

How are you doing -

What do I need to ask the patient?

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What do we need to know?

- **What is the main problem?**
 - Is the hip the reason for the symptoms?
- **Differential diagnosis**
- **Patient's expectations, demands**
- Definition of further diagnostic steps
- Choice of adequate therapy

Patient with «hip pain»

Extra-articular

- GTPS (Bursitis, Abductors)
- Spinal radiculopathy
- Sacroiliac joint, symphysitis pubica
- Stress-fracture pelvis and proximal femur
- Muscular dysbalance
- Hernia
- Tumor
- Infection

Intra-articular

- Degenerative or inflammatory arthritis
- AVN
- LCPD
- Impingement
- Labrum lesion
- DDH
- Stress-fracture femoral neck
- Tumors, PVNS
- Infections

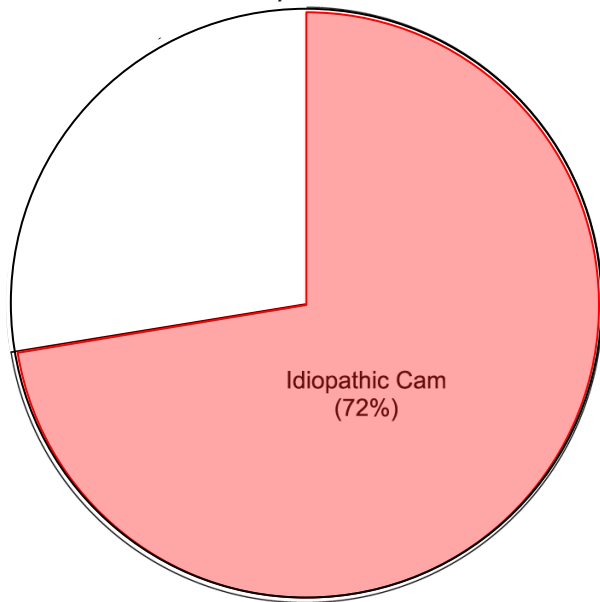
Patient's history

- Hip problems in the family
- Country of origin
- Hip problems in childhood/ adolescence
 - Treatment for DDH
 - SCFE, LCPD
 - Ambulatory problems
 - Problems in school, military

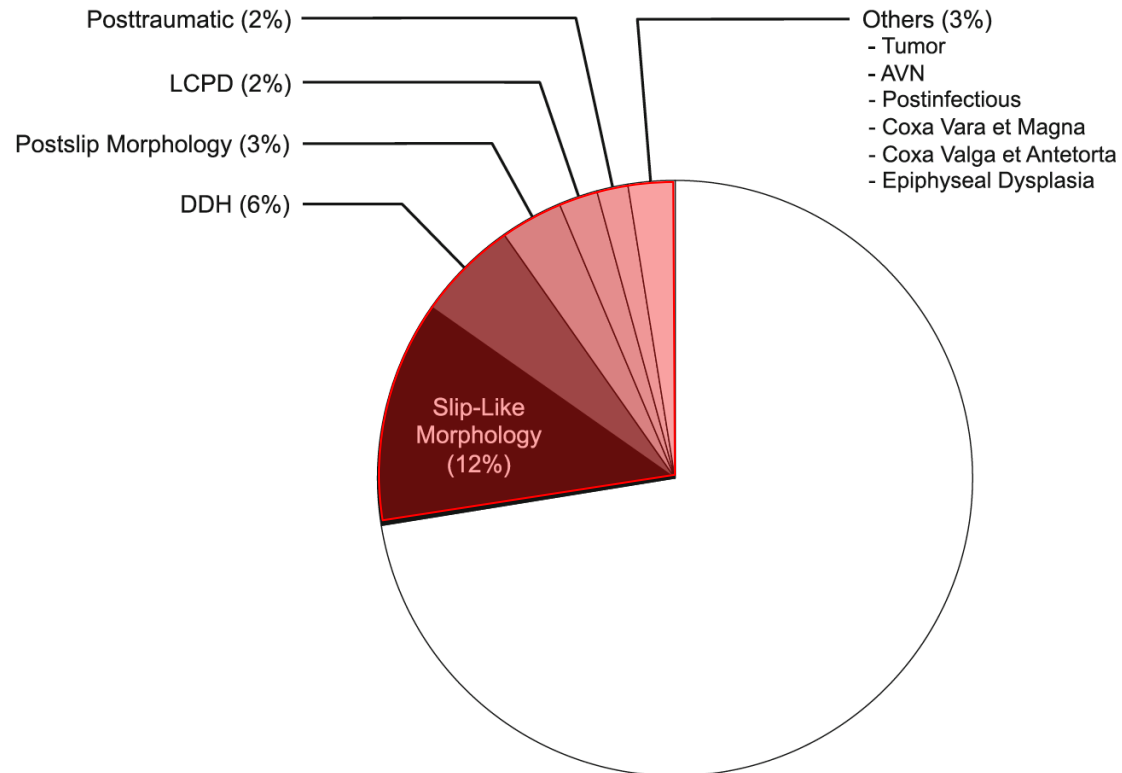
Patient's history

- Medical conditions
 - Obesity
 - Diabetes
 - Infections
 - SLE/ Psoriasis
 - Medication (steroids)
 - Alcohol, Drugs
- Trauma
- Previous operations
 - Inguinal hernia
 - Visceral/ gynecological operations

Cam- type morphology



idiopathic Cam 72%



secondary Cam 28%

radial MRI of 236 hips mit Cam-type FAI

Family history, genetic predisposition

Group	Gender	Morphological classification	
		Normal (%)	Pure cam (%)
Control	Male	53 (67.9)	12 (15.4)
	Female	55 (72.4)	5 (6.6)
Siblings	Male	41 (38.0)	33 (30.6)
	Female	42 (50.0)	15 (17.9)

All siblings			
Prevalence		Relative risk	p-value
Proband (hips)			
Male	42/90	3.1 (2.1 to 4.8)	< 0.001
Female	24/70	2.3 (1.4 to 3.8)	0.001
All	66/160	2.8 (1.8 to 4.2)	< 0.001

- Siblings of FAI patients
- Spouses as control group

Patient's history

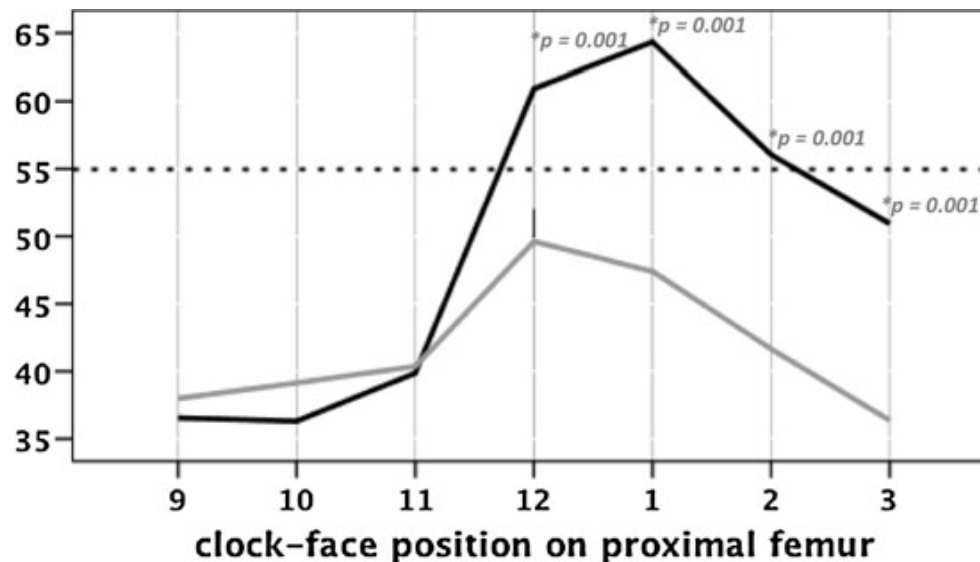
Heavy physical activity during skeletal development

- The growth plate adapts to physical activity
- Growth plate *function* (bone length) not altered unless ruptured or fractured
- Alterations in *structure* and *morphology* of the growth plate (earlier skeletal maturity, epiphyseal extension)

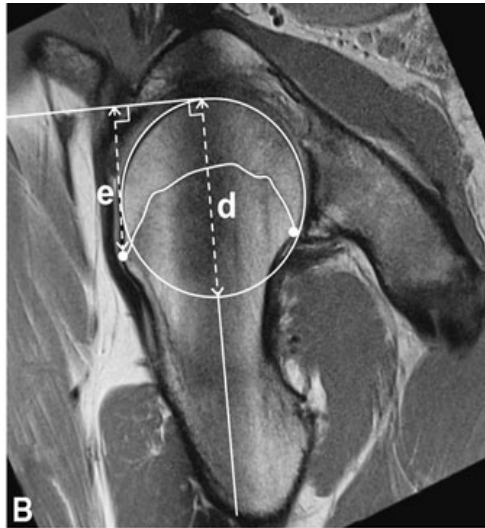
Prevalence of Cam-type FAI in basketball players

Male athletes, age 17.6 (9-25), age matched control group

10 x increased likelihood having an alpha angle greater 55°



Exercise induced growth plate alterations

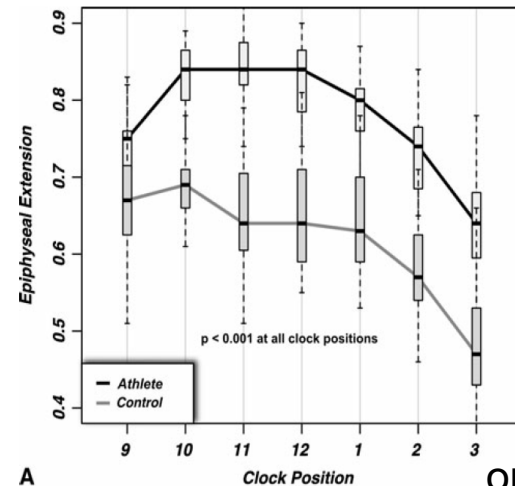


Epiphyseal extension = e/d

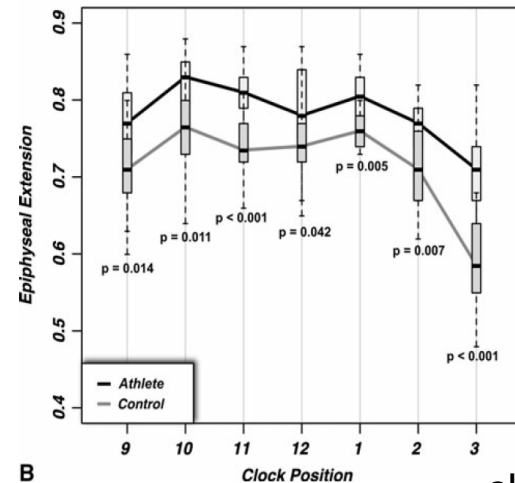
Male elite basketball athletes

Mean age 12.9 (open)/ 18.7 years (closed)

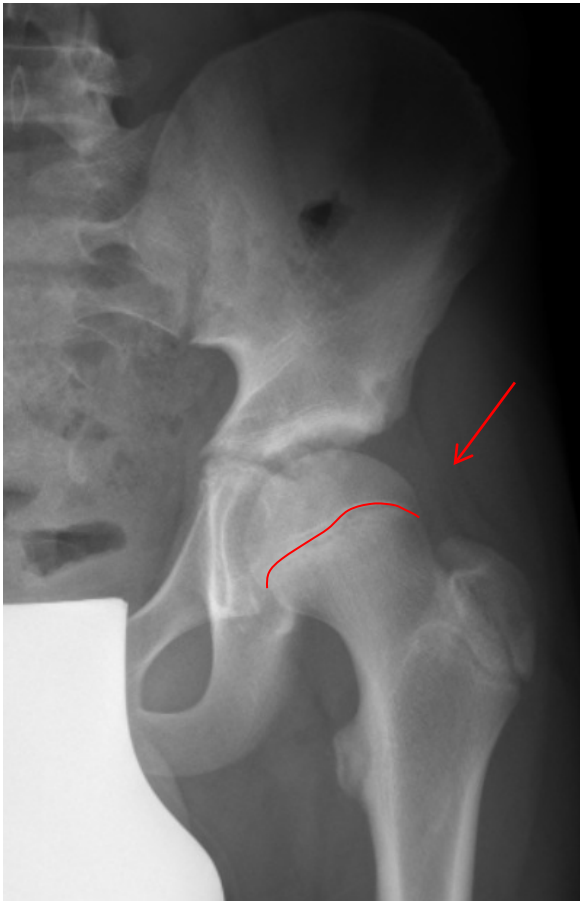
Age matched control group



A open physes



B closed physes



age 13



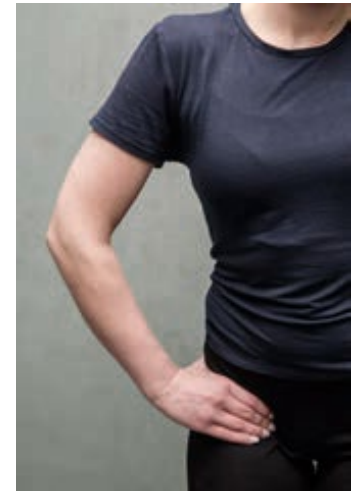
age 15

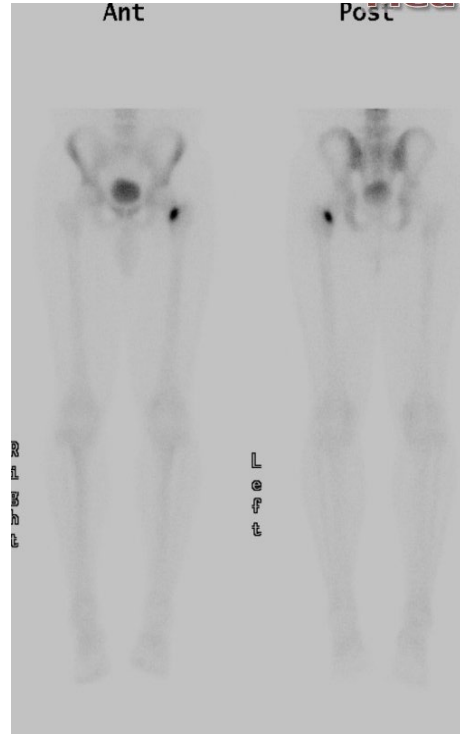
Specific history

- *Onset* of symptoms
 - Acute / post-traumatic / gradual increase
- *Duration* of symptoms
- *Provoking factors* of symptoms
 - Work
 - Stress
 - Physical activity
- *Dynamic* of symptoms
 - Increasing pain, treatment effects

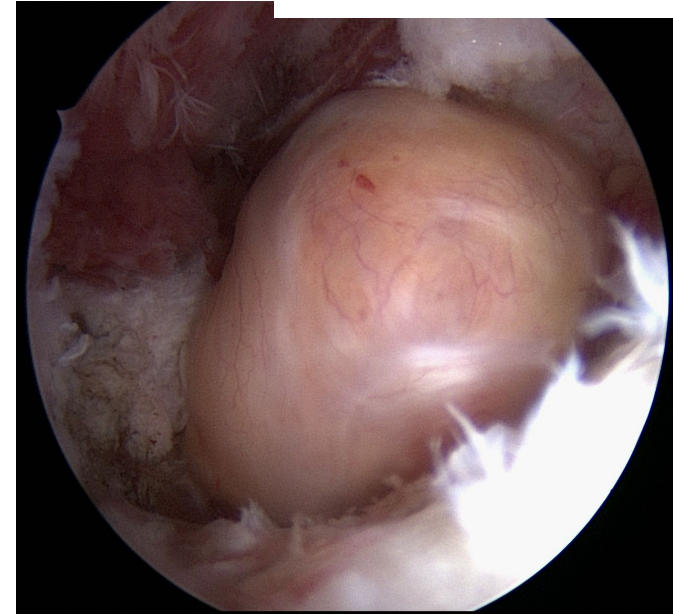
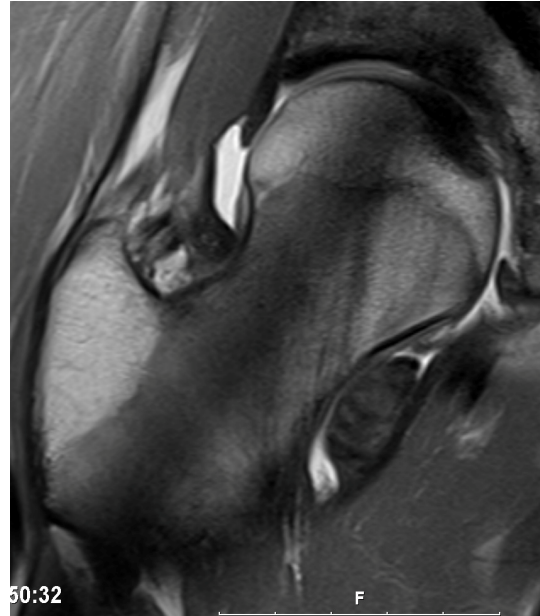
Specific history

- *Nature* of pain
 - Piercing
Labrum lesion, adhesion, loose joint bodies
 - Constant
Inflammation, Arthritis, FAI with chondral defect
 - Burning
Inflammation, joint effusion
 - Pain at rest, start-up/run-in pain
Arthritis
- *Location* of pain
 - Groin, C-sign
 - Radiating pain

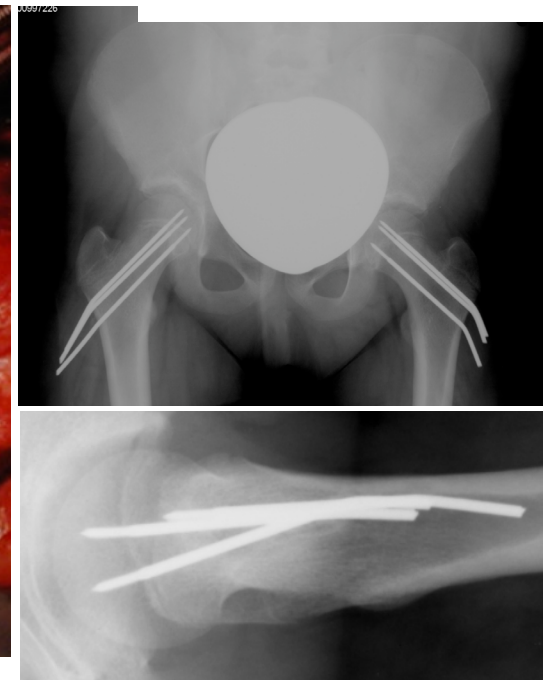
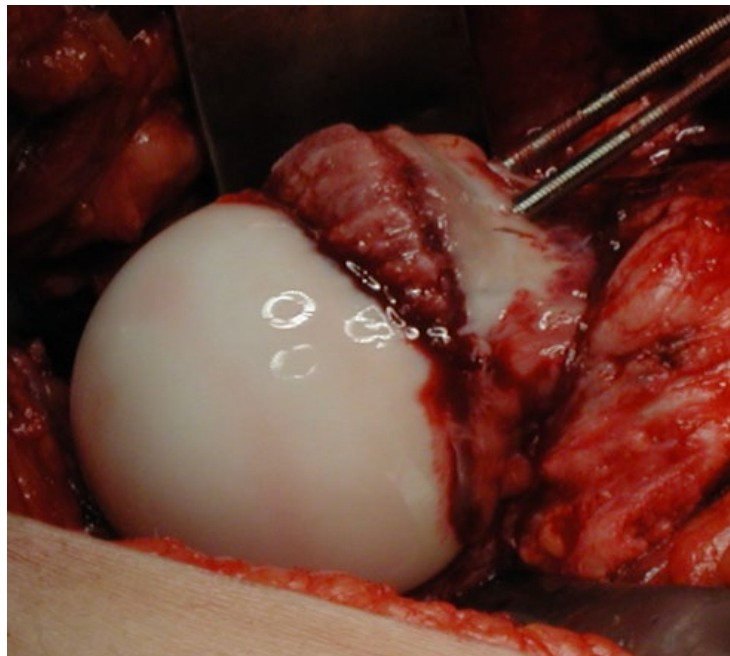




- Female, 19 years old
- Military service
- Dull pain left groin, worsening with physical activity



- Male, 23 years old
- Semi-professional soccer player
- Dull pain left groin during training, also at rest

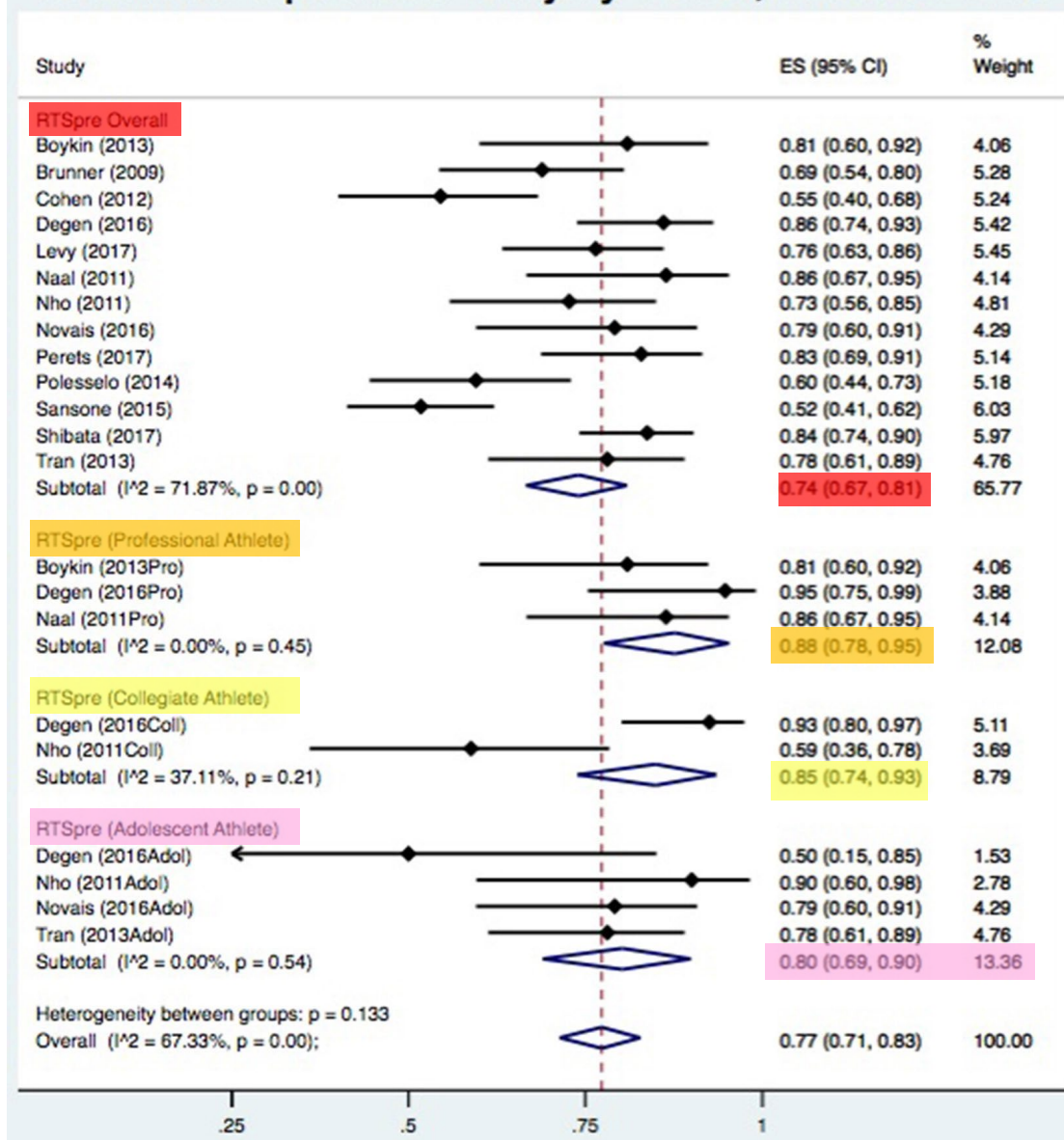


- Male, 14 years old
- Obese
- Acute pain in the left groin and knee

Patient's expectations

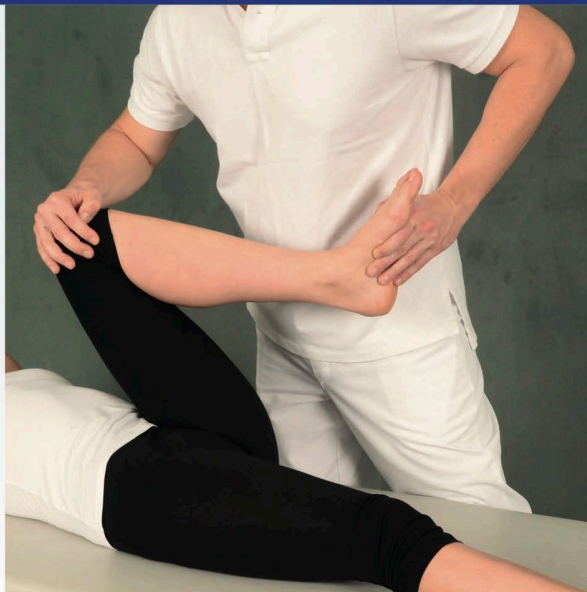
- How do the symptoms affect the patient's everyday life?
- Physical demands at work
- Ambitions in sport
- Willingness to change habits, avoid pain-inducing activities
- Willingness for a surgical intervention/ acceptance of possible complications
- Prevention of later arthritis

Return to Sport at Preinjury Level, Athlete Level



Diagnostik des Hüftgelenkes

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Thank you

