



NEUROMODULATION

Health care

VAGUS NERVE STIMULATION

Neuromodulation Center



What is Vagus Nerve Stimulation?

Vagus Nerve Stimulation is a surgical method that is successfully applied in our country for patients who are resistant to drug treatment, that is, patients whose epileptic seizures continue despite taking medication. It is based on the logic that the electrode wrapped around this nerve, which is called the "vagus nerve" and runs next to the carotid artery in the neck region, is connected to a battery source and the electric currents produced by this stimulation suppress abnormal activities in the brain.



At the same time, if some seizures are felt in advance, bringing a wristband worn on the wrist closer to the stimulation can prevent the seizure by making the stimulation send a stronger current.

How is Vagus Nerve Stimulation Surgery Performed?

Vagus Nerve Stimulation surgery is a very short and safe procedure in experienced hands. The patient is placed on the operating table in the supine position and under general anesthesia, the vagus nerve located next to the vein known as the jugular vein is found and the electrode is wrapped around this nerve and then this electrode is connected to a pulse generator placed under the collarbone.



Who is a Candidate for Vagus Nerve Stimulation Surgery?


Patients who continue to have seizures despite using two different seizure medications for their seizures are candidates for this surgery. However, there should not be any surgical problem (tumor or similar structures) in the brain that will cause these seizures.





How is the surgery decided?

The application of the surgery is decided by a committee consisting of Neurosurgery, Neurology and Psychiatry physicians. All members of the committee firstly evaluating the patient.



What are the Advantages of Vagus Nerve Stimulation Surgery?

Effectiveness

Most importantly, oral medications cannot provide the necessary seizure control in the patient, so its effectiveness is already its most important advantage.

Adjustability

Since the device can be managed through a remote control, the amount of current to be applied can be easily adjusted. By increasing the voltage to be applied over time, efficiency and seizure control are increased.

Many studies have shown that this intervention is also effective in the treatment of treatment-resistant depression and has been FDA approved for this diagnosis and is used in Europe and North America for the treatment of this disease.



Activability when needed

If the person feels an epileptic seizure a few seconds before it occurs, some seizures can be prevented with a magnetic bracelet to be worn on the wrist. When the patient feels the seizure, if he/she brings the wristband closer to his/her neck, to the area where the pulse generator is located, the onset of the seizure can be prevented.



What are the Risks of Surgery?

Risk of infection

It can be reduced considerably with the dose of antibiotics to be given before, during and after the surgery and the utmost attention to sterilization conditions during the surgery. Damage to the nerve
The rate of occurrence of such risks is very low and the possibility of occurrence in experienced hands is almost negligible.

Bleeding

As we mentioned at the beginning, since the vagus nerve is located near the jugular vein and a large vein, a mistake in surgery can result in serious bleeding, but in experienced hands this risk is very low.



Under which conditions should it not be performed?

- If there is a damage or mass in the brain that causes these seizures and requires surgical intervention,
- If the patient has an active infection,
- If there is a heart rhythm disorder,





Our Services

You can be sure that you will receive the best service during your treatment. If you decide to visit our center, we are offering a complete treatment package.

The package includes:

▪ **Full examination of the patient by all necessary specialists;**

- *Neurologist,
- *Neurosurgeon
- *Psychologist
- *Anesthesiologist
- *Nutritionist
- *Cardiologist
- *Physical Therapy and rehabilitation specialist.



▪ **Establishing the correct diagnosis before the surgery.**

▪ **Discussion the expectation with the patient and patient's relatives**

▪ **All laboratory and Radiological examinations;**

- Serological evaluations
- Chest Radiology
- Necessary blood tests
- 2 times Whole Brain Computerized Tomography (preoperative for planning and postoperative for electrode position checking) Under sedation
- Detailed Whole Brain Cranial MRI (under general anesthesia for higher quality of images).



Deep Brain Stimulation Surgery includes:

- Necessary equipments for the surgery (FDA approved)
- All necessary medication
- The work of the medical team led by **Dr. ATILLA YILMAZ**
- Postoperatively daily DBS system check and wound care.
- Postoperatively daily DBS programming
- Post-operative rehabilitation and physiotherapy exercises.
- Walking and occupational therapy

These services are available as standard in all our service packages, service packages including extra services are also available.



Our services also includes:

- 7 DAYS at the hospital for the patient and his/her two relatives.
- 7 DAYS accommodation at the hotel for the patient and his or her relatives.
- Three meals a day for patients and his/her relatives during the stay (hospital and hotel).
- Transfer to and from the airport.
- Airport - Hospital transfer Hospital - Hotel transfer After discharging Daily Hotel - hospital transfers.
- Long-term Postoperatively online consultations (for 2 years).
- Your treatment will continue for approximately 14 DAYS. Experienced staff and translators will be with you at every stage of your treatment. They will give you all the support and attention you need.



Transfer

When you land at the airport in Turkey, we welcome you with a V.I.P transfer vehicle. A comfortable journey awaits you from the airport to our hospital with our transfer vehicle. And after your treatment is completed, we drop you back to the airport.

‘We provide the best transfer and accommodation opportunities for you.’

During the 2 weeks period here, you will stay in our hospital for the first week to monitor your medical process. In the second week, we provide accommodation in the hotel located in an area close to our hospital so you can come everyday for dressing, examination, and stimulation programming.

We have two different hotel options. in standart package you will have room in a 3-star hotel with suites. Additionally you can upgrade your package with 5-star hotel with standard rooms. During these stays, 2 relatives of our patient can accompain.

Hotels

Food



Our package also includes 3 times meal per day for the patient and 2 relatives, and also we prepare some traditional surprises, and welcoming snacks.

Our center and our Professor have provided training opportunities on Neuromodulation surgeries to 25 countries named below.

Our professor

Assoc.Prof. Dr. Atilla YILMAZ

has contributed to the realization of such surgeries in all these countries.

- Germany
- Azerbaijan
- United Arab Emirates
- Algeria
- Morocco
- South Africa
- Georgia
- Croatia
- Iraq
- Iran
- Qatar
- Kazakhstan
- Kyrgyzstan
- Libya
- Lebanon
- Egypt
- Mongolia
- Moldova
- Uzbekistan
- Pakistan
- Romania
- Russia
- Saudi Arabia
- Tajikistan
- Jordan

Our professor
Assoc.Prof. Dr. Atilla YILMAZ has
successfully operated more than 500
patients from 30 different countries in
terms of neuromodulation surgeries.

- Germany
- Austria
- Azerbaijan
- Bulgaria
- Algeria
- Palestine
- Georgia
- Netherlands
- Iran
- Iraq
- Kazakhstan
- Kyrgyzstan
- Kosovo
- Kuwait
- Turkish Republic
of Northern Cyprus
- Libya
- Lebanon
- Mongolia
- Nigeria
- Uzbekistan
- Pakistan
- Russia
- Saudi Arabia
- Serbia
- Syria
- Tajikistan
- Tunisia
- Turkmenistan
- Ukraine
- Jordan

NEUROMODULATION

Nerve

Regulator

Neuromodulation, which literally means regulating the nervous system, consists of 5 different surgeries applied on different diseases.

Deep Brain Stimulation

Parkinson's
Dystonia (involuntary movement and contraction)
Essential Tremor Treatments



Spinal Cord Stimulation

Diabetic Neuropathy
Back or Neck Surgery
Pain Due to Vascular Diseases (Bueger)
In the treatment of pain (phantom) resulting from the amputation of a certain limb

Sacral Stimulation (Bladder Stimulation or Hip Stimulation)

Urinary Incontinence, Failure to Urinate, Inability to Urinate,
Incomplete Urine Discharge,,
Frequent urination
Involuntary incontinence of flatulence
Interstitial Cystitis, Pelvic Pain, Chronic Constipation
Neurogenic Bladder Treatments



Vagus Nerve Stimulation (Epilepsy)

Epilepsy resistant to drug treatment

Baclofen Pump

In the treatment of involuntary contractions (Spasticity)



All these Neuromodulation Interventions are successfully applied in our Center.



neuromedulationcenter



neuromedulationinturkey



NeuromedulationinTurkey



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