

Exercise #4 SPINAL FLEXION FROM SUPINE POSITION

Purpose: To strengthen the rectus abdominis without compromising the integrity of the spine

Common uses for emphasized muscles in daily activity: Getting out of bed in the morning; anytime moving from a supine to a vertical position

Muscular Emphasis: Transverse abdominis to compress abdomen and stabilize lumbo-pelvic region; rectus abdominis and Obliques concentrically to create thoracic flexion, eccentrically to control return down.

Primary Muscle Mover(s): Rectus Abdominis

Secondary Muscle Mover(s): None

Muscle Stabilizers: Shoulder girdle stabilizers (to move scapulae into neutral from protracted position), Hip flexors (iliopsoas and quadriceps) to stabilize pelvis

Postural Landmarks:

- Stabilize rib cage and scapulae throughout, avoiding protraction of the shoulders
- Do not contract into full posterior tilt of the pelvis (try to maintain neutral lumbar spine)
- Do not hyperflex the cervical vertebrae
- Make sure the feet stay grounded, ensuring that hip flexors are not engaged
- Do not overwork the rectus abdominis by 'flexing' too high, giving the appearance of popping abdominals

Anatomy:

Rectus Abdominis

The *Rectus abdominis* is a band of muscles that originates on the pubic symphysis and crest and inserts on the costal cartilages 5, 6, 7 and xiphoid process. It contracts strongly when doing sit-ups or lifting both legs several inches from the floor in a supine position (while maintaining a neutral pelvis). Contrary to popular belief the rectus abdominis is not a group of 6-8 individual muscles, but simply two long bands of muscle that run from the ribs to the pelvis. <http://www.exrx.net/Muscles/RectusAbdominis.html>