

ONLINE LEARNING

A Practitioner's Guide to the Providence Nocturnal Scoliosis® System



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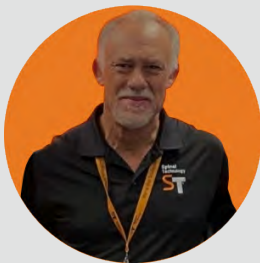


Welcome

This ebook was designed as a companion piece to our Online Video Training.

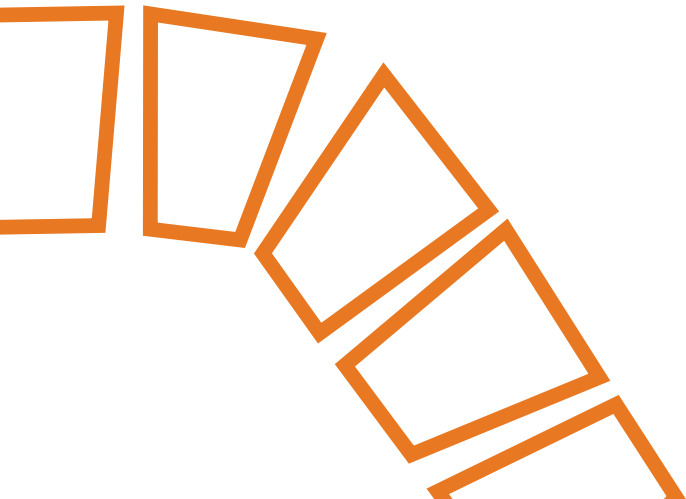


Visit [YouTube.com/@SpinalTechnology](https://www.youtube.com/@SpinalTechnology) to watch the full video.



David Collins is a certified orthotist with over thirty-two years of experience in orthotics and prosthetics and is passionate about the treatment of scoliosis. In this guide, he will explain the correct process of measuring the four scoliosis curve types with Spinal Technology's Providence Nocturnal Scoliosis® System.

The Providence® was developed when it was observed that significant correction of scoliosis curves could be achieved using an acrylic frame to apply direct corrective forces to the patient. The frame was initially created to demonstrate supine spinal flexibility in radiographic pre-operative planning. The acrylic board is now used to measure for the fabrication of orthoses, using computer-aided design and manufacturing techniques.

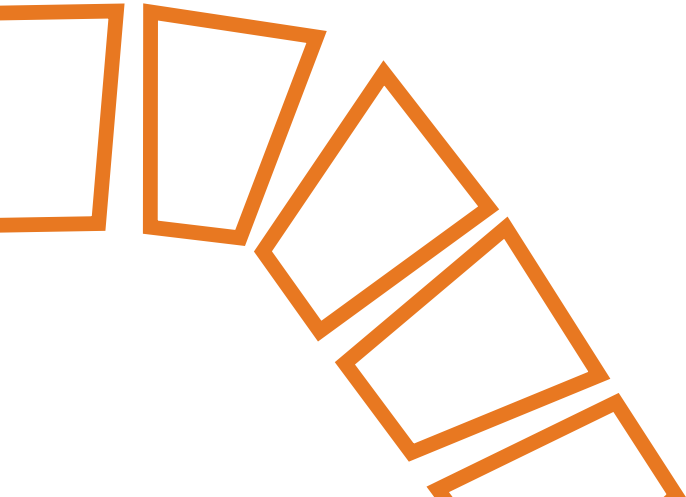


Measuring

Proper measurements are fundamental to achieving better outcomes in spinal bracing, even when using the Providence® board, scanning, or casting your patient.

Steps for Proper Measurements

- **Step 1:** Ensure the patient wears a form-fitting stockinette or body sock. Place an elastic waistband between the last rib and the iliac crest. This helps you to know where the waist is at all times throughout the measuring process.
- **Step 2:** Measure the patient in the supine position, as this will allow for accurate measurements.
- **Step 3:** The five circumference measurements should be taken snug, but not as snug as full-time bracing. The waist should be the most snug measurement.
- **Step 4:** Take two anterior-posterior (AP) measurements at the xiphoid and the ASIS level.
- **Step 5:** Take two linear or length measurements, from the waist to xiphoid and waist to pubis.
- **Step 6:** Record the measurements on the orthometry form.



Measurement Form

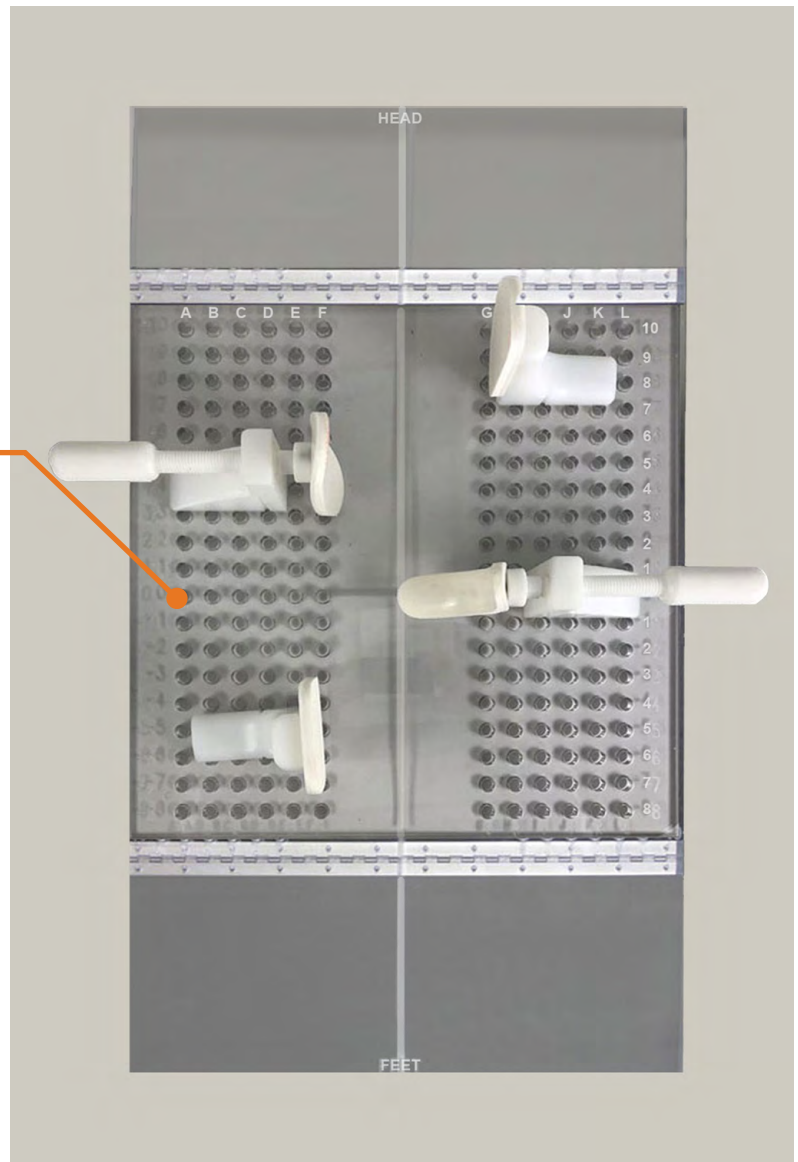
Spinal Technology provides specific order forms for each brace type. Practitioners should use the Providence® order form even if sending in a scan or cast. It indicates where to write down the patient's measurements if the practitioner knows the curve analysis or the patient's X-ray. Dedicated areas for the measurements, such as circumferences, the two APs, and the two linear measurements, are also indicated.

If the patient is a current wearer, the practitioner must check the corresponding box on the form. Additionally, the type of pads used, whether standard or pediatric, should be noted on the form. The patient's height, weight, age, and gender also need to be entered.

The Providence® Measuring Board

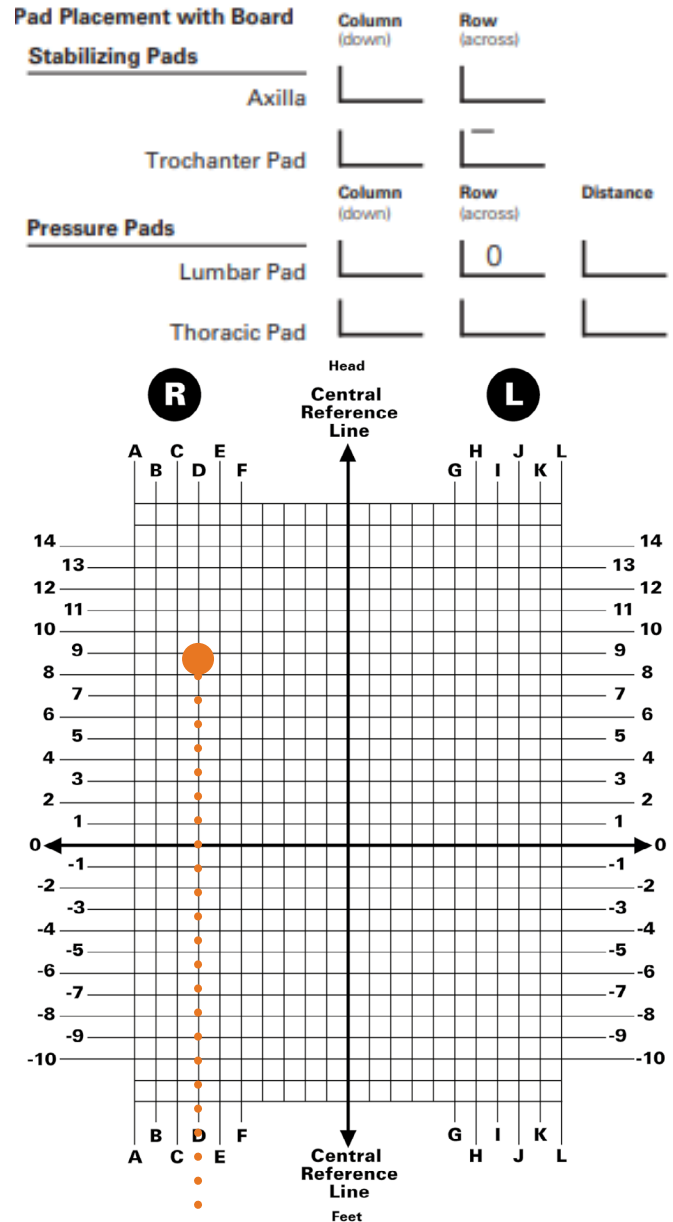
The Providence® board includes six pads:

- One axilla pad.
- One troch pad.
- Two waist pads (one pediatric and one standard).
- Two thoracic pads (one pediatric and one standard).



The center line is located in the center of the board, running from the top “head” to the bottom “feet.” The zero line, or the waistline, is at zero and runs horizontally. Each hole represents an alphabetical number and a numerical number. The alphabetical numbers run across the top, and the numerical numbers run from positive to negative.

The pads plug into the holes of the acrylic board with two pegs. The compression is measured from the pad’s end to the threads’ end. The line on each pad indicates pad placement for each pad location and has a letter and a number corresponding to the orthometry form. The pad pegs fit into the lettered and numbered holes on the board. To note the measurement, the practitioner should record the number and column letter.



- The “Pad Placement with Board
- Stabilizing Pads” section of the
- orthometry form shows the line on
- each block that indicates the pad
- placement, so the column (down) and
- the row (across) should be written
- down. The waist will always be at zero,
- and the distance where the pressure
- was applied should be indicated in
- the thoracic pad distance section. For
- example, if the axilla is at **D9**, enter
- “D9” in the axilla column.

Measuring the Patient's Circumferences

- **Step 1:** Measure snug, but not as tight as with daytime bracing.
- **Step 2:** Take the measurements when the patient is in the supine position.
- **Step 3:** Measure the circumference of the waist, xiphoid, trochanter, axilla, and ASIS.
- **Step 4:** Take the anterior-posterior (AP) measurement at the xiphoid and ASIS.
- **Step 5:** Take linear/length measurements from waist to xiphoid and waist to pubis.
- **Step 6:** These should be marked down on the orthometry form.

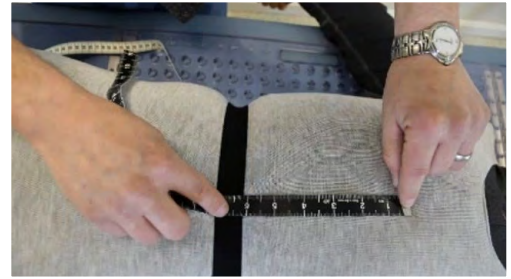
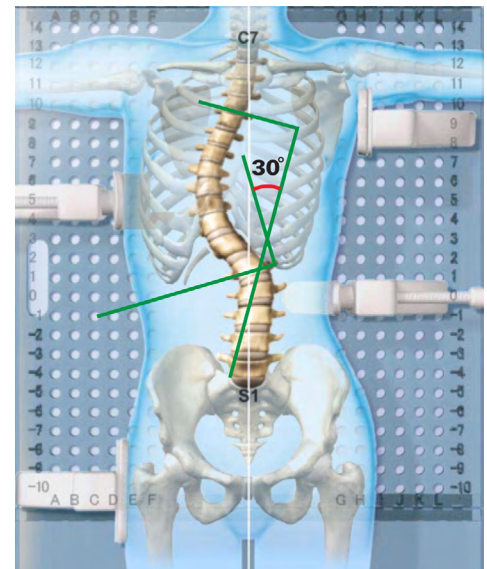
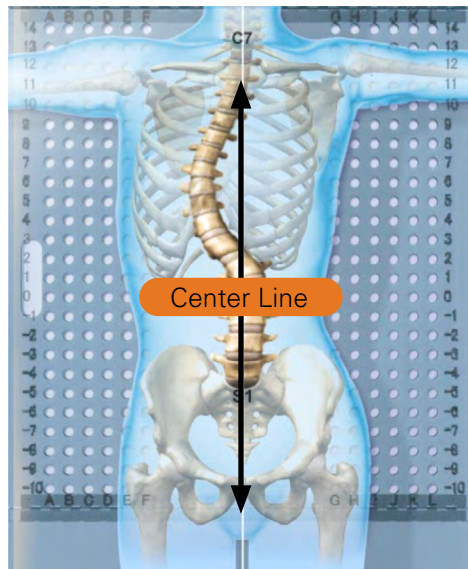
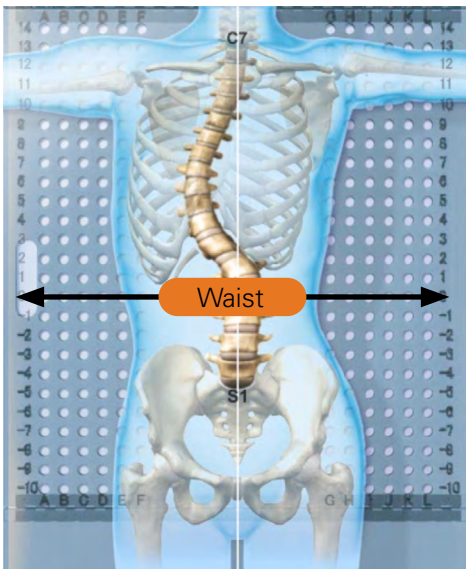


Photo 1: Waist to xiphoid

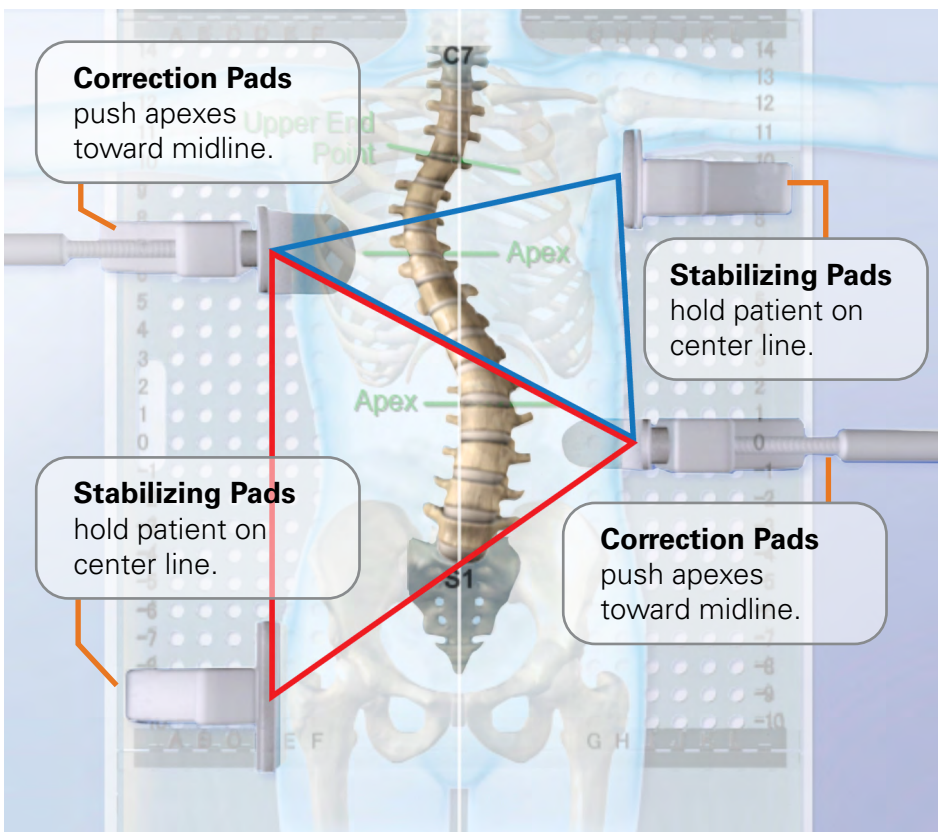
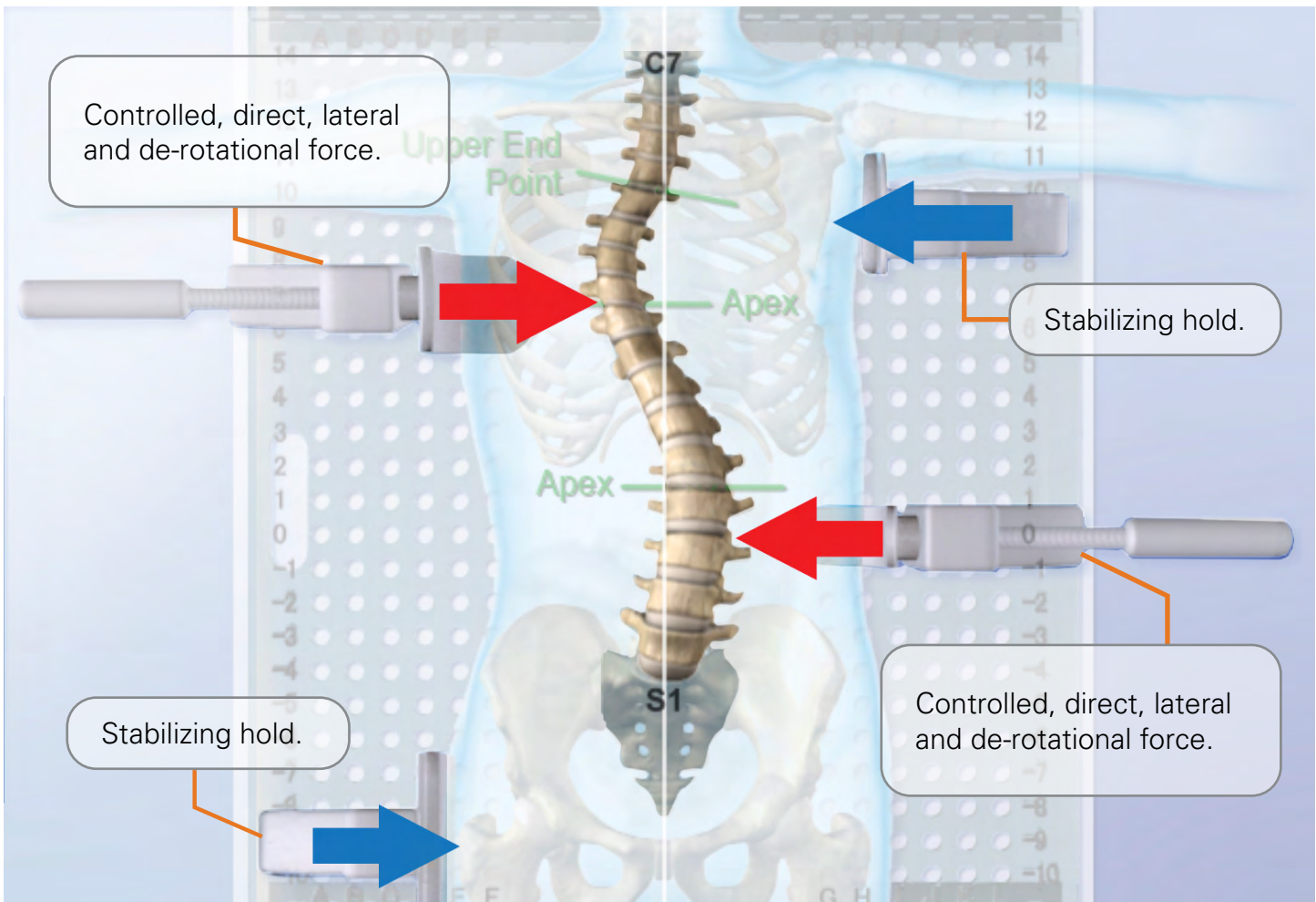


Photo 2: Waist to pubis



- Position the patient on the board on the center line.
- Always place the waist at row zero on the measurement board.
- You can always find the center line by palpating C7, and S1 should be on the center line just by bisecting the legs.

- The pad placement application is based on the curve type determined from your X-ray. The board can accommodate all four curve types: a lumbar curve, a thoracolumbar curve, a double curve, and a thoracic curve.

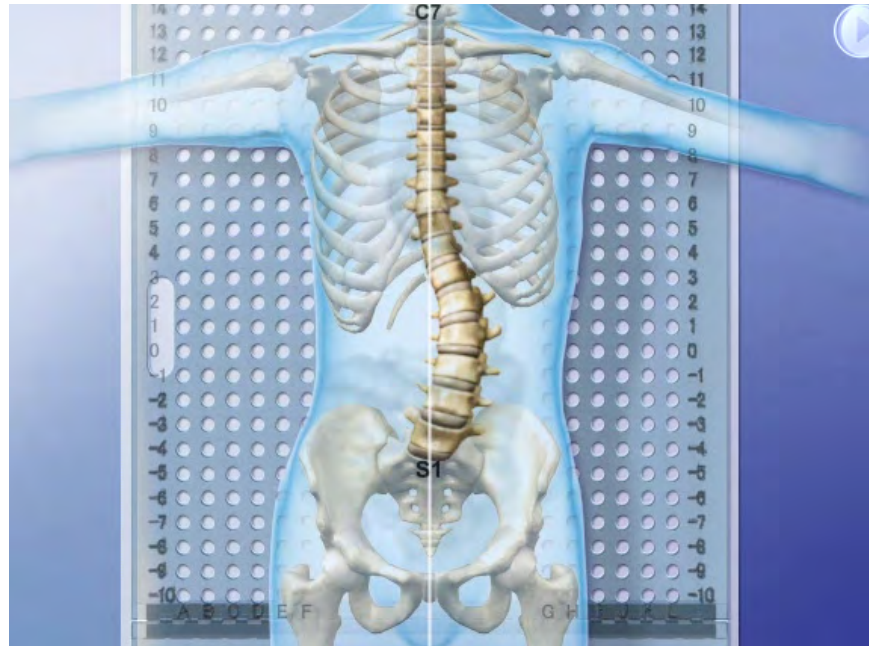


- The objective is to move the apices of the scoliosis curve to the midline or beyond while stabilizing the endpoints of each curve, creating two perfect three-point core systems.
- The push pad is not a stabilizing pad. The board has two push pads and two stabilizing pads, creating the two three-point core systems.

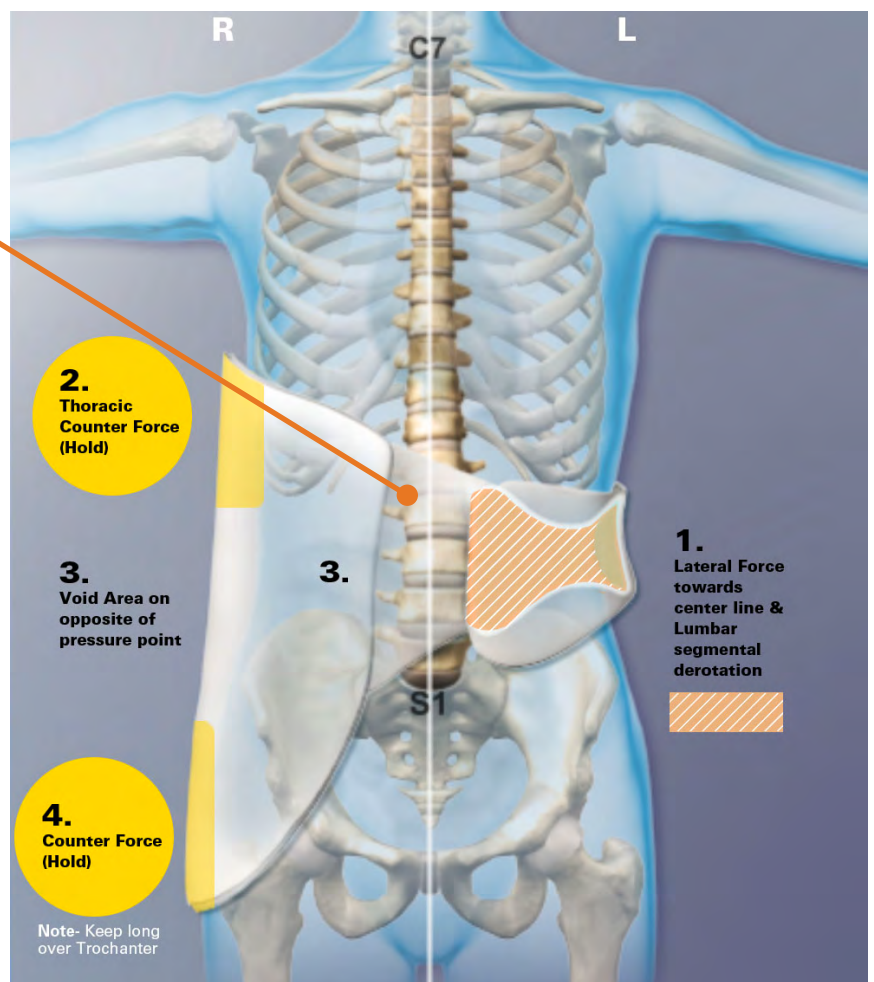
Using the Measurement Board for the Different Curve Types

Lumbar Curve

- After recording your measurements, place the Lumbar Pad on row zero with the pad between the iliac crest and the twelfth rib, but no compression.
- Stabilize S1 on the center line using the Trochanter Stabilizing Pad.
- Position the Thoracic Pad at the upper endpoint of the curve, perpendicular to the midline.
- Dial in the Lumbar Pad compression.



This is what the orthosis will look like.

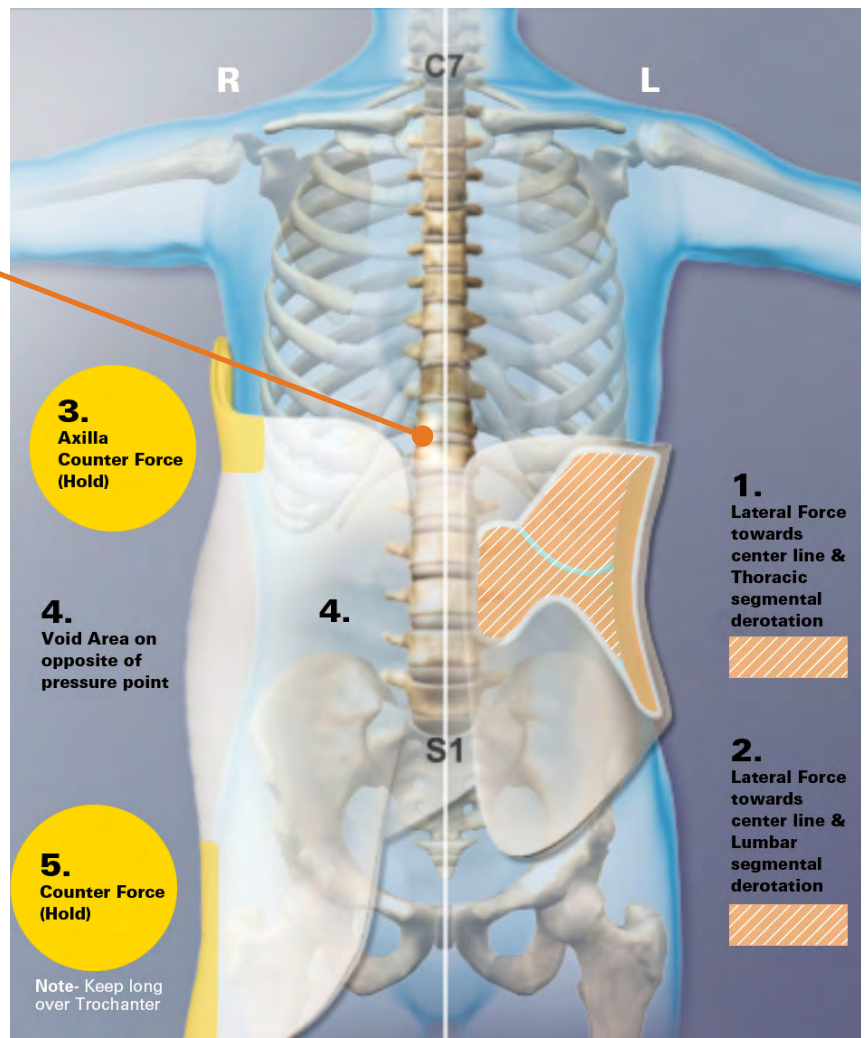


Thoracolumbar Curve

- After recording your measurements, place the Lumbar Pad on row zero with the pad between the iliac crest and the twelfth rib, but no compression.
- Stabilize S1 using the Trochanter Stabilizing Pad.
- Position the Axilla Stabilizing Pad at the upper endpoint of the curve perpendicular to the midline.
- Position the Thoracic Pad as close to the Lumbar Pad as possible.
- Dial in the Lumbar and Thoracic Pads for compression.



This is what the orthosis will look like.

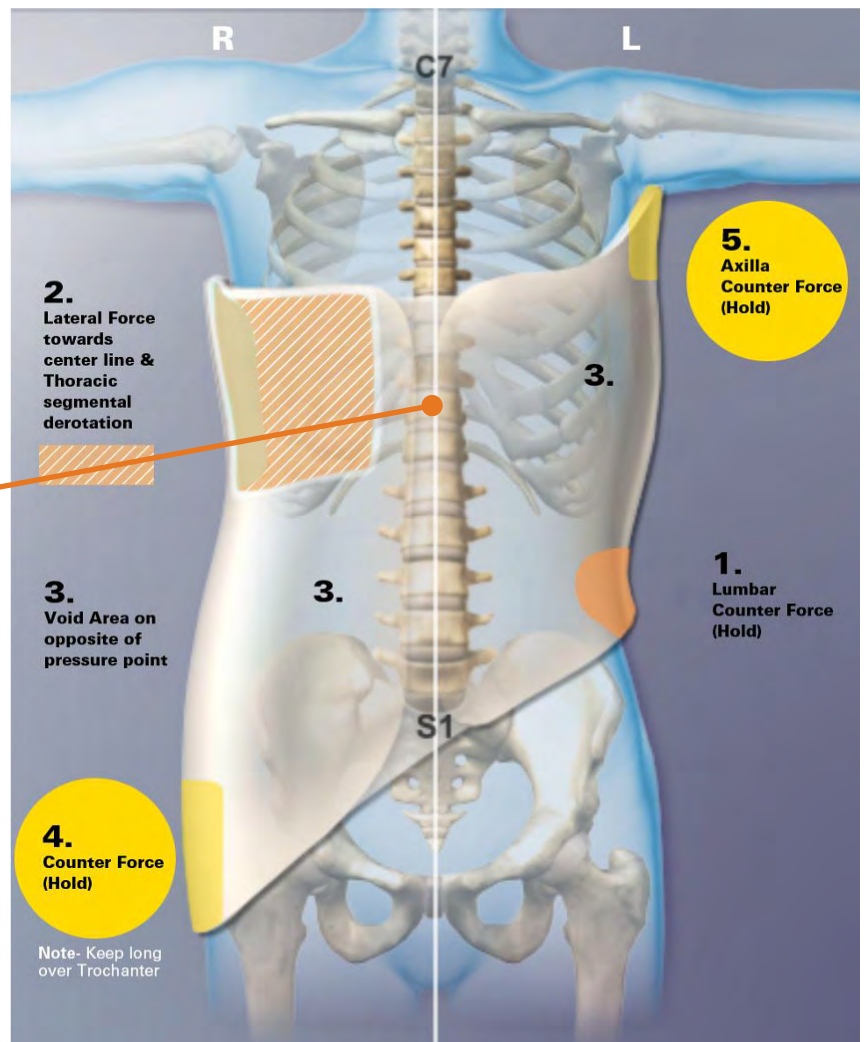


Thoracic Curve

- Place the patient measurements on the orthometry form.
- Place the Lumbar Pad at row zero.
- Stabilize S1 on the centerline using the Trochanter Stabilizing Pad.
- Position the Axilla Stabilizing Pad at the upper endpoint of the curve.
- Position the Thoracic Pad at the apex of the curve, perpendicular to the midline.
- Dial the Thoracic Pad in for correction.
- **Note:** The Lumbar Pad is used as a hold, not a corrective force.



This is what the orthosis will look like.



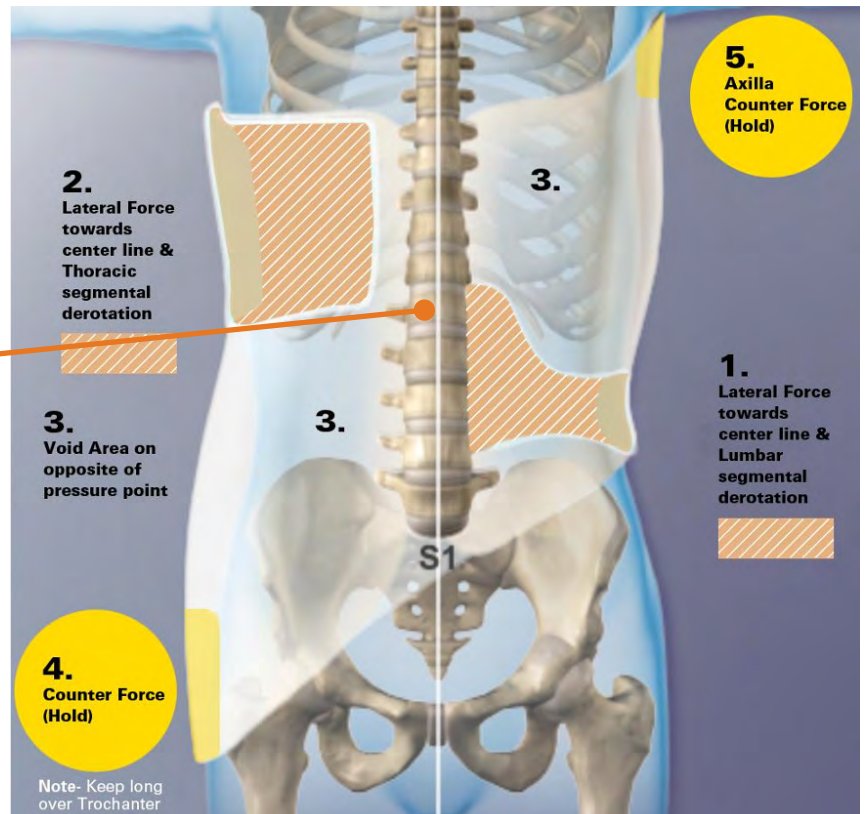
Double Curve

Right Thoracic, Left Lumbar

- Record your measurements and place your Lumbar Pad at row zero.
- Stabilize S1 centerline using the Trochanter Stabilizing Pad.
- Position the Axilla Stabilizing Pad at the upper endpoint of the curve, perpendicular to the midline.
- Position the Thoracic Pad at the apex of the curve, perpendicular to the midline.
- Dial in the Thoracic Pad for compression.



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To learn more about the Providence, visit Spinal.Tech/Providence.



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