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# THE CONCEPT OF PAINFUL MINOR INTERVERTEBRAL DYSFUNCTION

Robert MAIGNE (PARIS)

# **Current theory on spinal manipulation:**

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- The aim of manipulation is to restore normal mobility to a hypomobile vertebral segment (or joint)
- The diagnosis of hypo or hypermobility is based solely on palpation



**Assessment of segmental mobility is generally regarded as the keystone of manual medicine for diagnosis and treatment**

# This theory is open to criticism

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- Clinical assessment of hypomobility is not a reliable and reproducible test
- Hypomobility is frequent in osteoarthritic cadaveric vertebral joints
  - There is no evidence that it may be a source of pain
  - Hypomobility could be regarded as a protective mechanism against overuse of a degenerated joint

# The R. Maigne School I

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- If any component of the vertebral motion segment originates pain...
- ...It is likely that stressing this motion segment by specific maneuvers will elicit pain
- The tests we use depend solely upon eliciting tenderness or pain of the segment
- No particular attention is paid to hypomobility *per se*

# The R. Maigne School II

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- This does not mean that hypomobility does not exist
- It means that hypomobility is not the major or primary element regarding vertebral pain
- Hypomobility may be
  - a casual consequence of pain
  - or without relationship with the pain

# SEGMENTAL EXAMINATION

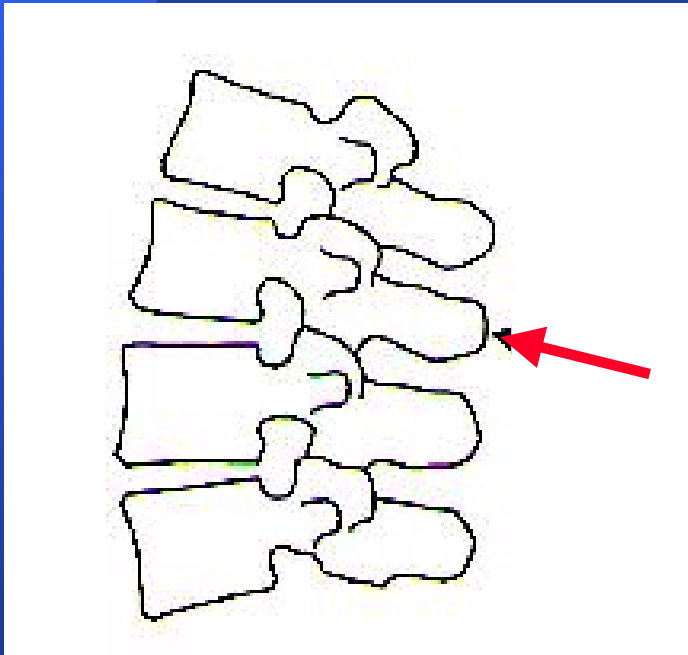
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**The four specific maneuvers of the segmental examination are:**

- 1 - Pressure on the spinous process
- 2 - Transverse pressure against the spinous process
- 3 - Longitudinal friction on the facet joints
- 4 - Pressure on the interspinous ligament

# SEGMENTAL EXAMINATION

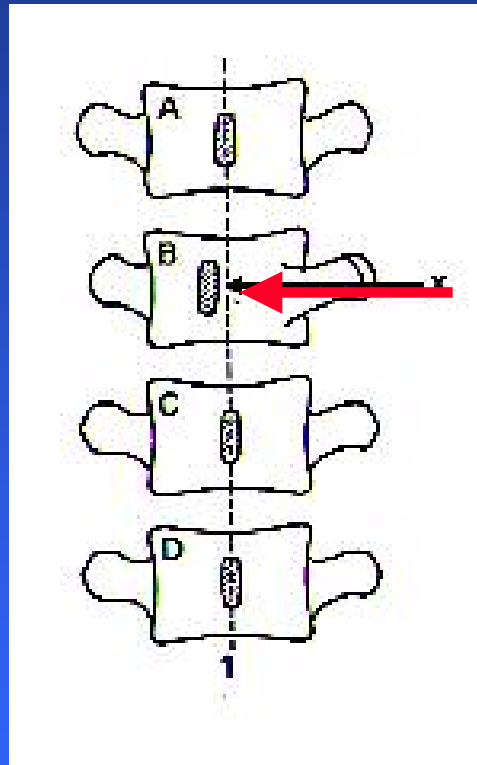
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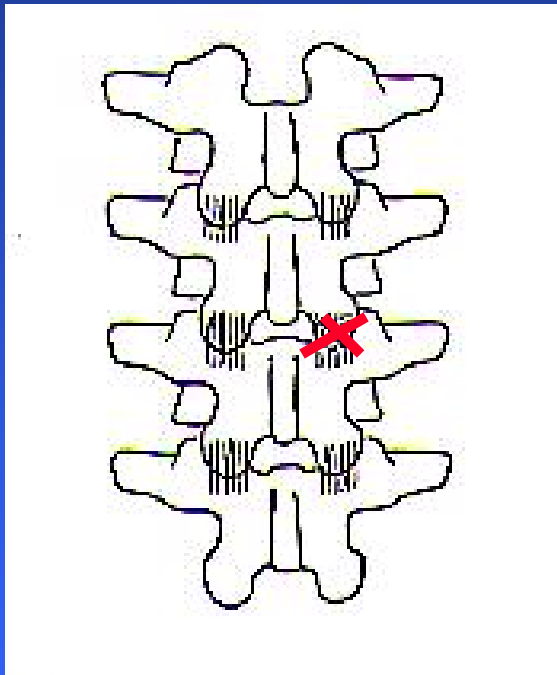


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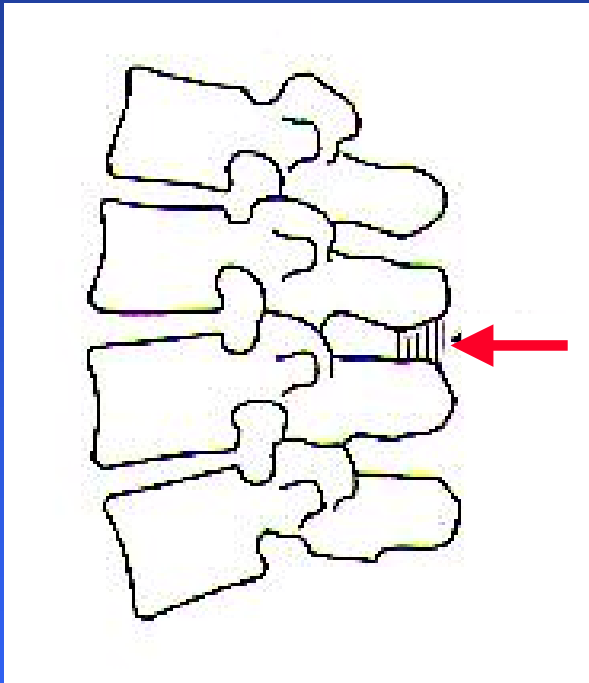
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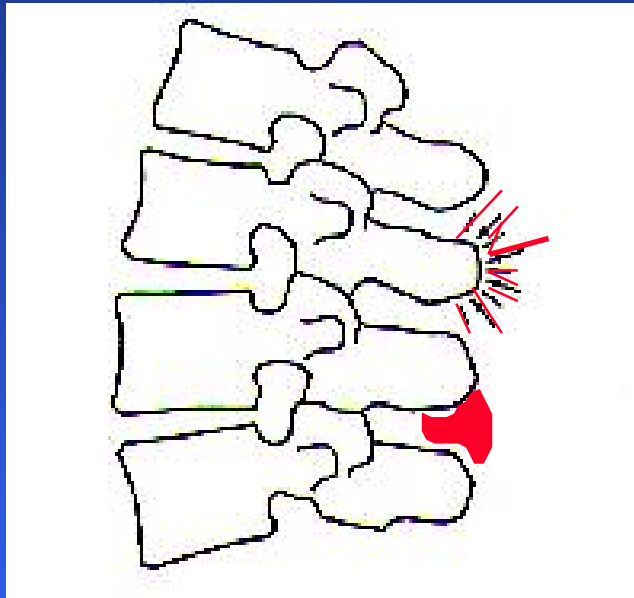


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# SEGMENTAL EXAMINATION

## Source of errors

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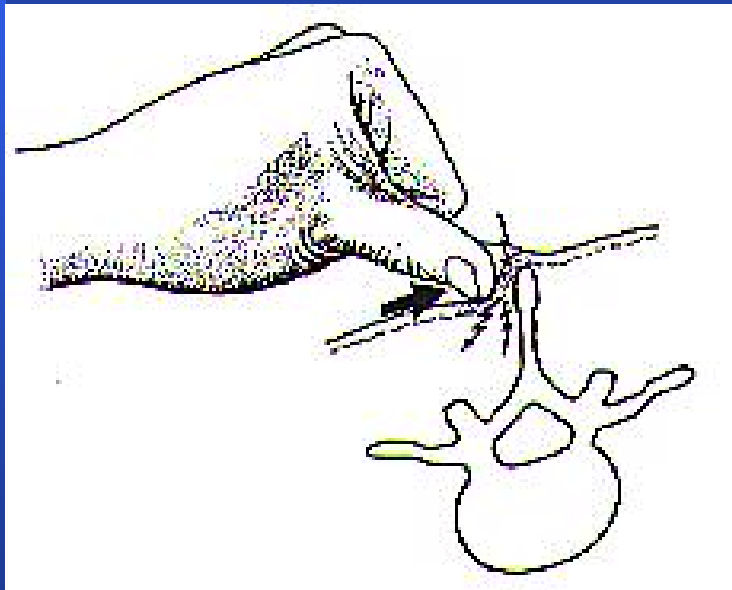


- Superficial tenderness of the spinous process
- Interspinous acute bursitis

# SEGMENTAL EXAMINATION

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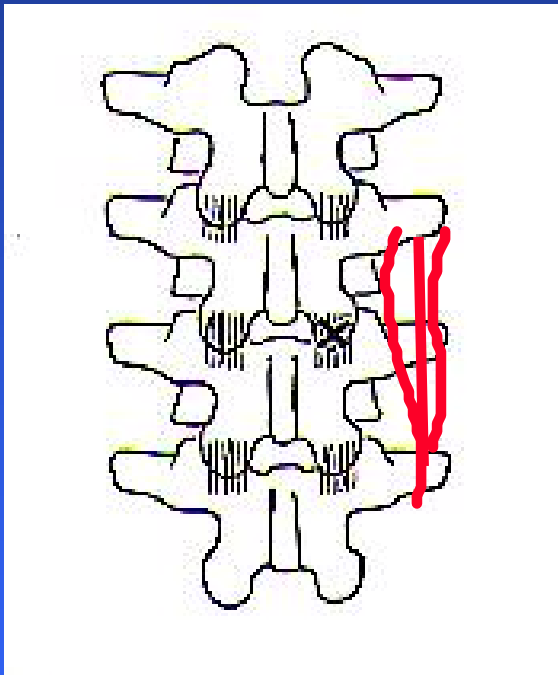


- Pressure of a sensitive or cellalgic skin over the spinous process

# SEGMENTAL EXAMINATION

## Source of errors

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- Pressure of a cellulalgic skin or tender taut muscular bands against the z-joints

# Pain Originating from a Vertebral Motion Segment Can Be Due To Many Causes (benign or not)

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- Some are more or less easily recognizable
  - Disc herniation
  - Acute synovitis of the Z-joints
- Others would be only recognizable with sophisticated investigations
  - Facet blocks
  - Discography + MRI

## These tests

- Are positive in less than 50% of the cases (Schwarzer et al, 1995)
- Are not applicable in routine daily practice

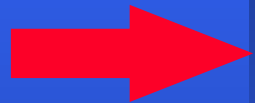
# **Pain from a Motion Segment Can Be Due To Many Causes**

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- **Segmental examination focuses the interest on the painful segment**
- **Special attention must be paid on this segment**
- **Depending on the clinical and the radiological context, further investigations may be necessary**

# **Painful Minor Intervertebral Dysfunction (MID, R. Maigne)**

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**The diagnosis of Painful MID is evoked**

- 1 - When the segmental examination is positive
- 2 - When the pain is considered as common
- 3 - Whether the X-Rays films are normal or show non significant degenerative changes



# **PAINFUL MINOR INTERVERTEBRAL DYSFUNCTION (R. Maigne)**

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## **MID :**

- Is the result of trauma, efforts, bad postures, repeated micro-traumas...
- Is not linked to any neurological deficit or X-Ray abnormality
- The diagnosis of MID is purely clinical
- It is based on segmental examination

# **Painful Minor Intervertebral Dysfunction (R. Maigne)**

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**In the framework of common pain syndromes, the most frequent causes of segmental dysfunction are:**

- "Painful Minor Intervertebral Dysfunction" (MID)
- Disc lesions
- Synovitis of zygapophyseal joints

# Painful Minor Intervertebral Dysfunction

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- Painful minor intervertebral dysfunction may be considered as a self-sustaining sprain of the vertebral segment
- The Painful MID can be active or latent. The signs of MID are permanent in chronic cases even between attacks

# Painful Minor Intervertebral Dysfunction

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Painful minor intervertebral dysfunction appears to be the common denominator of a great number of vertebral pain

- directly
- or by intermediary of **reflex manifestations** that may be determined in the corresponding metamere : **Segmental Vertebral Cellulo - Teno-Periosteo-Myalgic Syndrome**

*(R. Maigne)*