



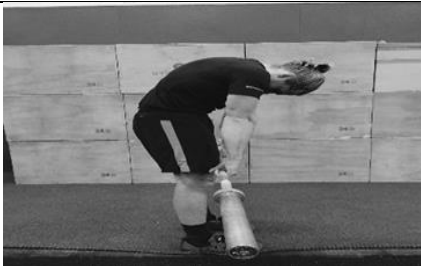







## Appendix 2 Mobility

Name	Objective/functionality		Description and comments
Thoracic extension on foam roller	Extension mobility  Non functional Dynamic		A foam roller is used as a moveable fulcrum/hinge point to improve localization of extension mobilisation.  A challenge to this exercise is controlling the lumbar spine during thoracic extension to avoid hinging in the low back during execution.
Kneeling thoracic spine extension stretch	Extension mobility  Non functional Dynamic		Combines general thoracic extension mobilisation with stretch of shoulders.  Stress on shoulders, hips, knees and ankles.
Thoracic flexion quadruped with and without foam roller	Flexion mobility  Non functional Dynamic		Non-weight bearing and with broad base of support. The stretch is performed with musculature working against gravity.  Not utilising body weight or levers to increase the stretch. Stress on hips, knees and ankles.
Thoracic flexion quadruped	Flexion mobility  Functional Static		Similar to flexion quadruped, with additional use of a foam roller fulcrum to lengthen upper body lever and activation of flexor musculature to create more force to stretch the thoracic spine.  Stress on ankle and knees.

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Jefferson curl	Flexion mobility  Functional Dynamic		Intended to target the whole back, stopping before flexion of the low back the exercise can arguably be more specific to the thoracic spine. Barbell works as a weight to pull into a flexion stretch. More demanding on motor control as standing, and need to control the weight while lowering the bar.
Seated side flexion with/without rotation	Side flexion/rotation mobility  Functional Dynamic		Combined trunk rotation with side flexion, allowing the athlete to reproduce specific movement of combined side flexion and rotation based on the individual sporting demands.  Difficult to target thoracic spine side flexion.
Sidelying side-flexion over Swiss ball	Side flexion mobility  Non functional Static		Uses a Swiss ball as a fulcrum to mobilise into side flexion movement. More demanding of motor control to balance using the unstable surface. Can incorporate mobility of arm and hip into stretch.  Difficult to isolate thoracic spine during performance.
Sidelying thoracic rotation	Rotation mobility  Non functional Dynamic		Targets the rotation of the thoracic with pelvis positioning aiming to stabilise lumbar spine. Can incorporate bands over top shoulder to create resistance to movement as well as stretching of the hip and shoulder.

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<p>Quadruped thoracic rotation</p>	<p>Rotation mobility</p> <p>Non functional</p> <p>Dynamic</p>		<p>The “lumbar locked position” uses full hip and knee flexion to “lock” the lumbar spine in flexion, making it more specific to thoracic rotation.</p> <p>Demanding on hips, knees and ankles.</p>
<p>Squat with extension and rotation</p>	<p>Rotation/extension mobility</p> <p>Non functional</p> <p>Static</p>		<p>Combined thoracic rotation and extension in a squat position. Use of hands allows the athlete to create an overpressure to rotation and extension of the thorax, while the lower lumbar spine is in relative neutral. Can also incorporate stretch of upwards facing shoulder. Requires good squatting technique, and demanding on hips, knees and ankles.</p>