76a Orthopedic Massage: Introduction - Low Back Pain

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Class Outline

5 minutes	Attendance, Breath of Arrival, and Reminders
10 minutes	Lecture:
25 minutes	Lecture:
15 minutes	Active study skills:
60 minutes	Total

76a Orthopedic Massage: Introduction - Low Back Pain

Class Reminders

Quizzes:

- 78a Kinesiology Quiz (erectors, lats, quadratus lumborum, multifidi, rotatores) – 50 questions in 40 minutes

Spot Checks:

- 78b Orthopedic Massage: Spot Check – Low Back Pain
- 81b Orthopedic Massage: Spot Check – Rotator Cuff and Carpal Tunnel

Assignments:

- 85a Orthopedic Massage: Outside Massages (2 due at the start of class)

Preparation for upcoming classes:

- 76b Orthopedic Massage: Technique Demo and Practice – Low Back Pain - Packet j:69-76
- 77a Myofascial and Fascia Techniques (Part II)
- 77b Orthopedic Massage: Technique Demo and Practice – Low Back Pain - Packet J: 69-76 and 77-78
- 78a Kinesiology Quiz
- 78b Orthopedic Massage: Spot Check – Low Back Pain
- 79a Orthopedic Massage: Introduction – Rotator Cuff and Carpal Tunnel -Packet J: 79-84

Classroom Rules

Punctuality - everybody's time is precious

- Be ready to learn at the start of class; we'll have you out of here on time
- Tardiness: arriving late, returning late after breaks, leaving during class, leaving early

The following are not allowed:

- Bare feet
- Side talking
- Lying down
- Inappropriate clothing
- Food or drink except water
- Phones that are visible in the classroom, bathrooms, or internship

You will receive one verbal warning, then you'll have to leave the room.

Quadratus Lumborum, Trail Guide Page 207

A

Unilaterally:
Laterally tilt (elevate) the pelvis

Laterally flex the vertebral column to the same side

Assist to extend vertebral column

Bilaterally:
Fix the last rib during forced inhalation and exhalation

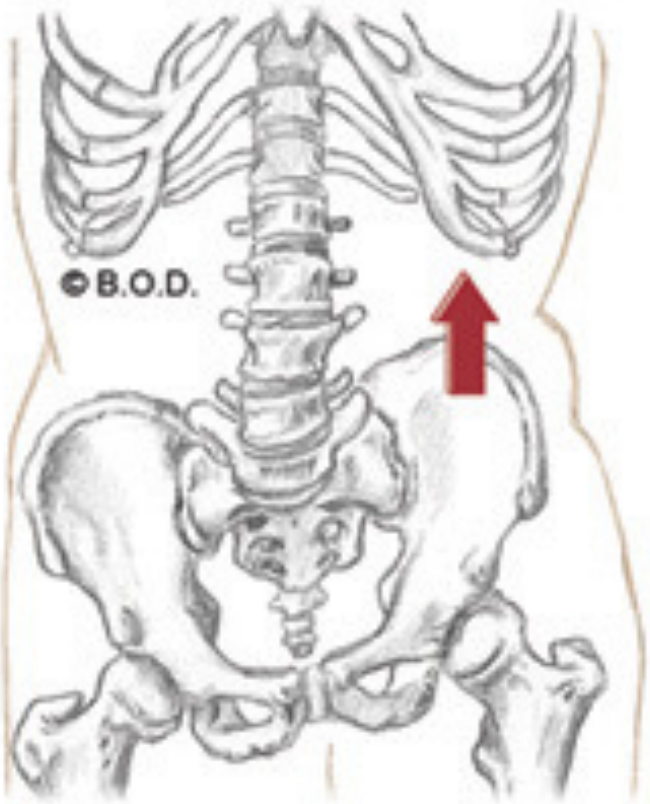
O

Posterior iliac crest

I

Last rib

Transverse processes of 1st-4th lumbar vertebrae



Anterior View

Quadratus Lumborum, Trail Guide Page 207

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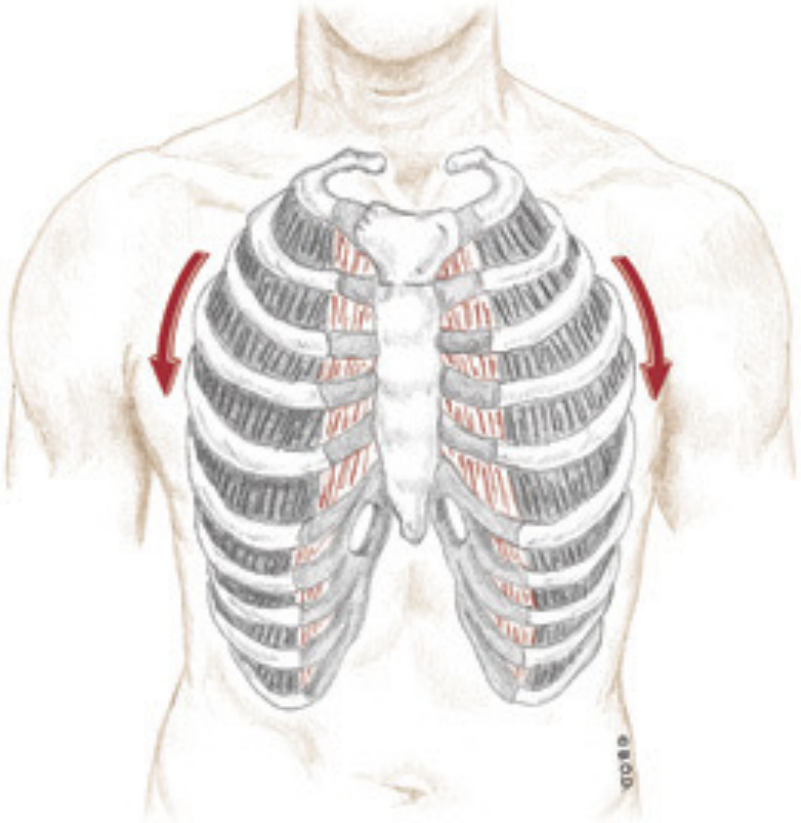

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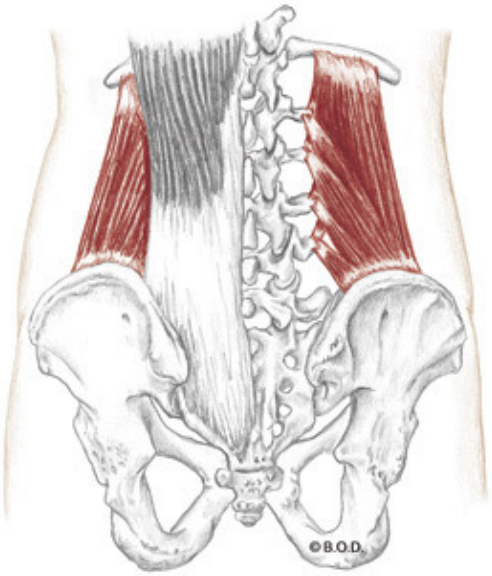

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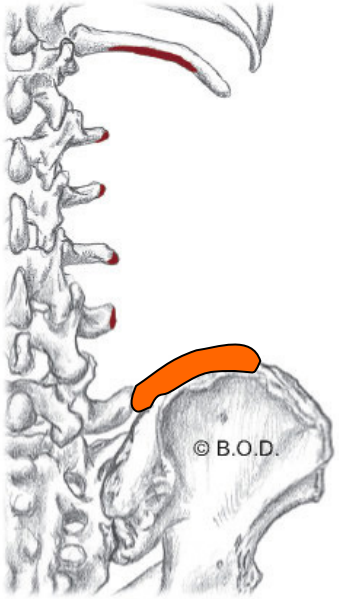

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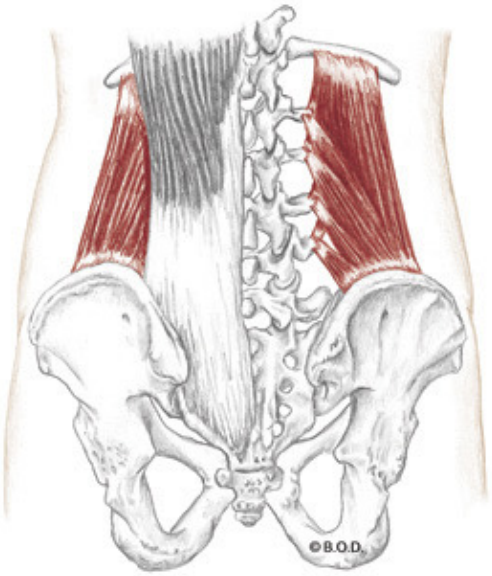

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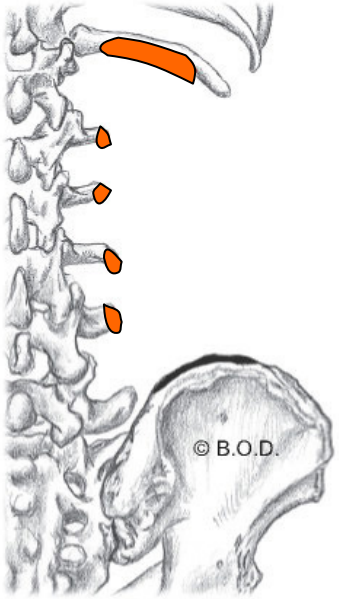
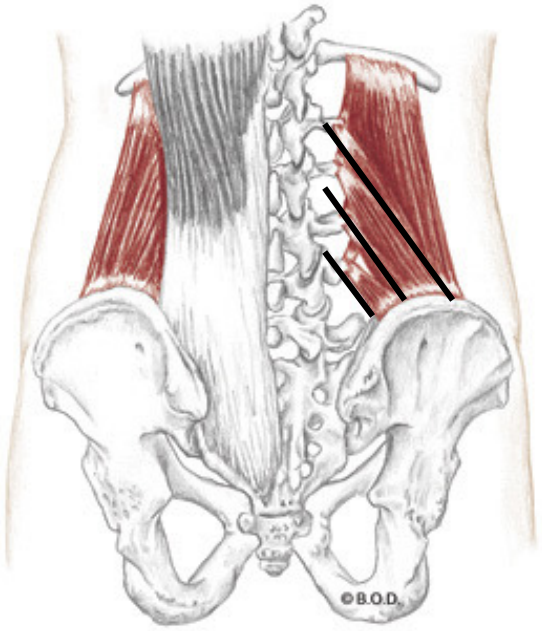
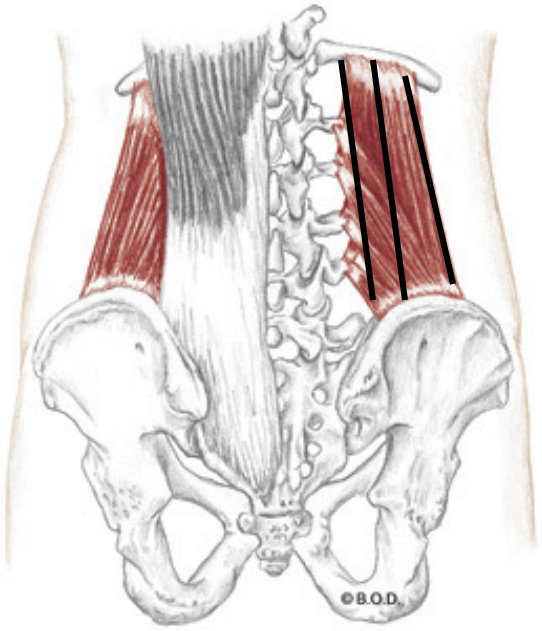


Quadratus Lumborum, Trail Guide Page 207

NOTE: the three lines of QL fibers correspond to the deep longitudinal stripping used in the orthopedic protocol for Low Back Pain.



Posterior View



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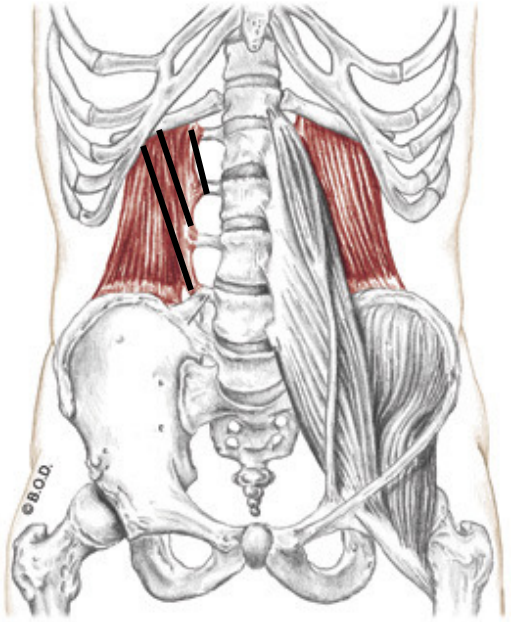


Anterior View


Switching
gears

Multifidi, Trail Guide Page 201

A

Unilaterally:
Rotate the vertebral column to the opposite side

Bilaterally:
Extend the vertebral column

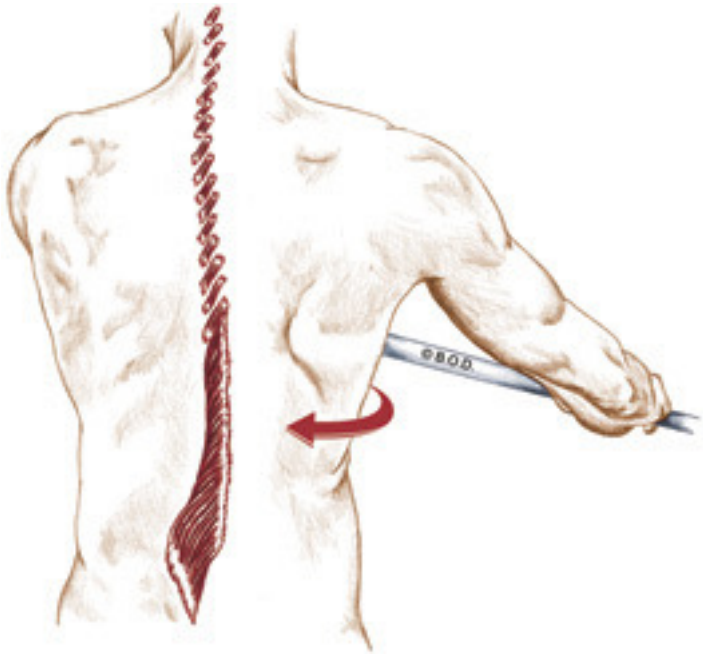
O

Sacrum

Transverse processes of lumbar vertebrae through cervical vertebrae

I

Spinous processes of lumbar vertebrae through 2nd cervical vertebrae spanning 2 to 4 vertebrae



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Multifidi, Trail Guide Page 201

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Multifidi, Trail Guide Page 201

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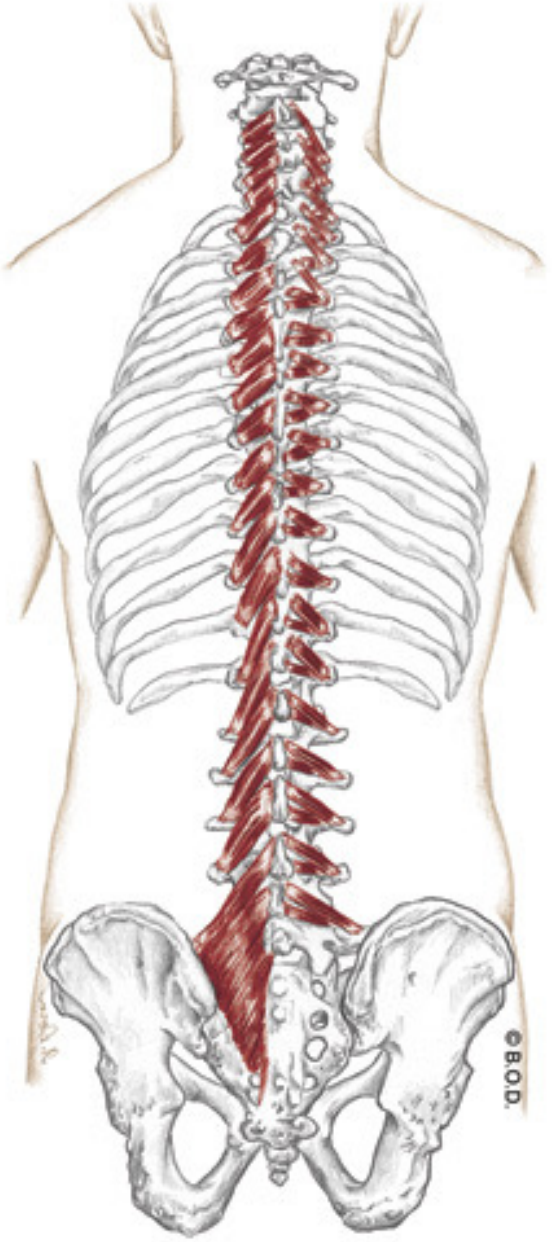

Multifidi Rotatores

Multifidi, Trail Guide Page 201

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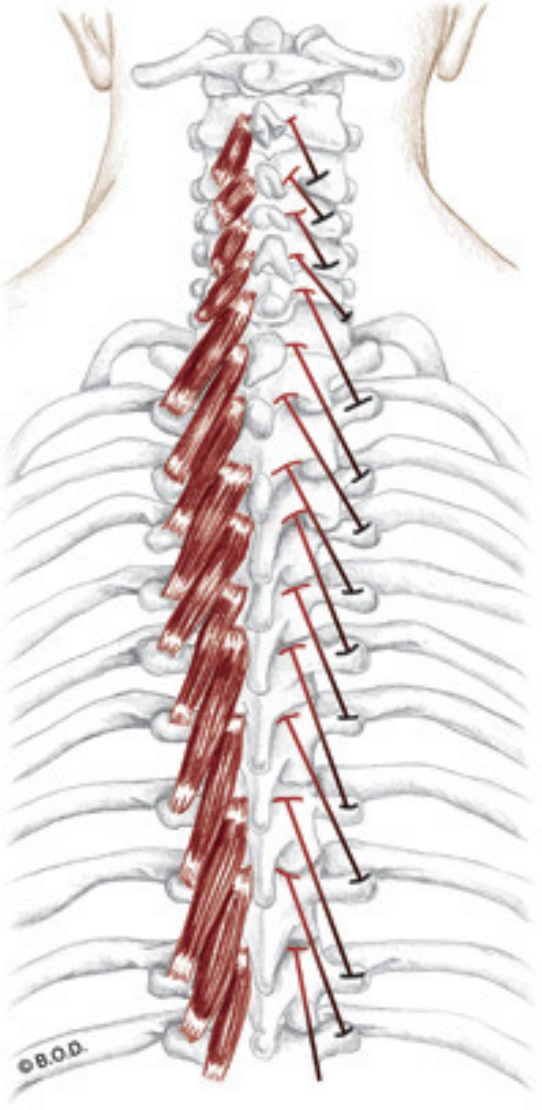

Multifidi

Posterior view

Multifidi, Trail Guide Page 201

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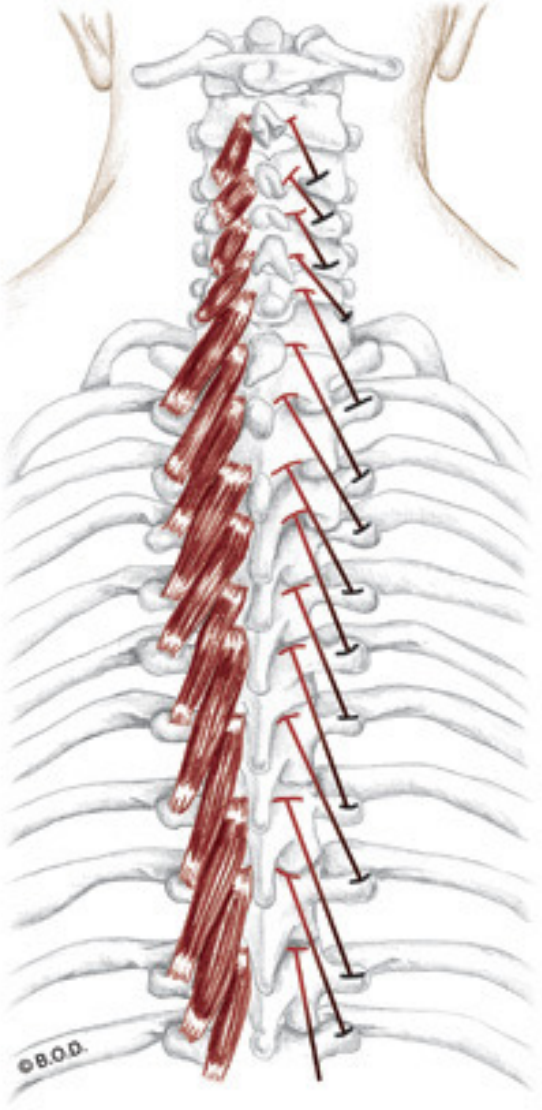

Multifidi

Posterior view


SWITCHING
GEARS
A BIT...

Rotatores, Trail Guide Page 201

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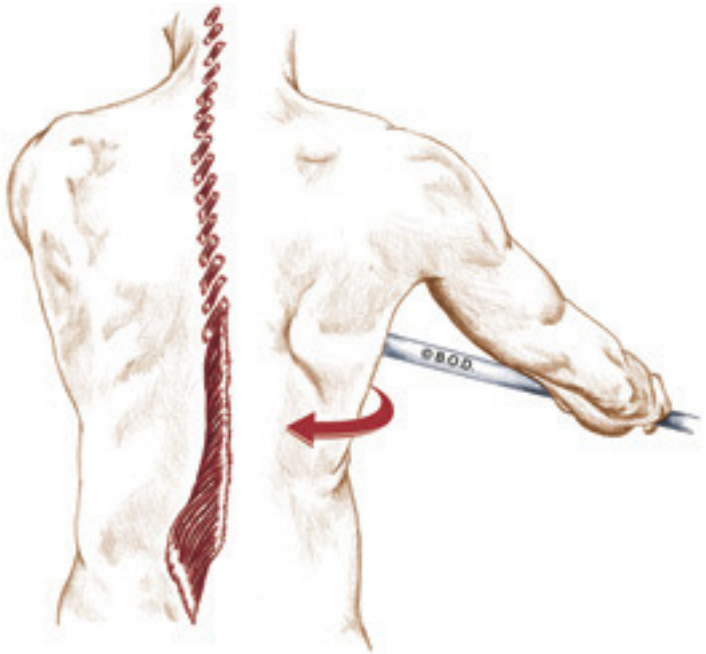

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Rotatores, Trail Guide Page 201

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Rotatores, Trail Guide Page 201

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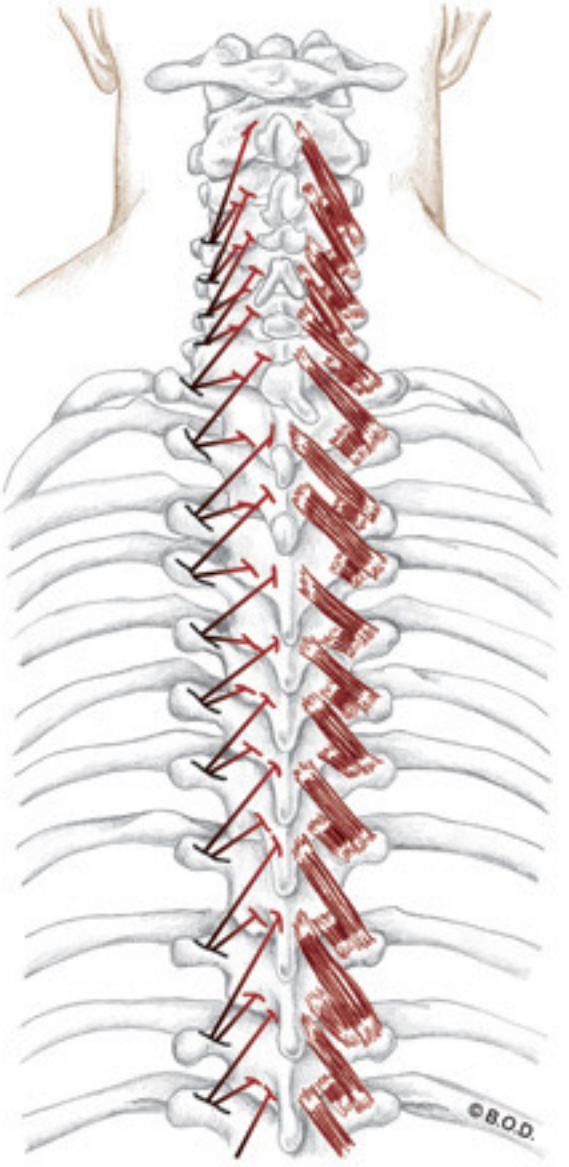

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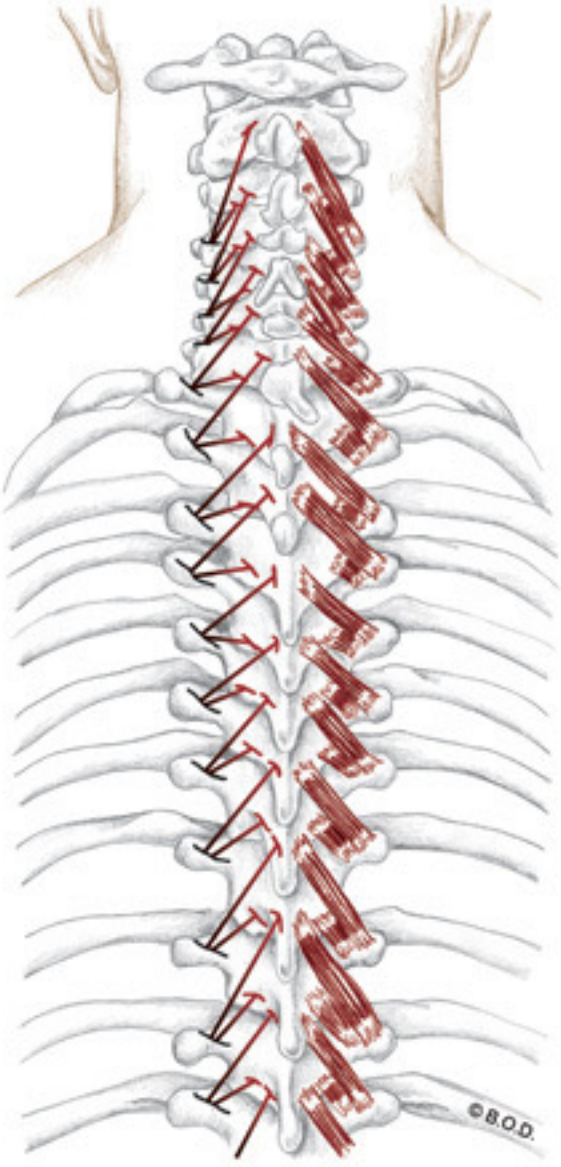


Posterior View

76a Orthopedic Massage: Introduction - Low Back Pain

J - 65

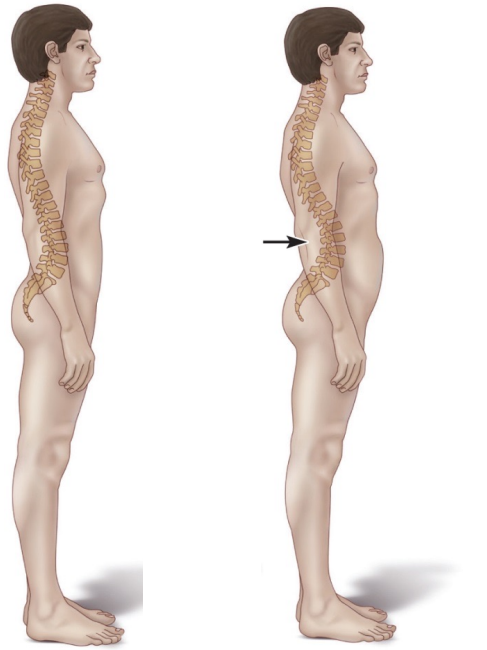
Causes of Low Back Pain (that we will learn to address)

1. Zygapophysial joint dysfunction

2. Neuromuscular dysfunction

Zygapophysial Joint Dysfunction

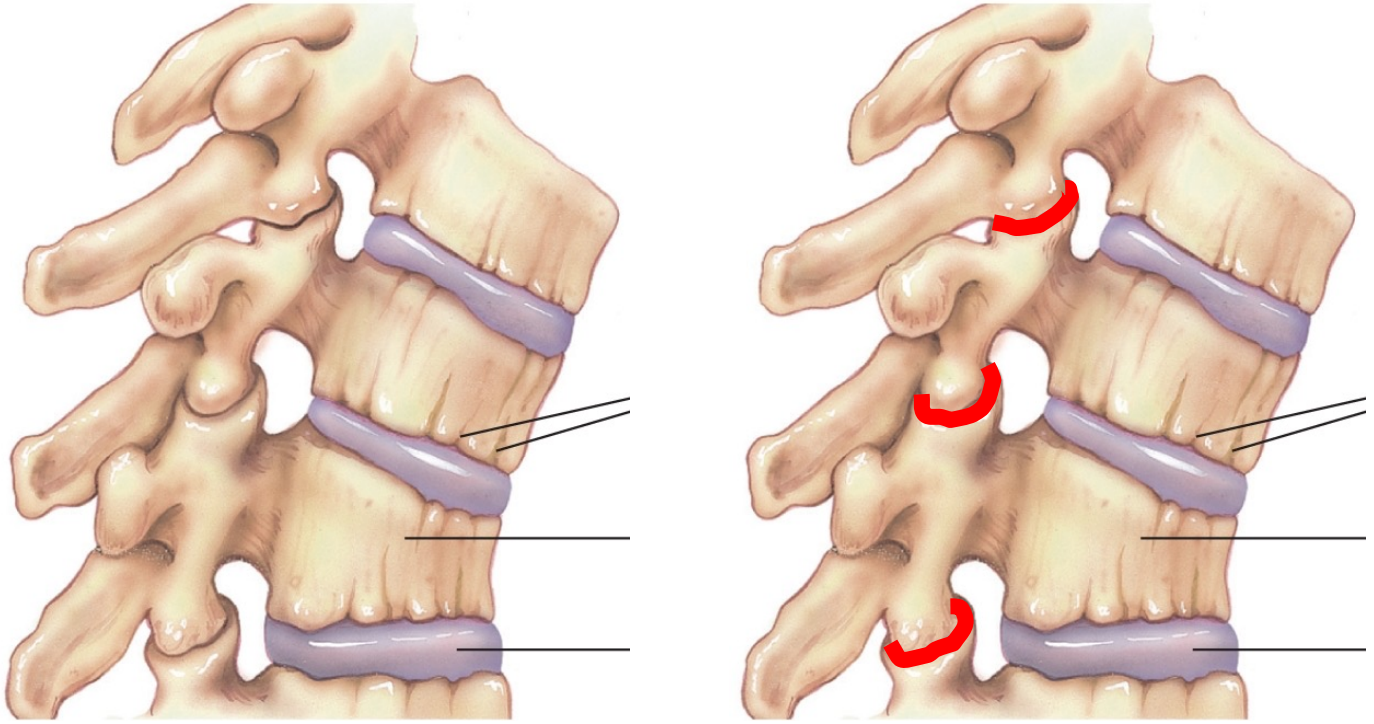
1. Zygapophysial joint dysfunction (Z-joint dysfunction) Lumbar hyperlordosis overloads the Z-joints causing joint capsule and synovial inflammation, and chondromalacia.



Normal Hyperlordosis

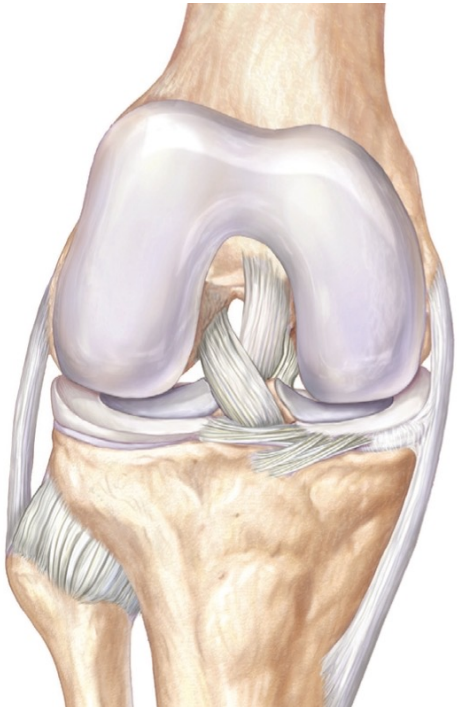
Zygapophysial Joint Dysfunction

Zygapophysial joint (AKA: facet joint, or Z-joint) Synovial joint between the superior articular process of one vertebra and the inferior articular process of the vertebra directly above it.



Zygapophysial Joint Dysfunction

Chondromalacia Degeneration (softening) of articular cartilage. Most common occurrence is on the underside of the patella, called chondromalacia patellae.



Other Causes of Low Back Pain

- Sacroiliac joint dysfunction (previously addressed)
- Herniated disc
- Systemic disorders
- Tumors or infections

Signs and Symptoms of Low Back Pain Due to Z-joint Dysfunction

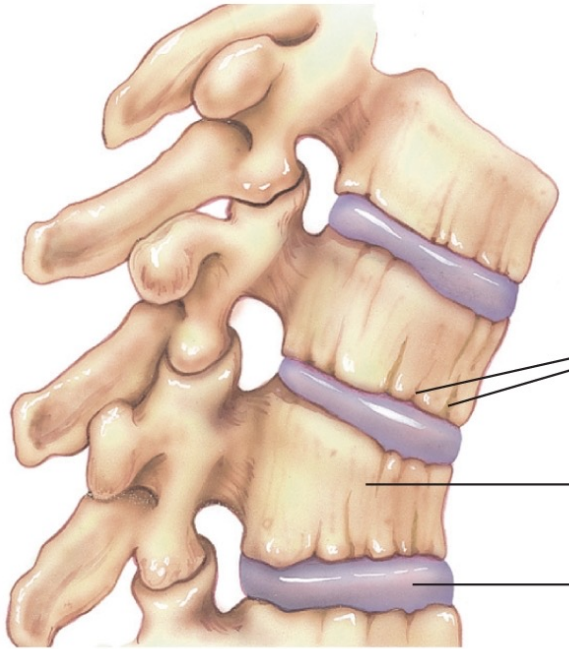
- Non-specific, deep, and achy
- Localized in a paravertebral area, unilaterally or bilaterally
- Worse in the morning
- Relieved by repeated motion
- Not worsened with coughing or laughing

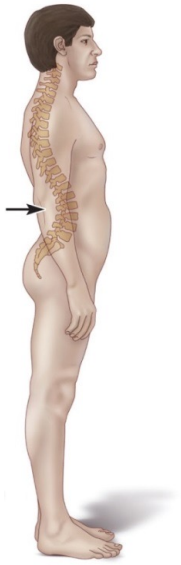
Activities that Exacerbate Low Back Pain due to Z-Joint Dysfunction

- Rest
- Hyperextension
- Twisting
- Stretching
- Lateral bending

Why is Z-Joint Dysfunction More Common in Lumbar Vertebrae

- Z-joints are partial load-bearing joints, and
- Vertebral extension increases the load carried by Z-joints, and
- Lumbar vertebrae are already in extension due to their lordotic curve





Hyperlordosis

Traditional Treatments for Z-Joint Dysfunction

NSAIDs and cryotherapy

- Variable effectiveness: inflammation is not always present
- Long term use may lead to GI tract and cardiovascular risks

Instruction in body mechanics, stretching, and strength training

- Effective: if done regularly to reduce lumbar lordosis

Corticosteroid injections

- Not effective

Neuromuscular Dysfunction

Neuromuscular dysfunction Impaired or abnormal functioning of nerves that control skeletal muscles.

Etiology
of Low Back Neuromuscular Dysfunction

- Trauma
- Fatigued muscles that are suddenly and awkwardly overloaded during a combined lateral flexion and rotation motion
- Dysfunctional coordination between muscle recruitment and fascial tension

Complications of Low Back Pain Due to Neuromuscular Dysfunction

- Postural stress in standing and sitting positions

- Altered movement patterns:
  - Restricted motion between two vertebral segments can increase or decrease motion at other segments
  - This lack of proper vertebral coordination leads to a mechanical overload and neuromuscular dysfunction of numerous muscles

Traditional Treatments for Low Back Pain Due to Neuromuscular Dysfunction

Bed rest

- Not effective: more detrimental than helpful
- Provides pain relief
- Causes muscle splinting and range of motion limitations
- May lead to deep vein thrombosis in the lower extremity

Traditional Treatments for Low Back Pain Due to Neuromuscular Dysfunction

NSAIDs

- Variable effectiveness: inflammation is not always present
- Long term use may lead to GI tract and cardiovascular risks

Corticosteroid injections

- Variable effectiveness: inflammatory and pain management

Traditional Treatments for Low Back Pain Due to Neuromuscular Dysfunction

Instruction in body mechanics, stretching, and strength training

- Effective: if done properly and regularly

Considerations and Cautions for Low Back Pain

- Restore proper joint biomechanics without increasing further trauma
- Stretching can be very helpful, especially if performed after massage
- If symptoms get worse as a result of treatment, cease that approach and reinvestigate the problem. You may need to refer the client to a more qualified practitioner for further evaluation
- Pay close attention to the pain reported by the client

Considerations and Cautions for Low Back Pain

- When in doubt about the cause of Low Back Pain, refer that client to a more qualified practitioner for further evaluation

- This treatment can dramatically alter muscular proprioception resulting in spasms in an easily overloaded muscle. Have the client move slowly and carefully when first getting up from the massage table and for a short time afterward

76a Orthopedic Massage: Low Back Pain - Introduction