

# Patient Education



ARNOLD PALMER HOSPITAL  
For Children  
Supported by Arnold Palmer Medical Center Foundation

The Pediatric Orthopaedic Center  
at Arnold Palmer Hospital  
83 W. Columbia St. Orlando, FL 32806  
321-841-3040 f:321-841-3049

## The “Ilizarov” Circular Frame

### What Is It?

The Ilizarov procedure is used to:

- heal fractures.
- lengthen bones.
- correct bony deformities.
- fill in gaps in the bone.



The procedure is named after Dr. Gavriel Ilizarov of Russia, who developed it in the 1950s. Doctors in the United States and other Western countries have been using the Ilizarov procedure since the 1980s.

This procedure involves cutting the bone during surgery (corticotomy). The two parts of the bone are separated and then stretched slowly and regularly about 1mm a day. This makes a space in your bone. New bone grows to fill the space, so that the bone becomes longer, or straighter, or both.

### The Ilizarov Team

A team of doctors, nurses, physical or occupational therapists, child life specialists (in the hospital) will be involved in your care.

#### Physical Therapy:

If the Ilizarov frame is on your leg or foot, the physical therapist will teach you:

- how to walk with a walker or crutches.
- an exercise program to maintain the strength and function of your leg.

#### Occupational Therapy:

If the Ilizarov frame is on your arm, the occupational therapist will:

- show you how to do self-care activities, like brushing your teeth.
- teach you an exercise program to keep the strength and function of your arm.

#### Child Life:

A child life specialist will:

- help you learn about and adjust to your Ilizarov frame.
- help you become familiar with the hospital.
- make a schedule for your daily routine while you are in the hospital.

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## **Thinking It Over Decision-making**

You will visit the clinic so that the doctor can decide if the Ilizarov is right for you. Your doctor should show you pictures of what the frame looks like. Sometimes, you may have the opportunity to meet with other patients who have a fixator in place to ask them about their experience.

## **Length of Treatment**

You will have to wear your Ilizarov frame until your bone has healed. Your doctor will determine how long you will wear the Ilizarov frame. In general, the frame is on for at least 1 month for every centimeter that it is lengthened.

## **How it Works**

You will turn a knob or plastic nut on your Ilizarov or circular frame between one to four times a day. You will start doing this five to seven days after surgery. If you forget to turn the knob or nut when you are supposed to, do not make up turns or bunch them together. Resume the schedule where you left off and contact your doctor's office for further instructions.

## **Pain**

The Ilizarov frame can be uncomfortable. Your doctor will give you medicine to help manage the pain. A child life specialist and physical therapist can help teach you ways to control your pain as well.

## **Pin Care**

You will start taking care of your Ilizarov pins two to three days after surgery when your bandages are removed. Your doctor will tell you when to start pin care. Your nurse will teach you how to do this.

## **Clinic**

You will return to the clinic for check-ups almost every week after you first leave the hospital. The frequency will then decrease to every two to four weeks. At these visits you will see your doctor, nurse, and possibly a therapist. You will also have x-rays taken at each visit.

## **What's Expected Of You**

Having an Ilizarov requires a commitment from you and your family. You will need to:

- take care of your pins.
- recognize the signs of pin irritation.
- turn the knob or nut exactly the way your doctor told you to.
- do your exercises. If the Ilizarov is on your leg, you will need to put as much weight as

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possible on it when you walk. This helps the bone to heal faster.

- return to a normal home routine as soon as possible. This includes all the regular things you usually do, like going to school, playing and seeing friends.

## Taking Your Ilizarov Frame Off

Your doctor will decide when to take off the Ilizarov frame. You will have surgery to take it off. Many patients get a cast when the frame is taken off. You will have to stay in the hospital for one or two days.

## Special Concerns

The Ilizarov is a complicated procedure. Some common concerns that may arise during the treatment include:

- pin site infections
- the bone gets crooked
- healing takes a long time
- tight muscles that will not loosen up
- the bone breaks after the frame is removed
- need for further surgery to correct some of these problems

