

POSITIONING GUIDE LUMBAR SPINE

Lumbar Spine Protocol for CRMA Studies



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If you have additional questions or need further assistance, please feel free to call us or reach out to support@thespinalkinetics.com

POSITIONING GUIDE LUMBAR SPINE Lumbar Spine Protocol for CRMA studies

- 1. Lateral Lumbar Neutral (recommended)
- 2. Lateral Lumbar Flexion (required)
- 3. Lateral Lumbar Extension (required)



**You must review your films prior to sending into Spinal Kinetics for a CRMA study. Ensure all necessary views are taken and all anatomy is clearly visualized.

You should be re-taking your films if there is:

- 1. Motion. Have the patient sit if they are unsteady, this will help reduce motion.
- 2. Artifact (piercings, zippers, buttons, pins, etc.) that are superimposing anatomy.
- 3. If you do not have the top half of the Sacrum on your images, try not to cut off L1 if possible but do NOT sacrifice the Sacrum. The entire Lumbar spine should be visible in one view.
- 4. If you can see L2-L4 on Flexion, but can see more vertebrae on the Extension view, re-take Flexion views to include more vertebrae. We can only use the vertebrae that we visualize in BOTH Flexion and Extension views.
- 5. If the images are too dark or too light and you are not able to visualize the four corners of the vertebral bodies.

6. If there is rotation of the spine.

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Lateral Lumbar Neutral (Recommended)

- 1. Patient standing erect or sitting in true lateral position with no rotation of the spine.
- 2. Place patient in true lateral position with arms raised or folded in front of them at shoulder height.
- 3. Central Ray should be about 1" above the Iliac Crest.
- 4. Take exposure on expiration.
- 5. Ideally, we are able to view L1-Sacrum. If this is not possible, we will measure the levels that are able to be visualized clearly.



Lateral Lumbar Flexion (Required)

- 1. Patient standing erect or sitting in true lateral position, no rotation of the spine.
- 2. Have the patient bend at the waist (arms up on bar or in front of them).
- 3. The pelvis must remain as stationary as possible during positioning. The pelvis acts as a fulcrum (pivot point) during changes in position.
- 4. Central Ray should be about 1" above Iliac Crest (but look at collimation field to be sure you are including all anatomy).
- 5. Take exposure on expiration.
- 6. Ideally, we are able to view L1-Sacrum. If this is not possible, we will measure the levels that are able to be visualized clearly.



Lateral Lumbar Extension (Required)

- 1. Patient standing erect or sitting in true lateral position, no rotation of the spine.
- 2. Patients arms should be either be raised or folded in front of them at the level of the shoulders.
- 3. Have the patient bend backwards at the waist.
- 4. The pelvis must remain as stationary as possible during positioning. The pelvis acts as a fulcrum (pivot point) during changes in position.
- 5. Central Ray should be about 1" above the Iliac Crest (but look at collimation field to be sure you are including all anatomy).
- 6. Take exposure on expiration.
- 7. Ideally, we are able to view L1-Sacrum. If this is not possible, we will measure the levels that are able to be visualized clearly.



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Proper and Improper Lumbar Flexion Positioning



This is a properly positioned Lumbar Lateral Flexion view. As you can see the patient is rolling the lumbar spine forward, not flexing at the hips. The patient has rolled their lumbar spine forward bending 75 degrees from vertical, using the pelvis as a fulcrum. (pivot point). When the patient is positioned this way it provides accurate intersegmental motion.



This Lumbar Lateral Flexion is NOT positioned correctly. The patient is flexing at the hip joint rather than at the Lumbar spine. The patient should have been instructed to stand straight and roll the lumbar spine forward bending 75 degrees from vertical, using the pelvis as a fulcrum (pivot point)



This Lumbar Lateral Flexion is NOT positioned correctly. The patient is actually sticking their buttocks out which is forcing the lumbar spine to actually extend instead of flex.

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LUMBAR SPINE IMAGES (Acceptable vs. Unacceptable Examples)

The images below are of great diagnostic quality. We can visualize L1 as well as the upper ½ of the sacrum. Please note the use of the Flexion/Extension markers on all the images.







The images below are examples of improper positioning, artifact and being too dark. These images would need to be repeated.







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