PROCEDURE FOR ADJUSTMENTS

Taylor spatial Frame (TSF)

The Taylor Spatial Frame (Smith & Nephew, Inc., Memphis, TN) consists of two rings connected by six struts. Each strut has a color-coded collar. A computer program determines the direction and number of turns by which each individual strut is to be adjusted.

General procedure:

• You may be required to turn several struts. For bone healing, it is better not to turn all the struts at the same time. Therefore, turn strut 1 and 2 in the morning, 3 and 4 in the afternoon, and 5 and 6 in the evening.

• Keep in mind that not all struts turn in the same direction or by the same increment. If you need to go to a larger number, turn in the direction of the arrow. If you need to go to a smaller number, turn against the arrow.

• Note that the barrel of each strut can and should turn freely within the frame. This is normal.
Specific procedure:

- Determine which type of strut you have on your TSF:
  - Fast fix struts look like Image 1 and need to be unlocked and relocked when doing adjustments;
  - Standard struts look like Image 2 and don’t require being unlocked.

To begin your adjustments, please look at Image 3 for the positioning of the wrenches. Examine the current settings on your struts and compare them with the settings designated on your computer printout for the end of the previous day (see picture of printout below, image 4). The struts do not always remain at the correct settings overnight because of inadvertent movement during sleep. Correct the settings, if necessary, before starting the current day’s adjustments. This needs to be checked and addressed every morning.
• Next, find the row for the current day. For each of the struts, read across the printout to determine the goal for the day.

• Hold the barrel portion of the strut steady in one hand. With the other hand, grasp the knurled turning portion at the end with the arrow.

Struts can usually be turned by hand at the beginning. Once there is a lot of tension in the frame you may require 10mm wrenches to turn the struts, as they become more difficult to turn by hand.

Always check the gradations to make sure the indicator is set at the correct number.

Image 3.

Strut adjustment
Exchanging struts

The struts come in four sizes and it may be necessary during your adjustment phase to exchange one or more struts for the next size. This is done in the clinic and is painless. The colored boxes indicate when exchanges will need to be done and usually there is a window of several days in which the struts overlap and can be exchanged. Whenever possible, we will take care of the exchanges during your regular clinic visits.

If this is not possible, we may train you to change the strut on your own, but only do this if advised to do so by Dr. Gdalevitch. If you have not received such training from us, do not attempt to exchange a strut yourself because doing so can destabilize the frame.

Image 4. Example of a TSF Program

Please note that this is an example of a TSF program and that it is not to be followed.
Please find below the link to a video demonstrating a strut adjustment:

https://www.youtube.com/watch?v=3PUBmA03_1E

If any questions or problems arise regarding your Taylor Spatial Frame and its adjustments, please contact us at info@drmarieg.com. In case of an emergency, please direct yourself to Verdun Hospital, 4000 Boulevard Lasalle, Verdun, Québec, H4G 2A2.

Credit and thanks: 2012 Rubin Institute for Advanced Orthopedics, Sinai Hospital of Baltimore.