

# SACRAL NERVE STIMULATION

Neuromodulation Center



# What is Sacral Nerve Stimulation?

Sacral Nerve Stimulation is a part of neuromodulation surgeries; It is a technological treatment method that can be applied in patients with problems such as small incontinence, or inability to perform, large incontinence, bladder paralysis. The system is based on the logic of supporting the inoperable nervous systems with the help of stimulation.

#### What is Sacral Nerve Stimulation Surgery? For Whome It Can Be Applied ?

•Those who cannot urinate, that is, those who cannot urinate or incontinence.

- Frequent urination
- Those who cannot urinate or hold their urine in the toilet when they urinate
- In those who have missed the large ablution
- People with chronic constipation
- Neurogenic bladder
- Interstitial Cystitis
- Painful sexual intercourse
- Pelvic pain

• Those who were born with a pouch in their waist and therefore have small-large ablution problems can apply to this treatment method. What are the Advantages of Sacral Nerve Stimulation Surgery?

• Performing the test procedure beforehand clearly reveals whether the patient will benefit from this treatment.



• Since the test procedure and the permanent placement of the pulse generator are performed under local anesthesia, there are no risks associated with general anesthesia.

• Thanks to the remote control, settings can be adjusted at any time and the device can even be turned off completely if desired.

• Since the pulse generator is rechargeable, its life can be extended up to 15 years.

# How is Sacral Nerve Stimulation Surgery Performed?

In this surgery, which is performed while the patient is awake and with local anesthesia method, the patient is first placed face down on the operating table and after the necessary local anesthesia is performed, a medium-thick needle is inserted into the point where the nerves leading to the bladder exit the spinal cord with the help of a mobile X-ray.



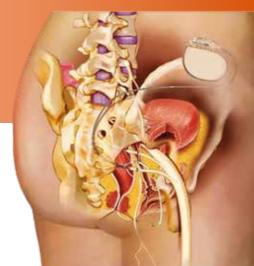
After making sure that this area is reached, test signals are sent and the response of the patient is observed. If the response is as expected, the electrode (cable) is placed on the nerve going to the bladder with the help of the existing needle and advanced the required amount and test currents are given to make sure that the required place is reached. After this process is completed, the cables are connected to a temporary pulse generator and the patient is discharged and taken into the testing process.



## How is it decided to perform Sacral Nerve Stimulation Surgery?

At the end of the test process, if the patient states that he/she has benefited, a new permanent pulse generator is placed under the skin with a very short procedure under local anesthesia. After the placement of the permanent pulse generator, there is no device left outside and everything becomes embedded under the skin. The surgery is decided by a committee consisting of Neurosurgery, Urology or General Surgery, Neurology and Psychiatry physicians. All members of the committee firstly evaluating the patient and if it is decided that the patient is suitable, it is decided to perform the test procedure.

If the patient declares that he/she has benefited after the test attempt, it is decided to implant a permanent pulse generator. Test application can be counted among the biggest advantages of this surgery.



# What are the Risks of the Surgery?

## **Risk of infection**

The dose of antibiotics to be given preoperatively and the utmost attention to sterilization conditions during surgery can be significantly reduced.

## Damage to the nerve

The rate of occurrence of such risks is very low and in experienced hands, the possibility of occurrence is almost negligible. If damage to the nerve is caused, it can cause pain, so it is recommended that this procedure should be performed in experienced hands.

# Under which conditions should it not be applied?

• If the patient has a psychiatric disorder,

 If the pain in the patient is due to some psychological reasons such as depression,

• If the patient has a condition that explains the cause of the pain and can be eliminated by surgery,

 If there is an infection at the site of the intervention,



You can be sure that you well receive the best service during your tr eatment. 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 timesWhole 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/her relatives during the rehabilitation and physical therapy period.

• 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.



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 hos pital so you can come everyday for dressing, examination, and stimula tion 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.

# Post operative Rehabilitation

For every patient we provide phisycal therapy and Psycological support at the hospital and hotel. Physical therapy is very important for patients who have difficulty in walking or moving for a long time due to their illness.

Physical therapy is applied to correct posture, walking, and muscle imbalance, to increase mobility and endurance. It may include point therapy to reduce stiffness and relieve pain, in addition to strenuous therapy exercise to strengthen the joints, mobilize them, and restore soft tissue.

We also support our patients by psychological evaluation and therapy.

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.

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