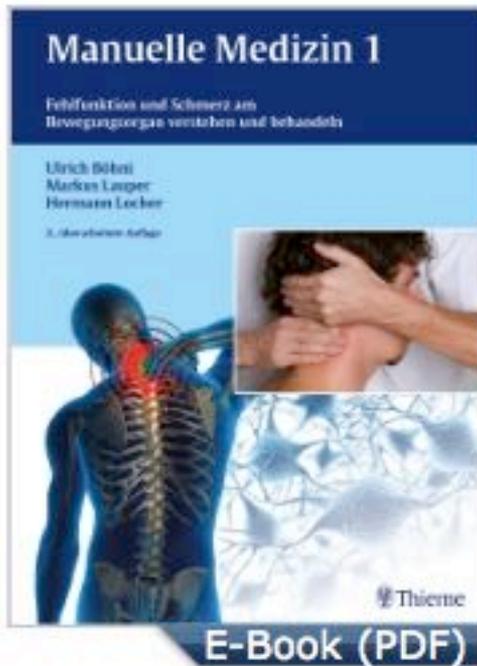




# Examination of the Lumbar Spine

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Med Man (S.A.M.M.)

Varna Sept 18-19th 2016



## Manuelle Medizin 1 (E-Book PDF)

Fehlfunktion und Schmerz am Bewegungsorgan verstehen und

> Ulrich W. Böni > Markus Lauper > Hermann-Alexander Locher

**Buch**

**E-Book (PDF)**

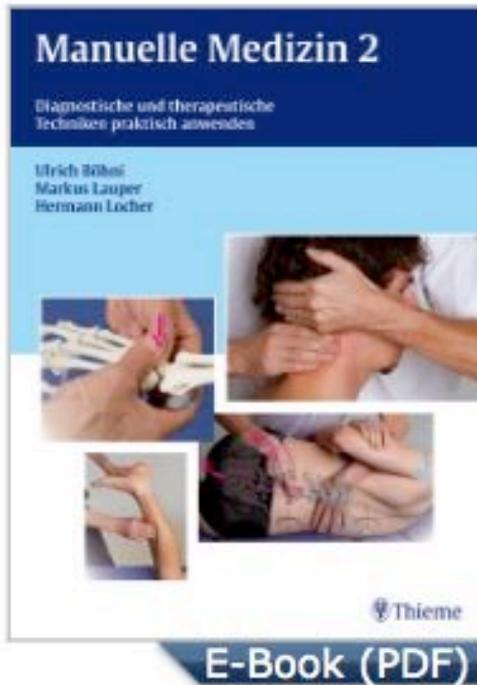
2., überarbeitete  
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, PDF  
ISBN: 9783131652621

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Diagnostische und therapeutische Techniken praktisch anwenden

> Ulrich W. Böhni > Markus Lauper > Hermann-Alexander Locher

2011  
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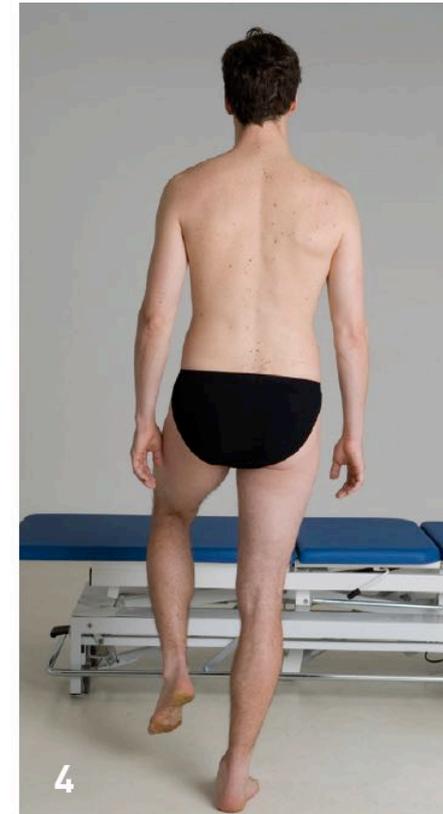
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MwSt.

# First step

- Inspection

## Inspection: Posture and Function: pa



## Inspection: Posture und Function pa



## Inspection:



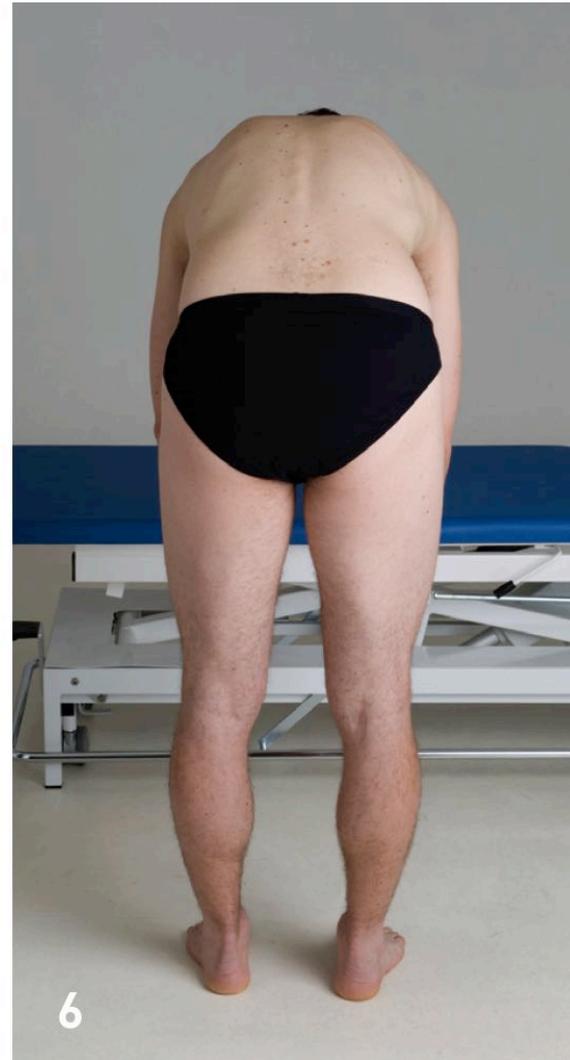
## Inspection: pelvis inclination



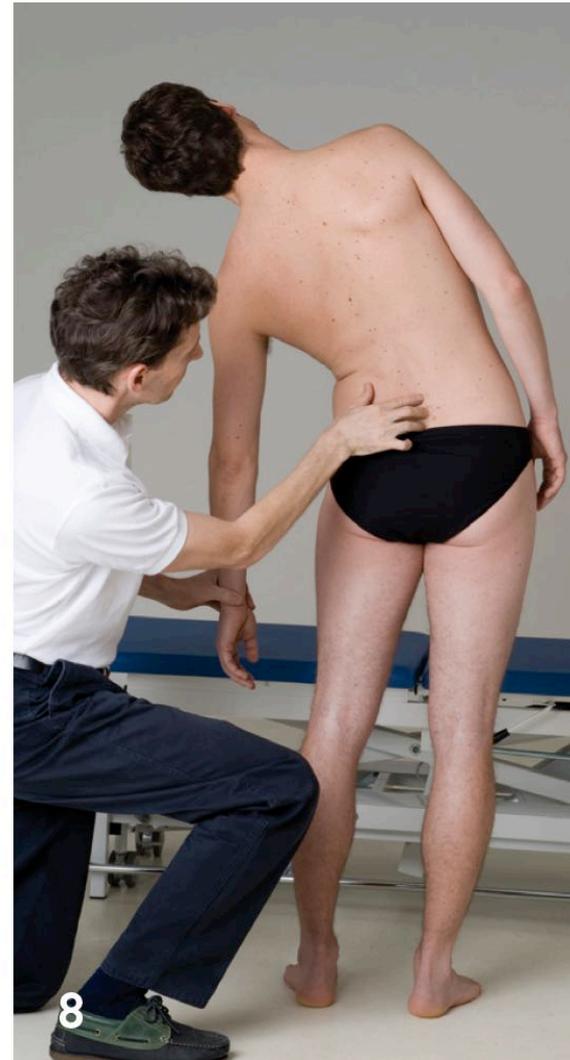
## 2nd step

- Inspection
- Regional examination
  - Mobility

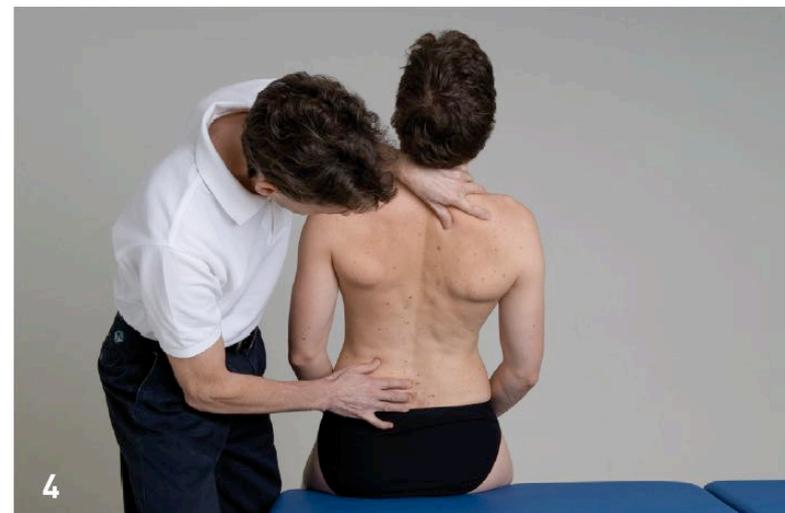
## Inspection: active flexion



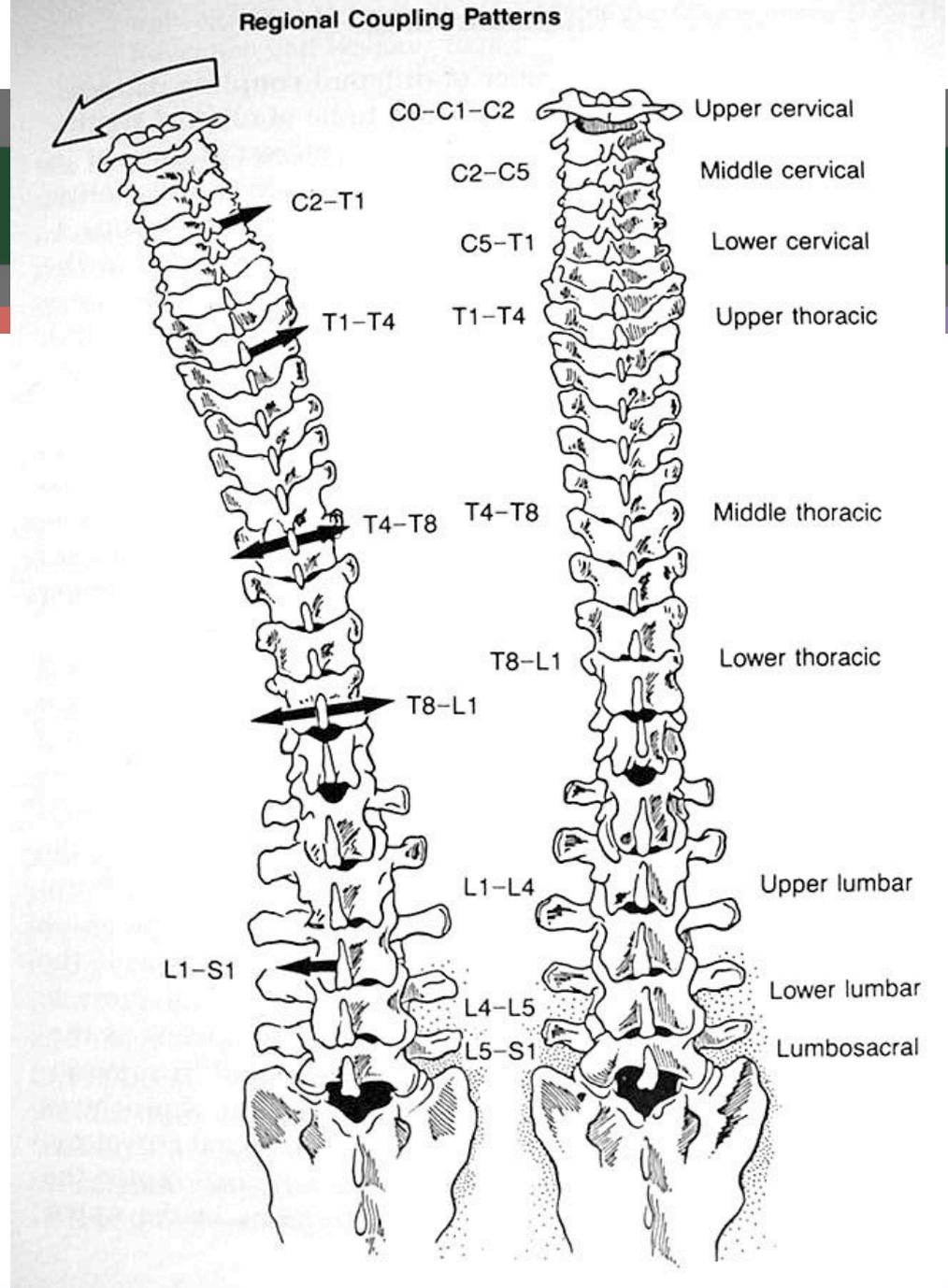
## Inspection: Extension, Lateroflexion



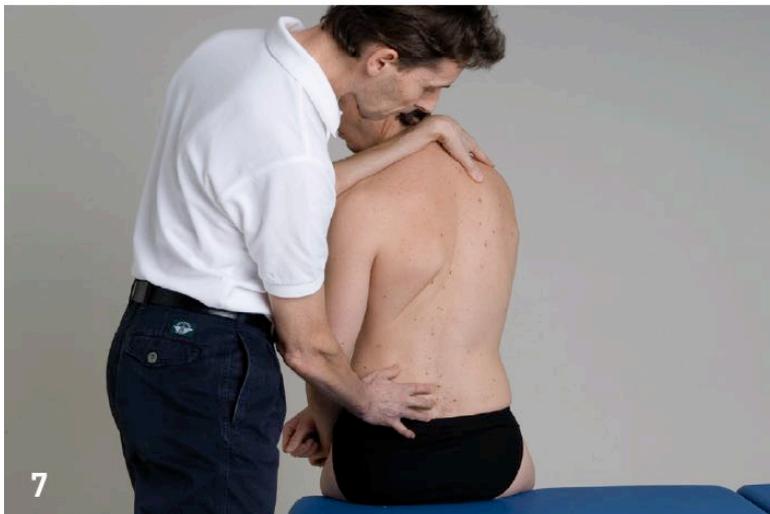
## Movement palpation of the segmental mobility: sitting



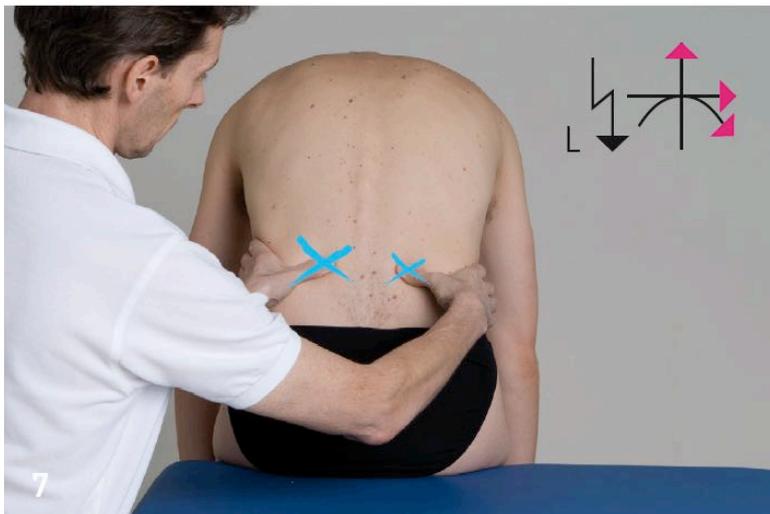
# Regional Coupling Patterns



## Testing of the passive regional mobility



## Passive Testing of the segmental mobility: motion palpation



# Regional, lumbar flexion-extension



## 3rd step

- Inspection
- Regional examination
  - Mobility
  - General manual palpation

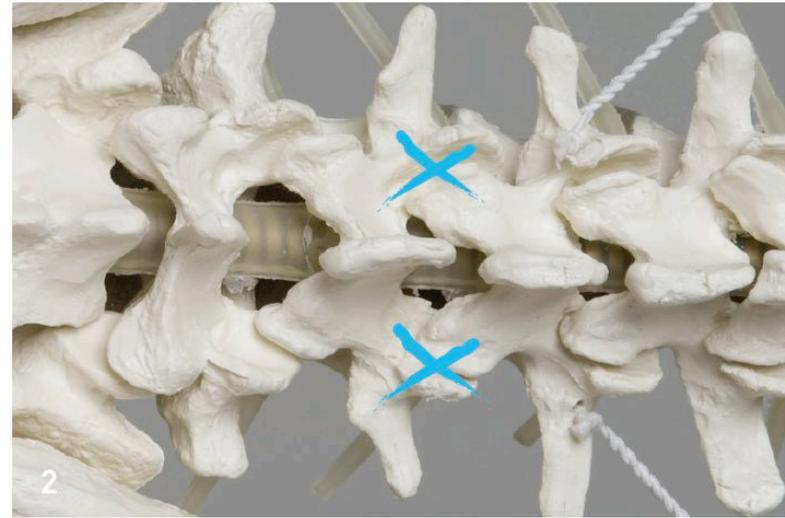
## Paraspinal Soft tissue palpation superficial and deep .



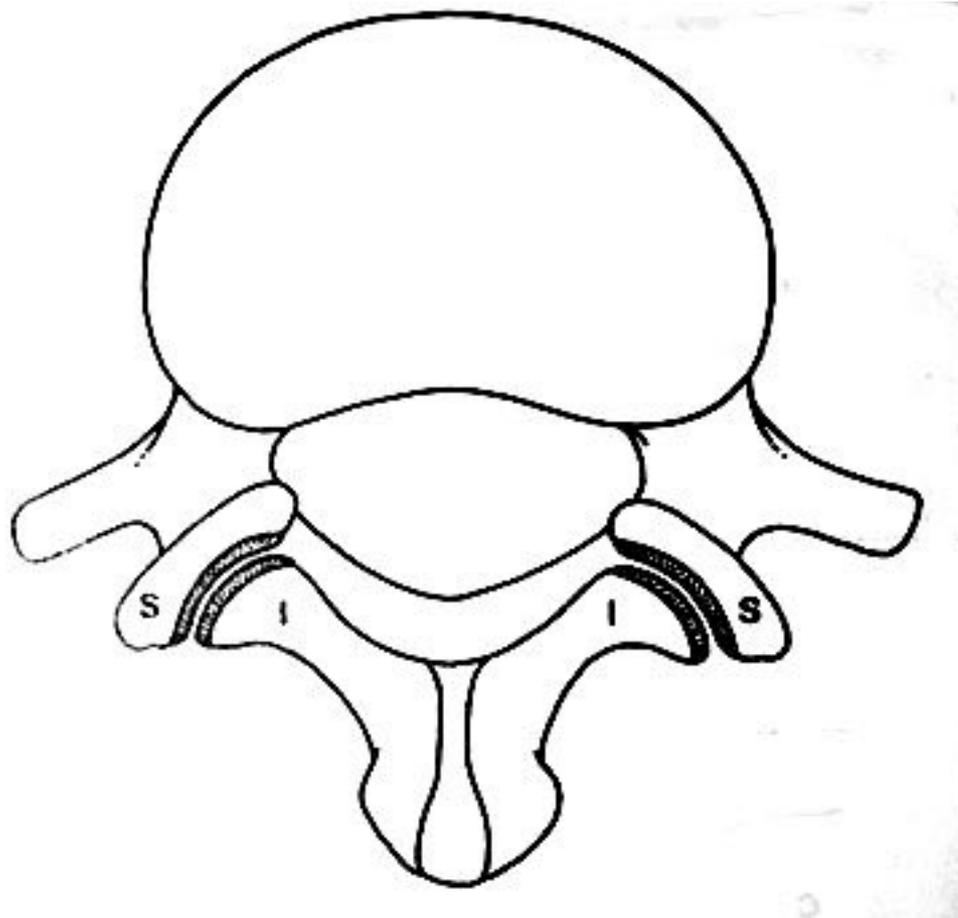
## 4th step

- Inspection
- Regional examination
  - Mobility
  - General manual palpation
- Segmental manual palpation

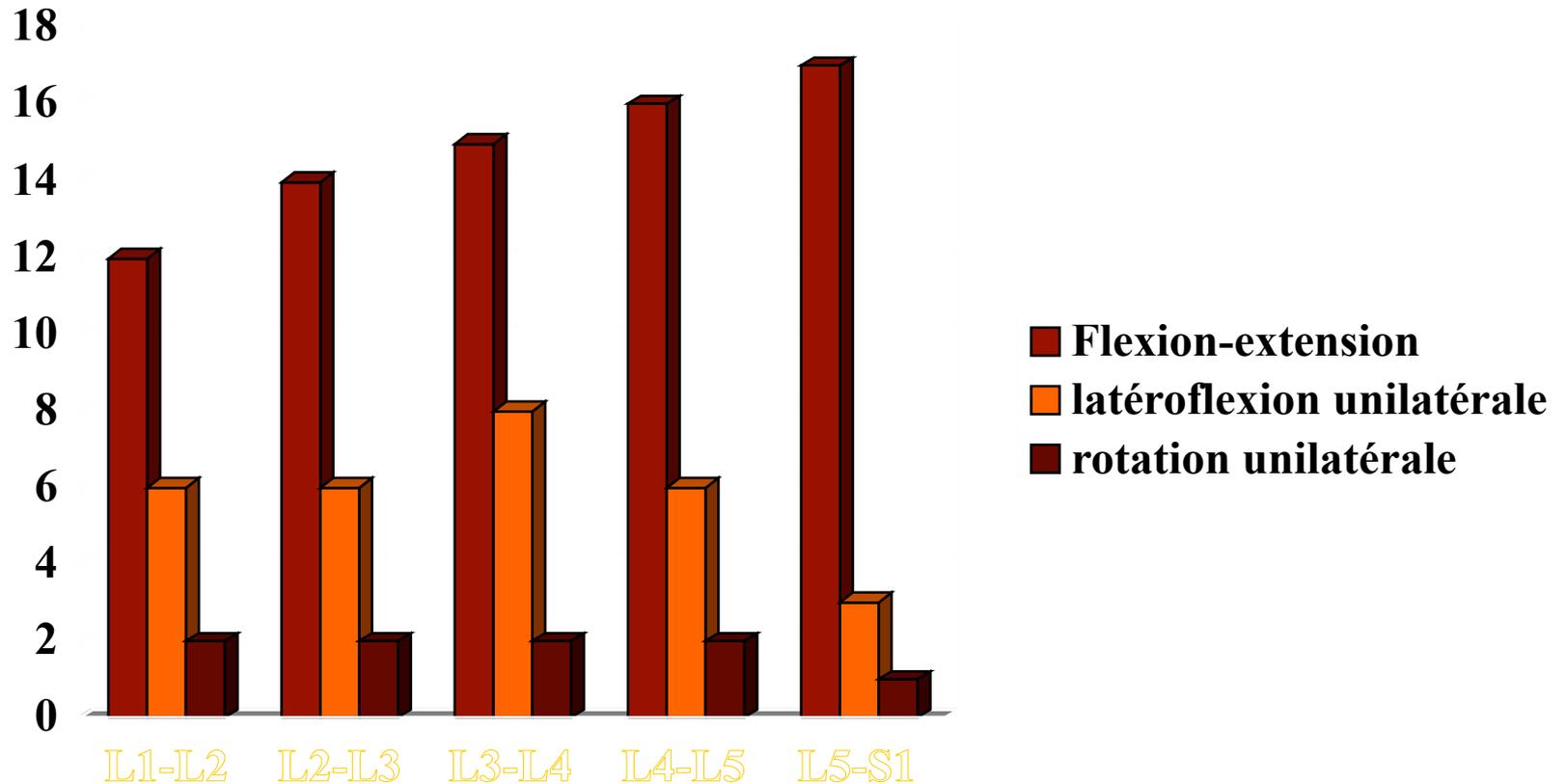
## Segmental springing



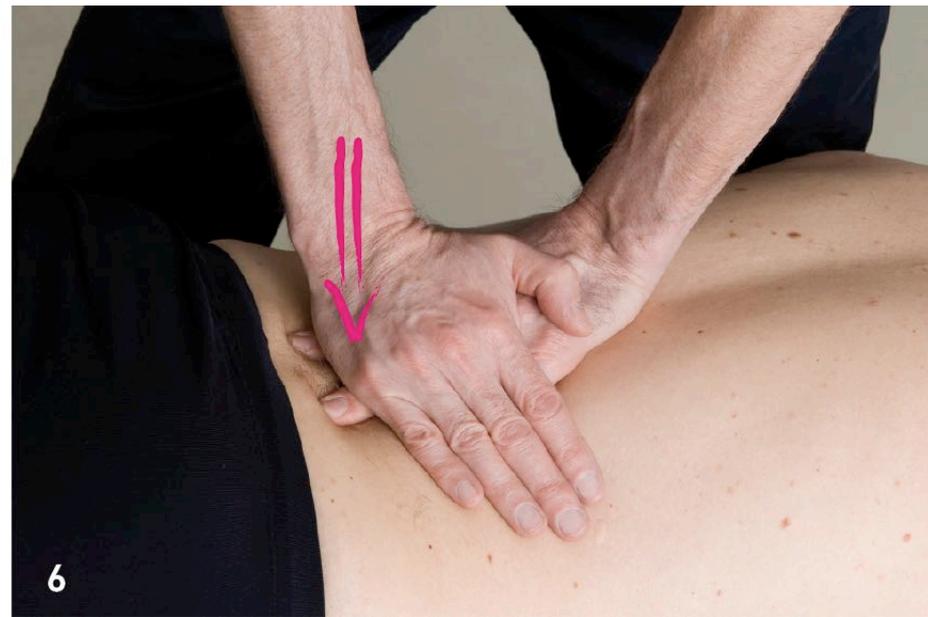
# Zygapophysseal joints :orientation



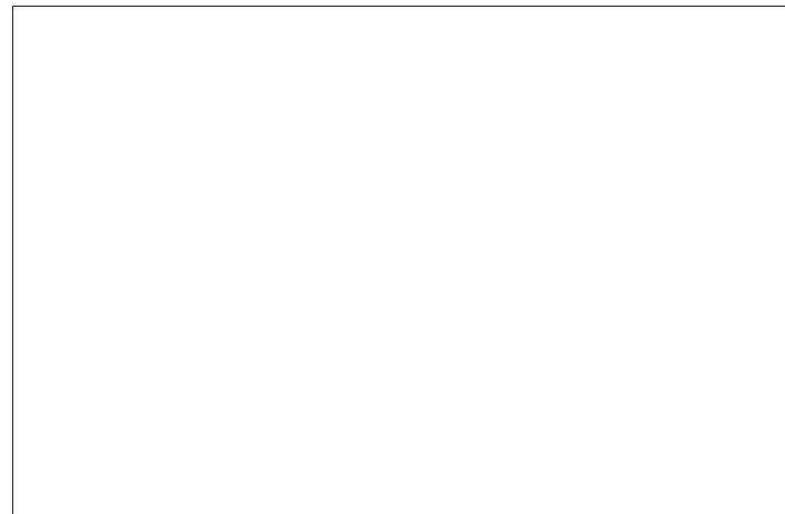
# Lumbar segmental mobility



## Springing



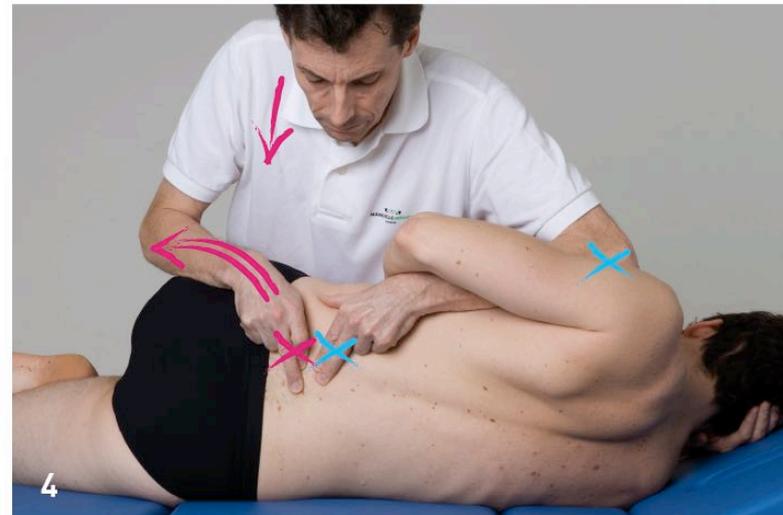
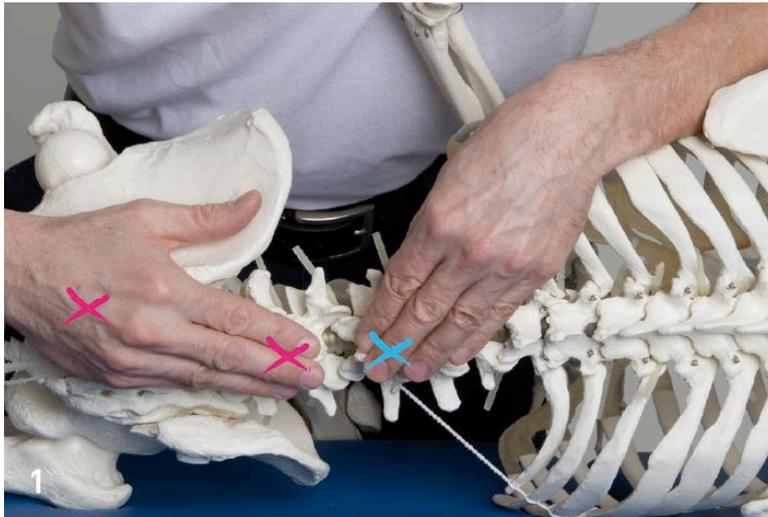
# Passive, segmental, angular mobility



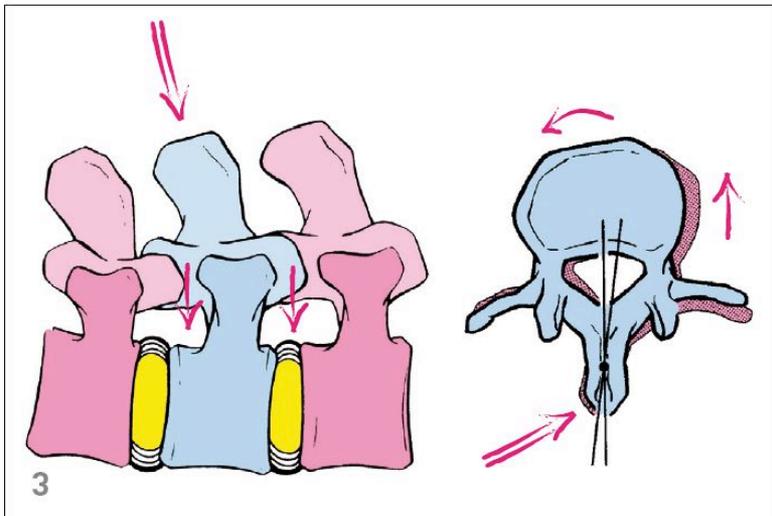
# Passive, segmental rotation



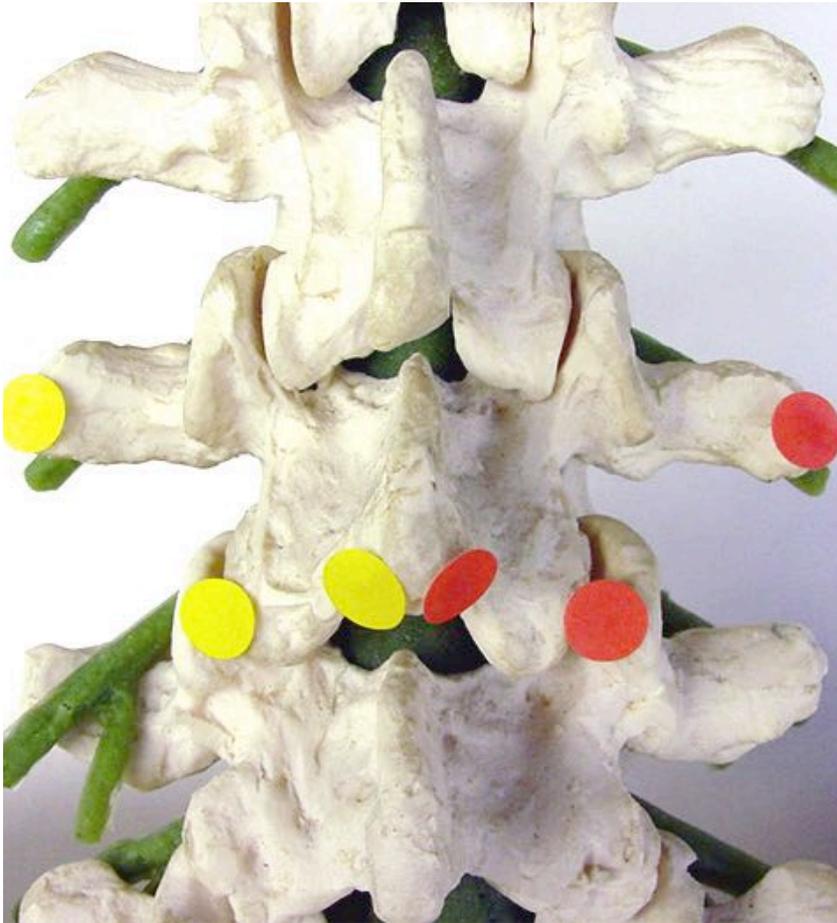
## Passive, segmental, flexion and traction



## Joint play



# Lumbar zones of irritation (Sell)

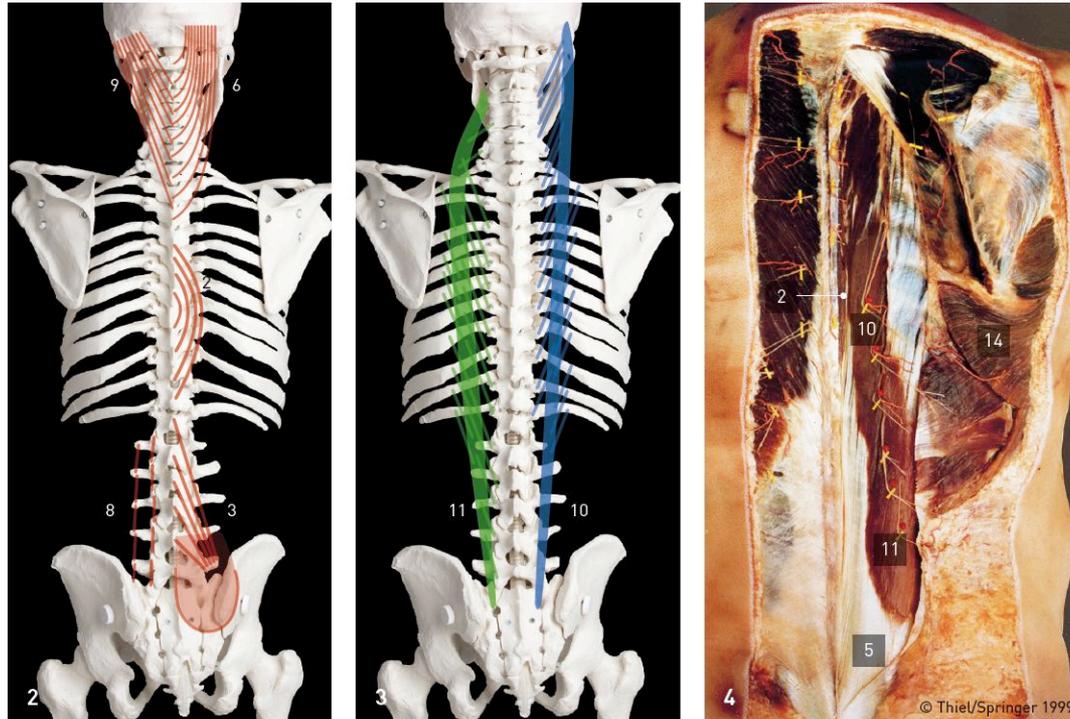


- Empirical
- Unilateral
- Does not diminish with pressure

## 4th step

- Inspection
- Regional examination
  - Mobility
  - General manual palpation
- Segmental manual palpation
- Musculature
  - Length
  - Trigger points

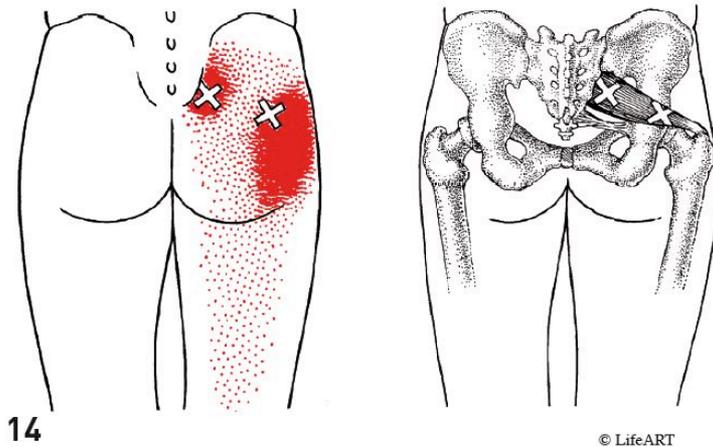
## M. erector spinae (intrinsic back musculature)



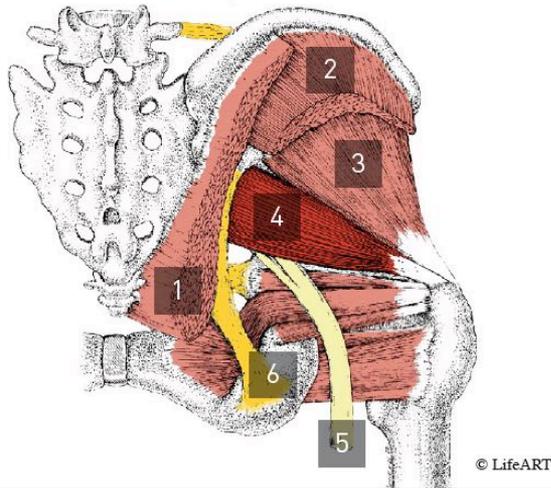
- 1 = medialer Trakt
- 2 = M. spinalis thoracis
- 3 = Mm. rotatores/multifidi
- 5 = Unter dem sehnigen Teil des lateralen Traktes liegt der kräftige Multifidus.
- 6 = M. semispinalis capitis
- 7 = lateraler Trakt
- 8 = Mm. intertransversarii
- 9 = M. splenius capitis
- 10 = M. longissimus dorsi (blau)

- 11 = M. iliocostalis (grün)
- 12 = M. psoas major
- 13 = M. quadratus lumborum
- 14 = M. latissimus dorsi
- 15 = Fascia thoracolumbalis
- 16 = M. obliquus abdominis externus
- 17 = M. obliquus abdominis internus
- 18 = M. transversus abdominis

## M. Piriformis trigger points



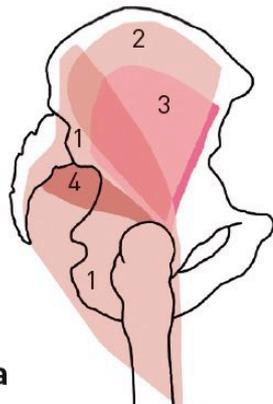
## M. piriformis and other external rotators)



1

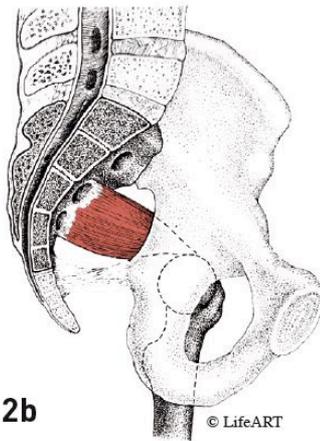
- 1 = M. gluteus maximus
- 2 = M. gluteus medius
- 3 = M. gluteus minimus
- 4 = M. piriformis
- 5 = N. ischiadicus
- 6 = Lig. sacrotuberale
- 7 = M. quadratus femoris
- 8 = M. gemellus superior und inferior;  
darüberliegend M. obturator internus
- 9 = Nicht abgebildet: M. obturator externus

von dorsal



2a

von lateral

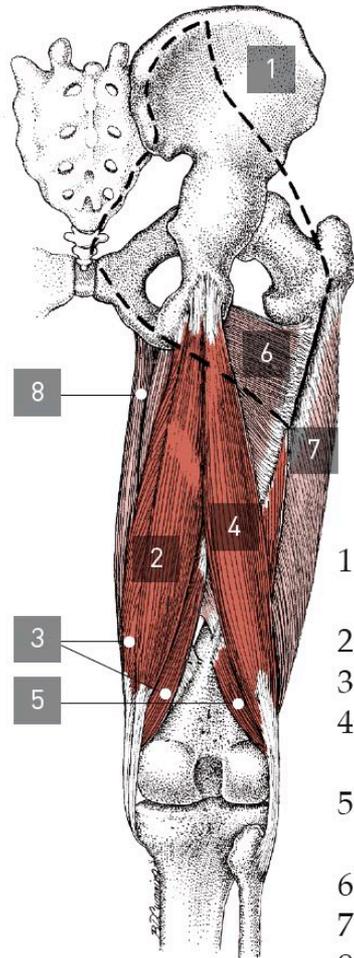


2b



3

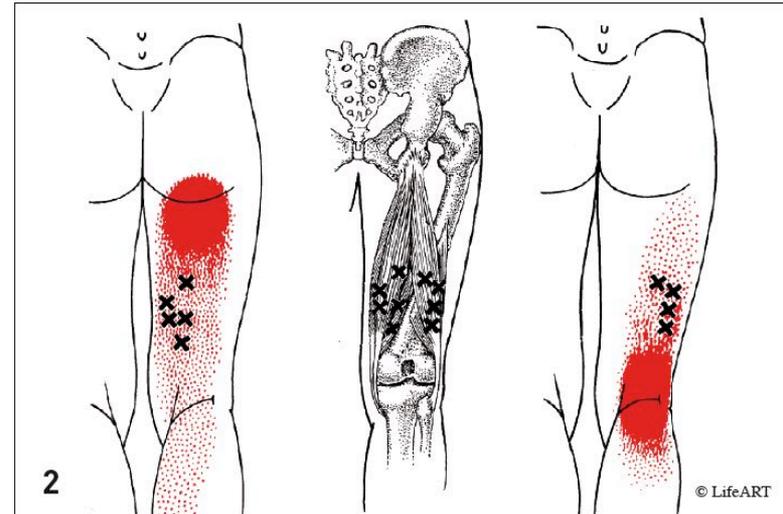
## Ischiocrural (biceps femoris, semitendinosus, semimembranosus)



1

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- 1 = Begrenzung  
M. gluteus maximus
- 2 = M. semitendinosus
- 3 = M. semimembranosus
- 4 = M. biceps femoris  
Caput longum
- 5 = M. biceps femoris  
Caput breve
- 6 = M. adductor magnus
- 7 = M. vastus lateralis
- 8 = M. gracilis



2

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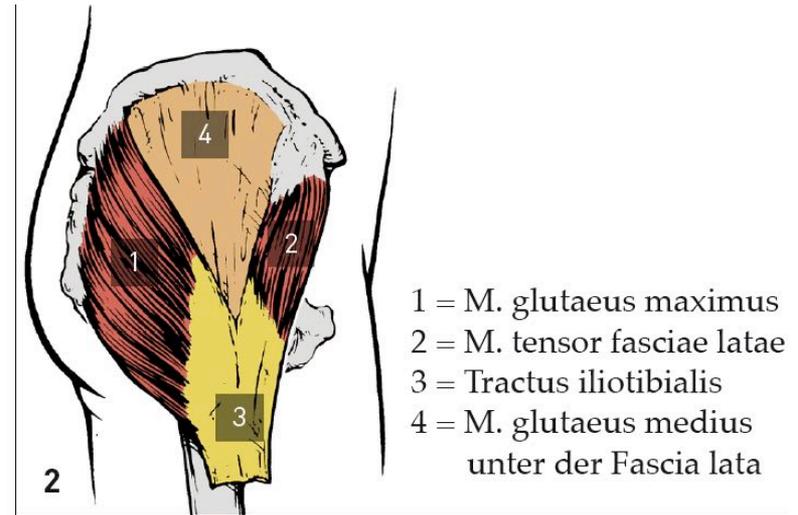
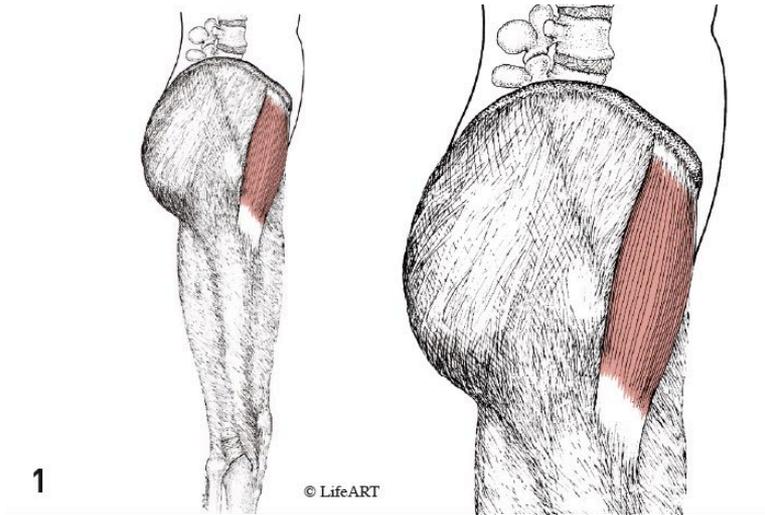


3

## Stretching of piriformis and external rotators

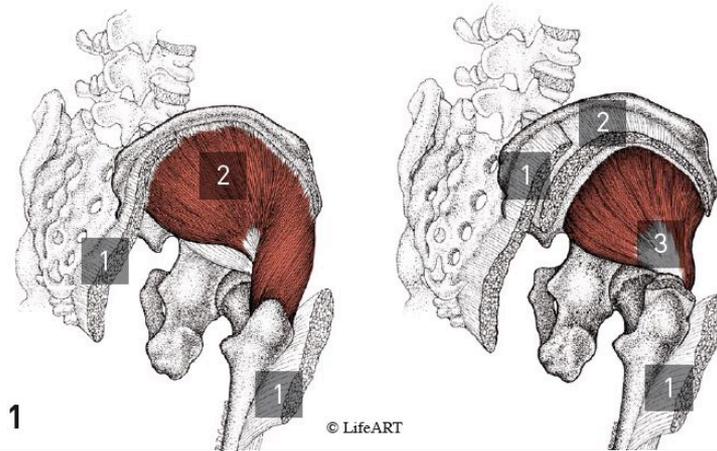


## Tensor fasciae latae

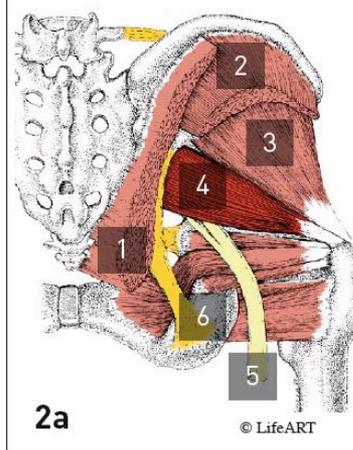


## Glutaeus medius/minimus

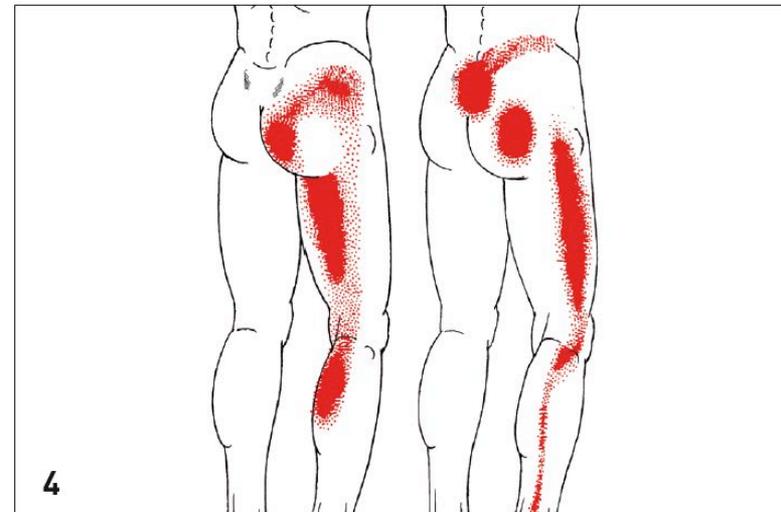
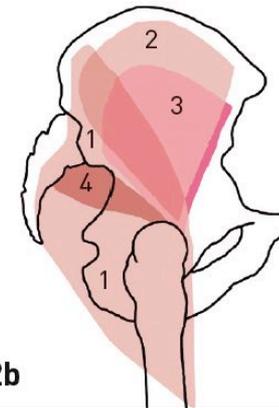
von dorsolateral (Legende s. Technik 810)



von dorsal



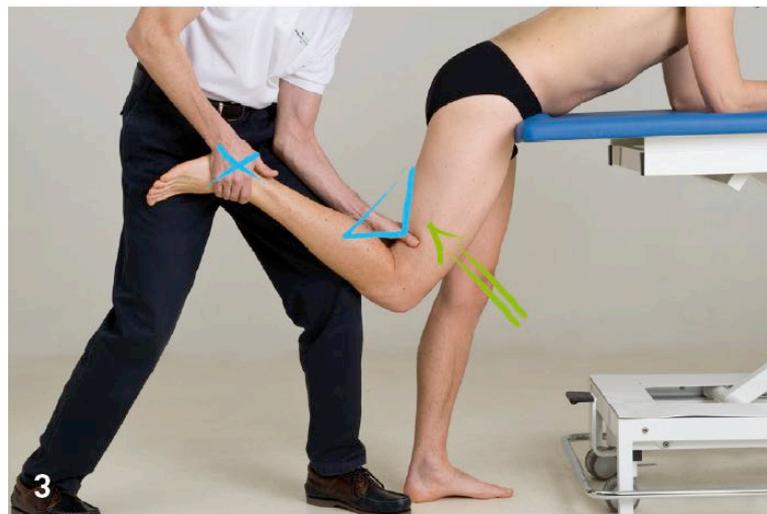
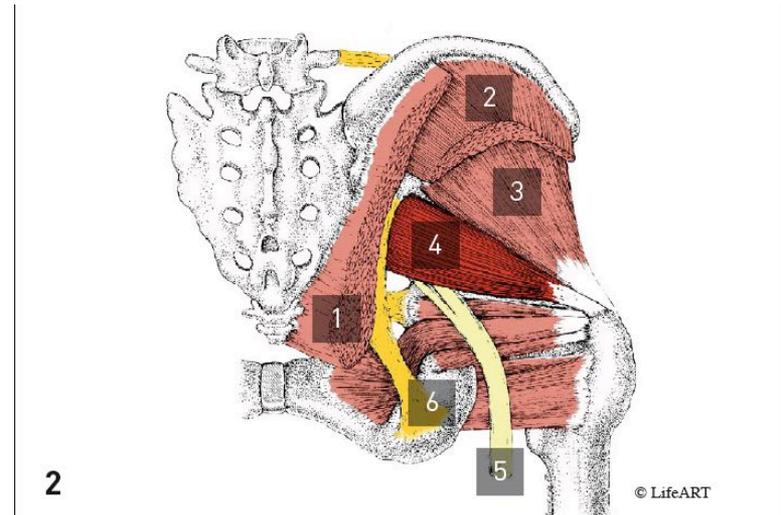
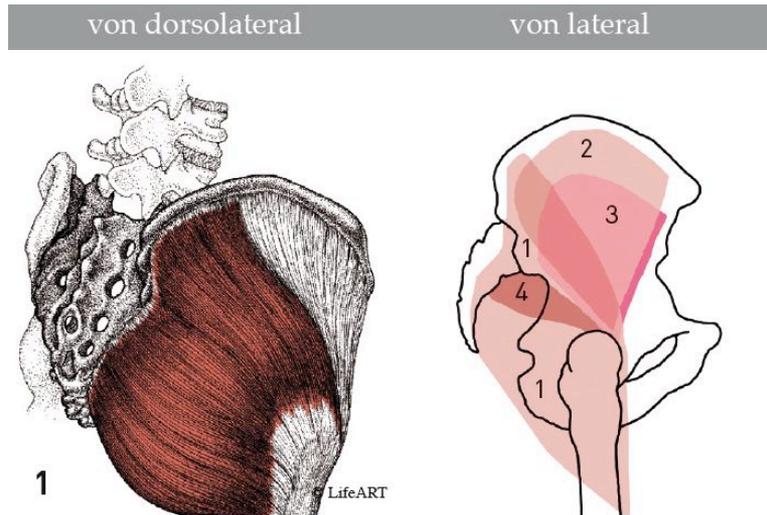
von lateral



## Quadriceps femoris



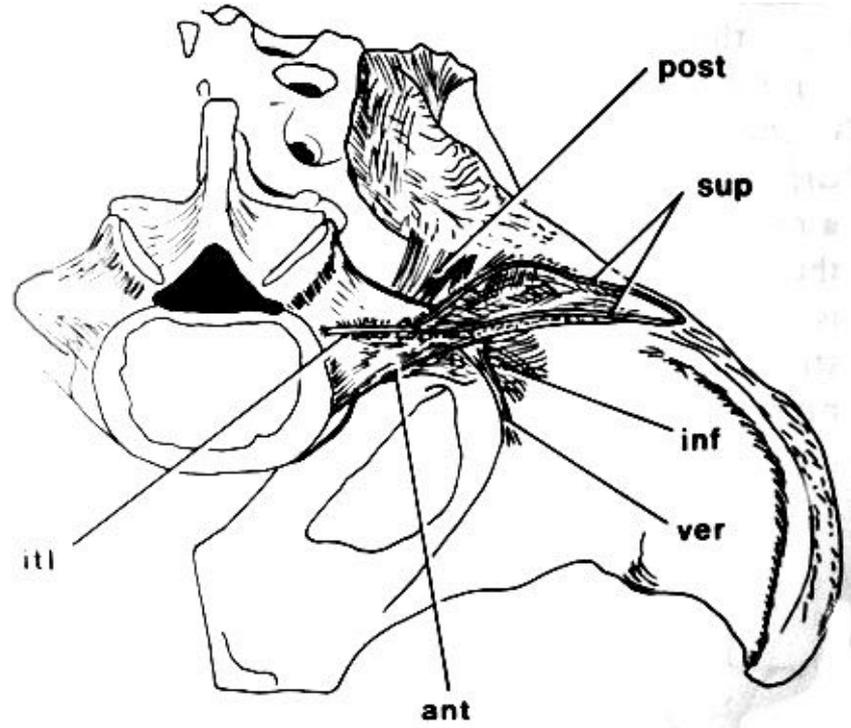
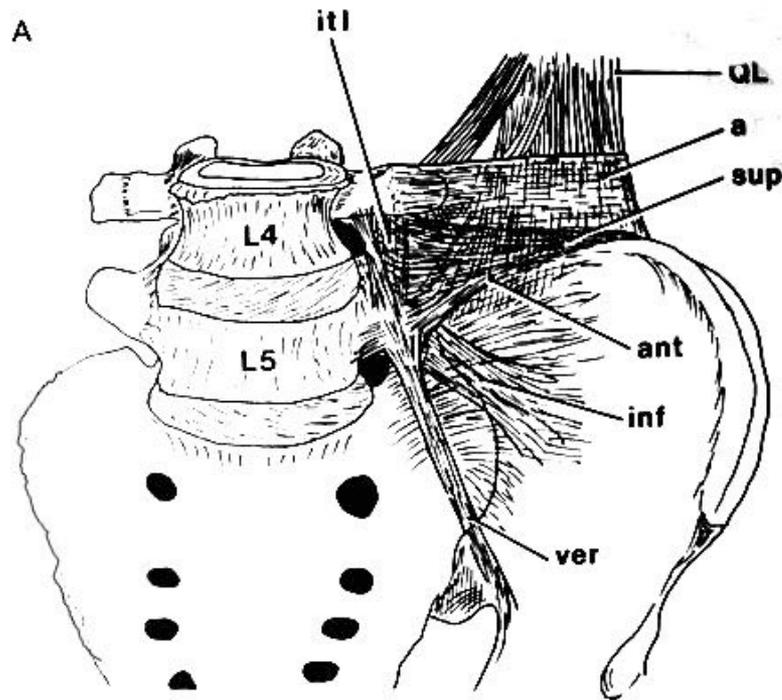
## Glutaeus maximus



- 1 = M. glutaeus maximus
- 2 = M. glutaeus medius
- 3 = M. glutaeus minimus
- 4 = M. piriformis
- 5 = N. ischiadicus
- 6 = Lig. sacrotuberale

Die Bursa trochanterica m. glutaei maximi liegt zwischen Muskel und Trochanter.

# Ilio-lumbar ligament

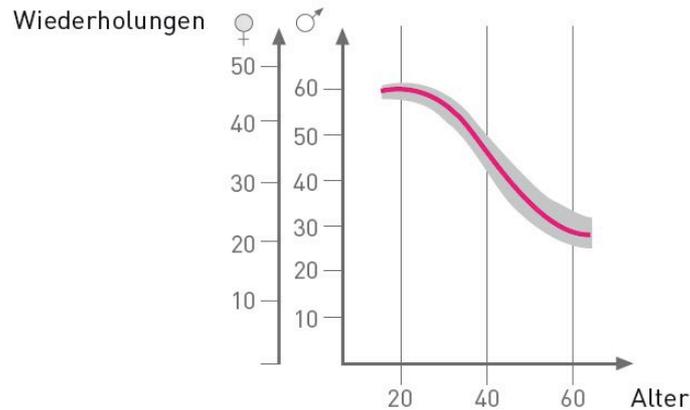


From N.Bogduk

## 4th step

- Inspection
- Regional examination
  - Mobility
  - General manual palpation
- Segmental manual palpation
- Musculature
  - Length
  - Trigger points
  - Endurance erector spinae

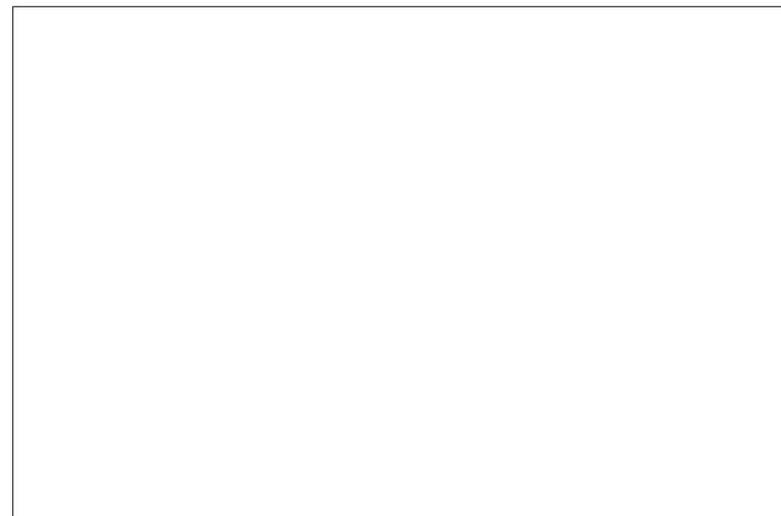
## Clinical evaluation of the trunc stabilisators



# 5th step

- Inspection
- Regional examination
  - Mobility
  - General manual palpation
- Segmental manual palpation
- Musculature examination
  - Length
  - Trigger points
  - Endurance of the erector spinae muscle
  - (force?)
- Neurodynamics after Beutler

## Neurodynamic Provocation Roots L2-4, Plexus lumbalis, N. femoralis



## Neurodynamic Provocation Roots L2-4, Plexus lumbalis, N. femoralis



## Neurodynamic Provocation Roots (L4), L5, S1; SLUMP Plexus lumbosacralis und N. ischiadicus



## Neurodynamic Provocation Roots (L4), L5, S1; SLUMP Plexus lumbosacralis und N. ischiadicus

