The aim of this information sheet is to describe your child’s treatment as simply as possible.

We currently use two types of circular frames to correct limbs these are shown below:

The ILIZAROV frame

The TAYLOR SPATIAL frame

Contacts:

Paediatric Limb Reconstruction Service

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Information About Circular Frame Treatments

Our young patients are at the centre of everything we do and all our work is focused on providing them with the best facilities, equipment and experience possible, helping to provide a world-class facility that is positioned at the very forefront of paediatric care.

For further advice contact:

Main hospital number: 0114 271 7000
Patient Advice & Liaison Team (PALS)
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Sheffield
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Our aim is that treatment should cause minimal disruption to your lives. Children are usually in hospital between six to ten days, and the rest of the treatment is home-based and family centred. We therefore rely on the children/young people and their carers being largely responsible for their own care.

Your child should not have to do anything in their treatment that will disrupt their school day too much. Most “tasks” can be done before or after school. However, our patients return to Sheffield for regular review during their treatment, therefore some school time is missed. Initially they will visit the out-patients clinic weekly or fortnightly, then eventually monthly.

Please note, research shows that smoking seriously inhibits bone healing. We strongly recommend that patients do not smoke. Friends and family should be aware that passive smoking can also affect bone healing.

We hope you find this information useful. Please do not hesitate to contact the PLRS team if you have any questions.

To enable limb correction to take place, the metal “frame” is attached around your child’s limb. This is done by passing metal pins through the skin, muscle and bone. At the same time a break is made in the bone. Once the frame is in place, the broken bone can be moved over time by making small alterations to the frame. The Ilizarov frame is altered by turning marked nuts on a metal rod, in the direction of a marked flag (Figure 1). The Taylor Spatial frame is altered by turning numbered, colour coded “struts” (Figure 2).

Figure 1
The Ilizarov frame rods

Figure 2
The Taylor Spatial frame struts

You will be given a programme of “turns” which will have to be performed at different times of the day.

The “turns programme” for the Ilizarov frame will be hand written using a sheet like the one shown in Figure 3. The turns programme for the Taylor Spatial frame, is computer generated from information inputted into a specialised computer programme (Figure 4).
Your child’s turns should always be carried out as instructed and should never be stopped without consulting the P.L.R.S. and/or your child’s Consultant.

Once the limb is in the correct position, the turns can be stopped. The frame must then stay in place while the bone heals. This process might seem quite overwhelming at first, but the children and young people quickly adapt to having a frame on their legs. Any discomfort usually settles after a few days, and doing the turns become part of your daily routine.

Limb reconstruction treatments can take a relatively long time to complete, generally between six months to a year. As such, you can appreciate that treatment has a big impact not only on your child’s life, but also that of the whole family.

If having their lower limbs corrected, your child will be expected to walk as much as possible throughout the treatment. Initially this will be with a walking frame or crutches. A wheelchair may be required for long distances. The physiotherapist here will ensure that your child is walking safely before they are discharged from the hospital. Following discharge from Sheffield Children’s, your child will be expected to attend regular physiotherapy sessions at their local hospital.

Because treatment takes so long, the Paediatric Limb Reconstruction Service strongly recommends that your child continues to attend school wherever possible. We will send a letter to your child’s school/community nurse to let them know about your child’s treatment. However, it is always useful if you can speak to school as well, so school routine can be adapted as necessary.

Certain “tasks” have to be carried out on a daily basis. These include cleaning the skin around each “pin site” to reduce the risk of possible infection (see Looking after Your Pin sites information sheet), physiotherapy exercise’s and doing the “turns programme”. The staff at Sheffield Children’s Hospital will ensure you have been thoroughly instructed in all of these “tasks” before your child is discharged from hospital.