

## PATIENT INFORMATION FORM

### Dear Patient/Legal Representative:

This patient information form provided to you It is to inform you about risks, possible complications, healing process and alternative methods and make you participate in the decision by raising awareness about the basic information about the operation you will have and the methods of surgery.

It should be noted that Limb Lengthening Surgery is open to complications and there is no guarantee or cannot be guaranteed for this surgery. The company takes maximum care when these problems arise and produces solutions with you to solve the problems.

The Company is not responsible for the incomplete information provided to you by the doctor or hospital during the treatment and the risks (slow bone union, non-bone union, fast bone union, infection, pain, limited range of motion and so on) that may occur before or after the treatment, and finally it is not responsible for the health problems caused by the doctor, hospital, materials used and the patient.

### Limb Lengthening:

The length of height that a person reaches as an adult depends on the genes they inherit from their parents, as well as general health and nutrition throughout his/her entire upbringing. The length of the bones increases thanks to the growth plaques in the bones called epiphysis. During adolescence, growth plaques on the ends of the bones stop growing when they close.

Limb Lengthening surgery is performed for health reasons or cosmetically at the request of the individual. This surgery, which can be applied not only to the legs but also to the arms, is the osteotomy of the bone that is planned to be extended and widening the gap between split ends by using a fixator from inside and/or externally.

### Limb Lengthening Methods:

#### 1. Lengthening Over Nails (LON) or Combined Methods

In the first stage of surgery, the bone is surgically cut and the intramedullary nails are placed in the bone cavity. In the second stage, an external fixator device is attached to the bone via a pin (screw). Shortly after the operation, the elongation period begins, and is carried out manually with the help of a metal allen key. In the process of elongation, limited weight-bearing can be put on the legs with walkers and crutches. After the desired amount of elongation is obtained, the external fixator device is removed by a removal surgery and the intramedullary nails are locked from the inside. After the bone is fully healed, the intramedullary nails in the bone cavity can be removed by an internal nail removal surgery between 1 and 2 years.

#### 2. Precice 2 Method

In the first stage of surgery, the bone is surgically cut and the intramedullary nails are placed in the bone cavity. Shortly after the operation, the elongation period begins. External Remote Controller (ERC) interacts with magnets in nails to perform elongation. Wheelchair should be used due to the limited weight-bearing capacity of the nail during the elongation process. Once the elongation is finished, patients can commence to put weight on their legs with doctor's approval and slowly return to their daily lives. After the bone is fully healed, the intramedullary nails in the bone cavity can be removed by an internal nail removal surgery between 1 and 2 years.



### 3. Stryde Method

In the first stage of surgery, the bone is surgically cut and the intramedullary nails are placed in the bone cavity. Shortly after the operation, the elongation period begins. External Remote Controller (ERC) interacts with magnets in nails to perform elongation. Weight can be put on the legs during the elongation process. Within the first 2 to 6 weeks after the operation, the patient returns to his/her normal life with the approval of a doctor. After the bone is fully healed, the intramedullary nails in the bone cavity can be removed by an internal nail removal surgery between 1 and 2 years.



### 6 Stages of Limb Lengthening:

- Consultation and Medical Examination
- Surgery
- Hospitalization
- Elongation process
- Consolidation
- Removal Surgery

**1. Consultation and Medical Examination:** Radiological examinations, measurements and other necessary examinations are performed before the operation. The clinical results are shared with the patient during the consultation by the doctor. Everything about the surgery is explained to the patient by the doctor. Both physical and psychological problems experienced by the patient in daily life are listened by the doctor. For what purpose the patient wants to extend his or her height, whether he/she can properly manage the recover process after the surgery and whether the patient has a relative who can support him/her throughout the process are evaluated by the doctor. If there are no health problems that will prevent surgery, the date of surgery is given as soon as possible.

**2. Surgery:** The surgery is performed under general anesthesia or local anesthesia. After the anesthesiologist's opinions are taken, the patient is free to choose the anesthesia method he/she wants. Surgeries are performed with the help of a tourniquet, thus the possibility of bleeding is very rare. Besides, blood supplements can be given if necessary.

**3. Hospitalization:** The hospitalization process is about 5 days. During this time, the patient stays in a single room with a bathroom and a single sofa (for a caretaker). If an arm lengthening surgery or a one leg lengthening surgery are performed, the hospital process is about 3 days. In this process, physical therapy sessions are taken, necessary exercises to be done are taught, dressing changes are made and how to extend the limb is explained.

**4. Elongation Process:** Depending on the selected surgical method, the daily amount of length is an average of 1 mm. The daily extension amount in the combined method is 1 mm (4 x 0.25 mm) while it is 0.99 mm (3 x 0.33 mm) in the Precice 2 method.

After discharge, the patient can spend the elongation process in his/her own home or country. As long as the appropriate conditions are established (sending regular X-ray images, taking physical therapy at regular intervals and dressing care), the elongation process can be monitored remotely. In this case, the patient should remain in constant contact with the patient consultation expert and the doctor. However, patients who want to spend the postoperative process in Turkey can receive regular physical therapy and health care service in the accommodation offered by the company. During this time, patients may need walker and wheelchair assistance in the first weeks. Gradually, they can then use crutches under the supervision of a doctor. The physiotherapist helps patients with exercises and teaches them the stretching, muscle and joint movements that should be done during this elongation process. It should be noted that patients should not neglect physical therapy sessions and the exercises recommended to be done during this period. Otherwise, it can lead to health problems such as limited range of motion and joint/muscle contractures. In addition to this, elongation more than the doctor recommends can cause the health problems previously mentioned. The patient is advised to take a shower about 2 or 3 weeks after the surgery. Because water increases the risk of infection and delays wound closure. Finally, X-rays are performed at regular intervals at the doctor's request and the current health status of the patient is monitored.

**5. Consolidation:** After the elongation process is completed, new bone tissues are formed in the extended bone area.

**6. Removal Surgery:** If sufficient consolidation is seen in the bone cavity after the amount of elongation obtained, the fixator is removed by the doctor under local anesthesia or general anesthesia. (This does not apply to patients who have surgery with fully external fixator method. After the bone is completely healed, the fixator is removed. For instance, Holyfix or Ilizarov)

Bone tissue hardens in the cavity formed after the device is removed. Along with the bone tissue, the soft tissue surrounding it extends to the same degree. At this stage, the patient gradually begins to give more weight and walk without crutches.

X-rays are checked at regular intervals at the doctor's request. Although the patient can do many physical activities (walking, swimming, body exercises), he/she continues to do the recommended exercises. However, heavy exercises, weight-lifting, running, and such activities cannot be done for a while after the device removal surgery. The doctor evaluates the clinical results and the current health status of the patient and tells him/her when to return to those activities. The full healing of the bone is on average 1 to 2 years, taking into account factors such as age, health and nutrition. After the bone is fully healed, patients can easily and painlessly have the intramedullary nails in the bone cavity removed under local anesthesia or general anesthesia.

(The information written at the top applies as well to patients who have surgery with an internal method. For example: Precice or Stryde)

#### **Complications & Risks in Limb Lengthening**

Like any surgical operation, there are possible complications and risks of limb lengthening surgeries. Regardless of which method is chosen, inevitable complications may occur during treatment or even after. It is recommended to staying in accommodation close to the hospital to know the warning signs of a serious complication before it becomes really serious and carry out continuous follow-up by a doctor and a team of specialists. In addition, there are unforeseen risks during and after surgery.

During the consultation, the doctor informs the patient about possible complications and risks and surgical operation is performed with the patient's decision.

**Side Effects:** There are a handful of side effects that cannot be prevented in lengthening surgery. These are natural results, and over time their effects disappear;



- Edema
- Hematom
- Muscle Pain
- Muscle Stiffness
- Muscle Weakness
- Nerve Pain
- Difficulty falling asleep or sleeping



Contracture (Hip, knee and ankle); it is the loss of range of motion in the joint or the restriction of the joint movement in certain directions due to loss of elasticity for various reasons in the muscles, tendons, joint capsules and ligaments surrounding the joint. Fortunately, physical therapy is the best way to reduce contractures. If your rehabilitation continues steadily during the extension phase, the severity of the mobility limitation is significantly under-maintained. If there is negligence in rehabilitation, the severity of movement limitation increases significantly and another surgical intervention may be required. Each person who has a limb lengthening surgery is expected to experience the above symptoms at least to a certain degree.

#### **Potential Complications and Risks:**

- Nerve Damage
- Joint and Muscle Contractures
- Infection
- Vascular trauma,

	<b>BACAK UZATMA AMELİYATI İNGİLİZCE BİLGİLENDİRİLMİŞ ONAM FORMU (LEG EXTENSION SURGERY INFORMED CONSENT FORM)</b>			
Dokuman No: YÖN.RB.250-01	Yayın Tarihi:22.06.2022	Rev.No:00	Rev.Tarihi:	Sayfa No:5/4

- Bone Infection
- Cartilage Damage
- Pin-loosening
- Premature consolidation (Fast Bone Union)
- Slow Bone Union
- Non-bone union
- Axial Deviation
- Bone Deformity
- Mal union
- Fat Embolism
- Thrombosis
- Fracture
- The nail breakage or crooked nail
- Technical problems linked to the nail or fixator

Fast, slow, and non-bone union are caused by the biological reaction of the person. X-ray is performed at regular intervals for quick diagnosis. Procedures that require surgery or surgery-free intervention are applied based on symptoms. For example, elongation cannot be continued due to rapid bone boiling. Therefore, in order to continue, the extension is accelerated under the doctor's control or the bone is re-cut by surgical intervention. In case where the bone is not consolidated, bone grafting can be made.

The doctor's examination is of great importance in the process of extension. Patients should express their complaints or requests. If the process is to be spent away from the hospital or abroad, remote patient monitoring can be done via online consultation. For the slightest problem in the distance, the doctor should be informed and should be referred to the nearest hospital where necessary.

The aspects that need to be taken care of during the elongation process will be explained to you by your doctor. Negligence, giving incomplete information (about health status), exercise/movements done with incorrect information, or further extension than recommended play a major role in the occurrence of complications listed on the top.

In the event of a malfunction or problem with the device or mechanism, the relevant authorized company is informed. If the company has a flaw in the research on the subject, the device or the faulty piece is replaced with another surgery. The device costs are covered by the relevant company and the hospital's fee is paid by the patient. However, if a condition arising from the patient is detected in cases requiring surgery, the patient is reimbursed for the equipment and the fees.

You may experience bone deformation during the elongation period caused by bent, broken or micro-movement of the nails that hold. The extension can be terminated or a nail replacement/device replacement/device correction operation can be performed due to the severity of the situation.

Pin-tract infection can occur immediately after surgery or during the process. The reason is mostly linked to lack of proper medical dressing change. There may be an infection contracted from the hospital rarely. In this case, the frequency of the dressing can be increased or antibiotics can be treated. The neglected infection can also jump into bone cells, causing bone infection. When encountered, the elongation process is stopped and treatments are being applied under the supervision of the doctor to stop the infection from progressing.

There is a risk of fracture, deformation, infection and bone shortening in the early period after removal of the devices. You must comply with all warnings and precautions recommended by the doctor.

During the lengthening process, the tension in the muscles and rotation can cause pressure on the bones. Therefore, deviations or curvature are observed in the broken bone. They can be corrected during the device removal surgery or by an additional surgical intervention performed upon patient's request.

During the treatment process, some patients may experience psychological problems and therefore request psychological support. Psychotherapy service is provided if needed.

Different complications that are not foreseen, other than the complications mentioned above, may occur and the planned treatment may be terminated or a decision may be made to maintain the current situation.

All these complications result in additional charges for hospital and treatment expenses are paid by the patient.



**BACAK UZATMA AMELİYATI İNGİLİZCE  
BİLGİLENDİRİLMİŞ ONAM FORMU  
(LEG EXTENSION SURGERY INFORMED CONSENT FORM)**



Dokuman No: YÖN.RB.250-01

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Rev.No:00

Rev.Tarihi:

Sayfa No:5/5

Patients should be aware of any complications that may occur when physical therapy is not taken properly, and the intermediary organization and the surgeon cannot be held responsible for these.

**The estimated duration of the process:** ..... - ..... minutes.

**Important properties of the medicines that may used:** I have been informed about the important features (what it used for, how it used, benefits, side effects) of the medicines that will used during the my treatment/approach in the hospital.

**Lifestyle recommendations that are critical to the patient's health:** I have been informed about postoperative lifestyle advices that I supposed to do ( Diet, bathe, drug use, moves that has to be done or not done).

**How to access medical assistance on the same subject in case of need:** I have been informed about how to access medical assistance on the same subject such as own doctor, a different doctor, clinic that treated and contacting 112 in emergency.

**Phone numbers to contact us:** Hospital Phone: +902122746925 – 4442593

**Consent:**

I am documenting that I have read this Information Form and have been informed by the representatives of the BUL Health Consulting and Tourism Company. I have been informed of the purpose, risks, and complications of medical or surgical intervention, and I have been given a copy of this form. Without further explanation and any pressure, I consciously confirm this process. I have read and understood the above statements. I'm aware that surgery is not for a disease-induced purpose, but for esthetic, cosmetic, and psychological needs.

I accept the consequences of potential risks and complications.

“ .....

(Fill in the blank with the sentence written below and write with your own handwriting.)

“I have read, understood and accept”

Date:...../...../..... Time:.....

IF THE PATIENT'S CONSCIOUS	IF THE PATIENT'S UNCONSCIOUS AND ACCOMPANIED BY HIS/HER LEGAL REPRESENTATIVE
<b>Patient's</b> Name Surname :..... Address :..... Phone :..... <b>Signature :</b> .....	<b>legal representatives* or guardians</b> Name Surname :..... Address :..... Phone :..... <b>Signature :</b> .....
<b>Doctor</b> Name Surname:..... Signature: .....	<b>Doctor</b> Name Surname:..... Signature: .....
<b>Witness **::</b> Name Surname:..... Signature: .....	<b>Witness **::</b> Name Surname:..... Signature: .....