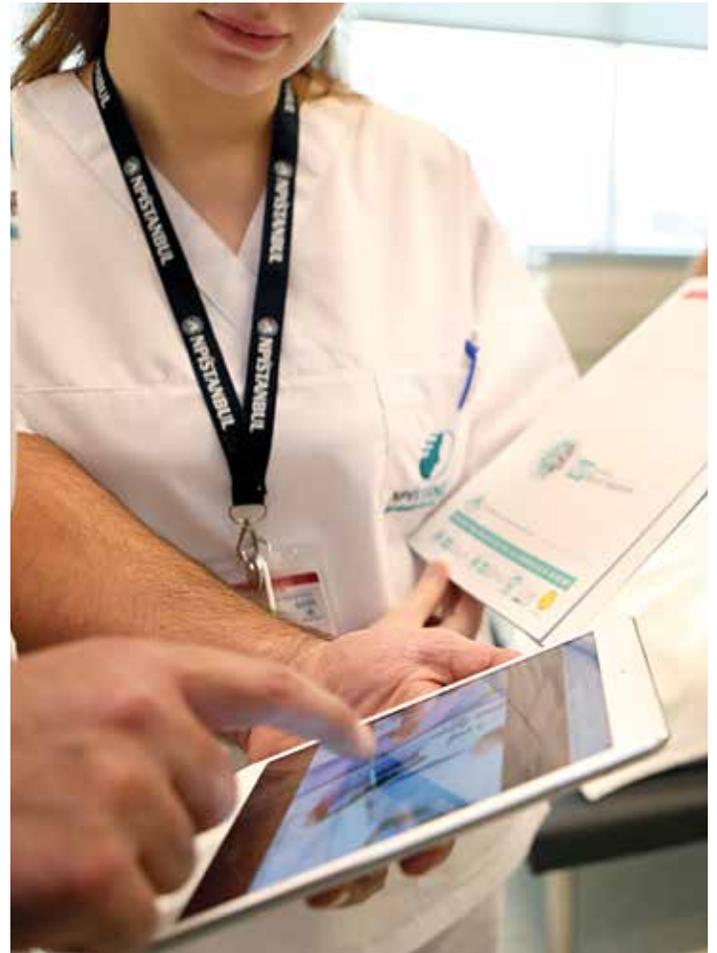
19. Advanced Toxicology Verification Laboratory provides important advantages in the treatment of addicted patients.

NP Group Health Care Centers

As NP Health Group, we are a group that makes a difference in the life of the clients with the international standards, in the light of contemporary science, with the center of excellence in health, advancing with a common working understanding of different disciplines. We are working to raise the level of mental health of the community with the power we have obtained from Üsküdar University, our science partnership, and prioritize preventive mental health studies. With our 19 years of knowledge accumulation in psychiatry, psychology, neurology and addiction, we have thousands of our consultants; we render services at the NPİSTANBUL Brain Hospital, which is Europe's second brain hospital, Üsküdar University NP Feneryolu Medical Center and Üsküdar University NP Etiler Medical Center.

Health Departments;

NPİSTANBUL Brain Hospital: It is the first private Neuropsychiatry hospital in Turkey, which is established with the aim of providing effective treatment services with the most advanced treatment facilities of contemporary medicine with diseases that concern mental/brain health. We decided to continue our journey as a special branch hospital of neuropsychiatry, as a hospital with more comprehensive services and technology, and we made our investments in this direction. We continue focusing on the brain field and with the general hospital facilities in our new building with our expanding team.





Üsküdar University: is a European Union and world standard universal university. A pioneer in the field of health, social, historical and cultural resources management that preserves and develops the personal and social mental health of our country and adds value and participation in regional development. Üsküdar University, which provides significant contributions to higher education as Turkey's first thematic university in the field of "Behavioral sciences and Health", communicates with departments and programs for future professions, it has also adopted a multidisciplinary approach in humanities and society, health, engineering and natural sciences. Üsküdar University attaches importance to collecting service concept with its social responsibility projects with its goal of being a world-class university with more than 40 laboratories, R&D foci, BrainPark Incubation Center, international accreditations and Erasmus programs for different fields. Therefore 16,000 students say "life is a choice" because they have professional standards that can integrate the "university-hospital cooperation" model with academic and clinical education, with an equality of

opportunity, which provides personalized training options, and the ideal value for an ethical corporate culture. In the laboratories of Üsküdar University, there are many kinds of practical training on behavioral sciences such as brain stimulation, neuroimaging, health physics, and software psychology with a clinic equipped with state-of-the-art technology for studies such as "Brain Computer Interface (BCI)" and artificial intelligence. Üsküdar University Laboratories, accompanied by a huge specialized academic staff in various fields, offers practical training with over 40 laboratories with 3000 m2 area as well as the NP Feneryolu Medical Center, NP Etiler Medical Center, and NP Physiotherapy Rehabilitation Center.

Üsküdar University, which has implemented the first Brainpark life in Turkey, continues its investments in laboratories and R&D. The unknown secrets of the brain and the development and treatment of important diseases such as autism, schizophrenia, Parkinson's, Alzheimer's. We are the only university in Turkey to represent Turkey and participate in the G20 World Brain Mapping and



treatment scientific Summit in the Brain Initiative project, initiated by the 44th President of the United States Barack Obama in 2013. Üsküdar University Advanced Toxicology Analysis Laboratory has succeeded in document and field inspections, which started in September 2015 and obtained ISO 17025-accreditation certificate. The purpose of our laboratory is to contribute to the prevention and treatment of drug use by doing all diagnosis, determination and analysis of toxic and addictive substances, adapting to EU rules, developing business associations, institutional development and to develop the physical and technical infrastructure. Quantitative analyzes of toxic and addictive substances (Opiat, amphetamine group, cannabis, synthetic cannabinoids, alcohol, cocaine) are carried out in our laboratory by means of Waters XEVOTQD ultra-performance liquid chromatography-coupled tandem mass spectrometry (UPLC-MS / MS).

Üsküdar University has implemented Brainpark Company to support entrepreneurship and commercialization. Brainpark aims to provide beginner support to young entrepreneurs, identify future promising ideas, and pave the way for these ideas. Brainpark, which is the incubation center company of Üsküdar University, has been operating in Gebze organized industrial zone (GOSB) TeknoPark. The company supports initiatives that have the potential to turn directly into the commercial products. After the application, the Brainpark team examines the application and can request reports from external evaluators if deemed necessary. Initiating the process of taking part in the incubation center at GOSB TeknoPark. In the incubation center, the entrepreneurs who are provided offices conduct their commercial activities in partnership with Brainpark Company. In this way, entrepreneurs are aiming to benefit from the financial

Üsküdar University R & D Focuses

- Neuromodulation Treatments
- Neurogenetic Studies
- Studies on Autism, Schizophrenia and Alzheimer
- Virtual Reality Programs in Health





advantages offered by TeknoPark and the training and consultancy services provided by the Incubation Center during the launch process. The CRISPR-Cas9 technique, which is based on improving the T cells and cancer therapies of voluntary patients with the CRISPR-Cas9 application, happened for the first time in Turkey at Üsküdar University. Üsküdar University aims to teach the Turkish scientific world the method of practical teaching. Üsküdar University Neuropsychopharmacology Practice and Research Center (NPFUAM) has units under the supervision of two different ministries; namely the Experimental Research Center (ÜSKÜDAB) and the Local Ethics Committee for Animal Experiments (ÜÜ-HADYEK). The Experimental Research Center (ÜSKÜDAB) was granted a work permit by the General Directorate of Food Control, Ministry of Food, Agriculture and

Livestock on 19.03.2014. In our center, mice and rats are the two types of experimental animals, which are produced.

Üsküdar University NP Etiler Medical Center: We offer service in the diagnosis and treatment of psychological, psychiatric and neurological diseases. We also offer the following personalized treatments to the patients who are in the adult psychiatric unit as well as outpatient care and show light to moderate symptoms of; Depression, Masked Depression, OCD (Obsessive Compulsive Disorder), Social Phobia, Personality Disorders, Bipolar Disorder, Schizophrenia, Manic Depressive Disorder, Impulse Control Disorders, Marital - Relationship Problems, Eating Disorders, Addiction Problems, Sleep Disorders, Generalized Anxiety and other symptoms related to psychiatric disorders.



Occupational Therapy: Our goal is to improve the quality of children and adolescents' lives (0-14 years) that suffer from developmental delays and special needs. Our team's approach and warm welcoming of the child; helps the child achieve the most appropriate goals according to his / her age and situation. We aim to help the children reach the highest potential they can reach. Our therapists are experienced experts who received special education in the field of Pediatric Therapy. We use the gaming method in our therapy and education sessions to make sure the child becomes more sensible of his / her sensual, psychological and physical needs.





Üsküdar University NP Feneryolu Medical Center:

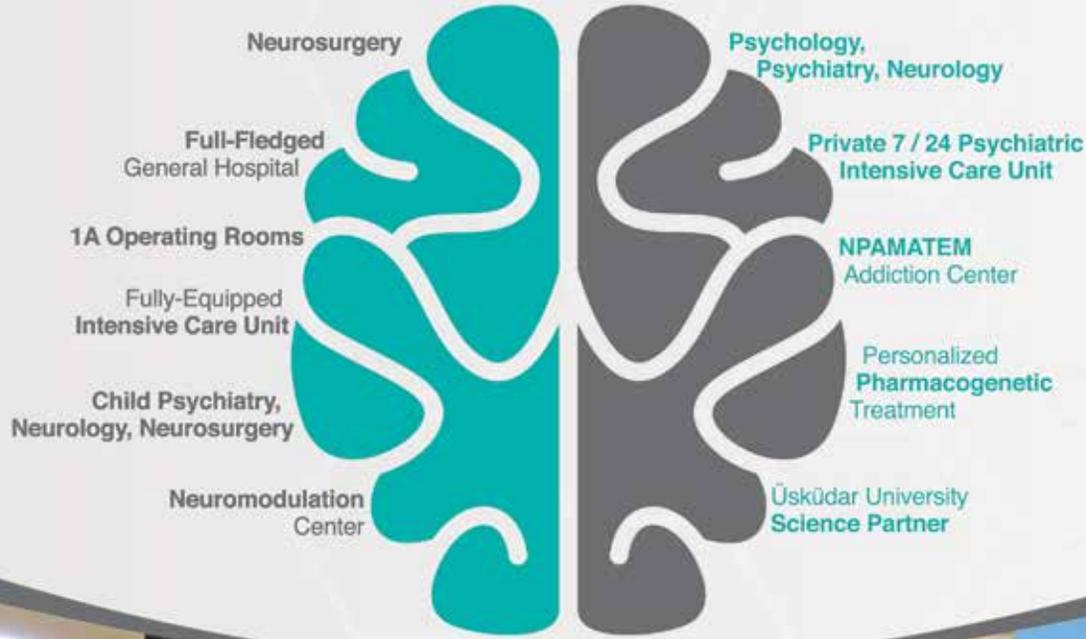
Provides services in Psychiatry, Psychology, Otorhinolaryngology, Voice Therapy, Speech Disorders and Physiotherapy. In our Adult, Child and Adolescence Psychiatry and Psychotherapy units, we offer personalized treatments for: Depression, Social Phobia, Personality Disorders, Bipolar disorder, Masked Depression, OCD (Obsessive Compulsive Disorder), Schizophrenia, Marriage and Relationship issues, Manic Depressive Disorder, Eating Disorders, Sexual Dysfunctions, Addiction Problems, Panic Disorder, Impulse Control Disorders, Sleep Disorders, Common Anxiety and other psychiatric disorders.

Physiotherapy Unit: A center is located to provide Spinal Health Rehabilitation, Neurological Rehabilitation, Oral Motor Rehabilitation, Physiotherapy, Lymph Edema Massage, Cardiopulmonary Rehabilitation, Orthopedic Rehabilitation, Sportsman Health Rehabilitation, Hand Rehabilitation, and Clinical Exercise.

Otorhinolaryngology, Language and Speech

Disorders Unit: Provides services in Treatment of Swallowing Problems in Children, Stuttering, Sound Disorders, Articulation Disorders, Sound Health, Swallowing Disorders, Child Language, Hearing Loss and other illnesses.

Turkey's first and only brain hospital...



NP İSTANBUL
Brain Hospital

Neuropsychiatry | Addiction | Neurosurgery

We are inspired by the
brain to achieve excellence

 [npistanbulbrainhospital](https://www.facebook.com/npistanbulbrainhospital) www.npistanbul.com/en

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