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Information for patients and carers Taylor Spatial Frame



Adults and Paediatrics



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The Taylor Spatial Frame (TSF)

This information sheet is a brief guide to what happens when you have a treatment using a Taylor spatial frame (TSF). The TSF is used for many different conditions, so that this is only a general guide. The following are some common questions and answers.

What is the Taylor Spatial Frame (TSF)?

- The TSF is a frame applied to a limb to lengthen it or correct deformity.
- The TSF consists of metal rings attached to the bone by wires and pins.
- These pass through the skin and muscles and fix into the bone.
- The two rings are connected together by 6 adjustable telescopic struts.
- The struts can be adjusted over a period of time to move the rings.
- This allows the limb to be changed in shape. The correction is guided by special computer software.

Why does my frame have extra rings and struts?

- Sometimes a more complicated frame is required.
- There may be extra rings and another set of six struts.
- The same principles apply to how the frame works.

What does the surgery involve?

- The TSF is applied under a general anaesthetic. The anaesthetist will discuss with you about other pain relieving treatments, such as an epidural or nerve block.
- An epidural and nerve block are injections that temporarily numb the nerves to the leg.
- Often the bone will be divided to allow the correction to occur. This is done through one or more small incisions.
- The pin sites (where the wires or pins pass through the skin) are dressed and the frame is wrapped in a bandage.

What happens when I come back to clinic?

- We will check your frame, examine you and take X rays on some visits.
- Sometimes the struts will have to be changed for longer or shorter struts as the correction takes place.
- To change a strut, a new temporary strut is put in, the old one is changed, and the temporary one removed.
- You may be given a new schedule as the correction continues.
- You will need to come to clinic weekly for the first few weeks.

How long will I have the frame on?

- This is variable depending on the type of surgery you have had.
- The frame is generally on for several months.
- The frame is removed under a brief general anaesthetic. This can normally be done as a day case.
- For frames on the shin or foot, the limb is put into plaster after the frame is removed.

What happens if I have a problem with the frame?

- You can telephone us for advice. If needed, you may need to come back into hospital for further treatment.
- For children, telephone Alice ward on **01691 404444**.
- For adults, telephone the ward you were on – Switch board number is: **01691 404000**.

How do I use the adjustment schedule?

- The schedule will have 6 columns of numbers – one for each strut.
- The date is down the left hand column.
- “Day 0” is the day before the adjustment starts. The strut lengths on this day are the lengths set during surgery.
- Each day you need to look at the new strut length.
- Adjust the length up or down as indicated on the schedule.
- Tick this off on the schedule so that you know you have adjusted it.
- You can spread the adjustments out through the day. For example, adjust 1 and 2 in the morning, 3 and 4 in the middle of the day, 5 and 6 at night.
- If your child is going to school with the frame on, then adjust 1 and 2 in the morning, 3 and 4 after school and 5 and 6 before bedtime.
- If you have to adjust a single strut a long way in one day, then you can do this in stages throughout the day.
- If the struts become too tight to turn, then you can use a pair of 10mm hexagonal spanners to adjust the strut (the spanners can be supplied by us, but normal 10mm hex spanners will work!)
- Put one spanner on the base of the strut, and use the other to rotate the adjustment ring.

How do I look after the frame at home?

- Make sure that when you are sat down that the frame is higher than your waist. This will allow the swelling to go down.
- Keep the limb mobile by regularly doing the exercises given to you by the physiotherapist. This is important to reduce the swelling, keep the muscles strong and to stop the joints getting stiff.
- Check your frame daily to make sure that the struts are at the correct length.
- Clean the pin sites as directed by your medical team.

What Happens with the frame after surgery?

- The dressings are changed the day after surgery whilst the limb is still numb.
- The dressings are changed daily after that until the wounds are dry.
- The frame can be cleaned at home using a shower or showerhead over a bath.
- You will be encouraged to exercise the limb as soon as possible.
- You will be encouraged to walk with crutches, helped by the ward staff.
- Depending on the type of frame, you may be able to put the foot to the ground afterwards.
- The time spent in hospital varies from a few days to a week. This depends on many factors, such a medical condition, type of surgery, home circumstances.

How do I adjust the frame?

- You will be given a printed sheet (adjustment schedule) that tells you how to adjust the frame.
- The frame adjustments start a few days after the surgery, as instructed by your surgeon.
- Each strut is labelled with a numbered and coloured tab.
- Each strut has a scale printed on one side. There is a silver marker on this scale with a line. The marker tells you how many millimetres long that strut is at that point.
- There is an adjustment ring at the top of the strut. If this is turned one full turn in the “+” direction, the strut will increase in length by 1 mm. The silver marker will move to show the new length.
- If the ring is turned one full turn opposite to the “+” direction, it will shorten by 1mm.
- There are different types of struts. Some have a locking nut which can be tightened down after the strut is adjusted. This can then be loosened for the next turn.
- Some struts have a quick release collar – do not move this as the frame will become unstable.

The Taylor Spatial Strut



Adjustment Schedule

Date	Day	Strut 1	Strut 2	Strut 3	Strut 4	Strut 5	Strut 6
17/10/11	0	174	152	232	171	187	133
Axial Translation Complete							
18/10/11	1	175	152	230	170	187	136
19/10/11	2	175	151	227	168	186	138
20/10/11	3	176	151	225	167	186	141
21/10/11	4	176	151	223	166	185	143
22/10/11	5	177	151	220	164	185	146
23/10/11	6	178	150	218	163	184	148
24/10/11	7	178	150	216	162	184	151
25/10/11	8	179	150	213	160	183	153
26/10/11	9	179	150	211	159	183	156
27/10/11	10	180	149	209	158	182	159
28/10/11	11	181	149	206	156	182	161

