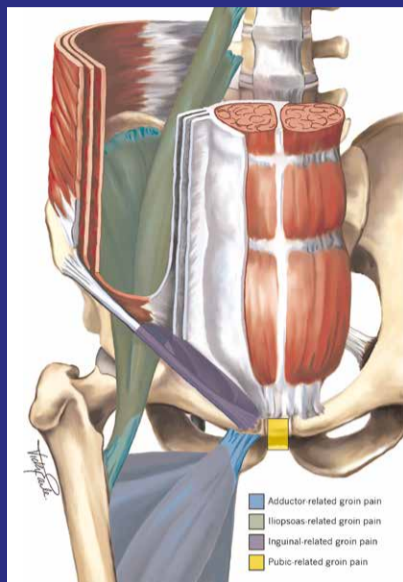


# GROIN INJURY IN ATHLETES

## Classification of groin injury

(Weir et al., 2015)

- 1 Clinical entities
  - a. Adductor-related
  - b. Inguinal-related
  - c. Iliopsoas-related
  - d. Pubic-related
- 2 Hip-related
- 3 Other causes

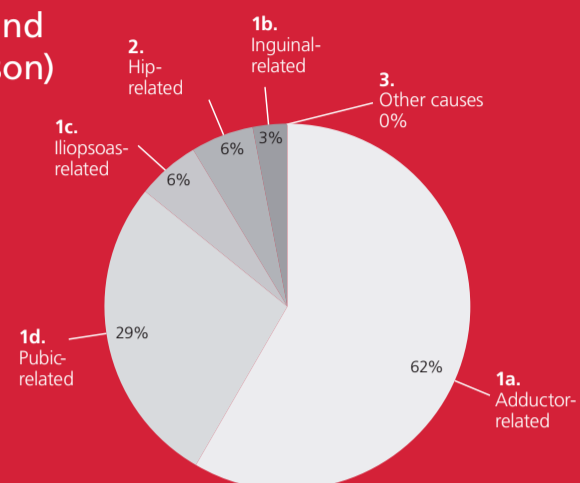


## GRoin Injury Prevention (GRIP) study: study on groin injury in professional football players

**Participants:**  
> 300 players from Eredivisie and Jupiler League (2015-2016 season)

**Results:**  
29 players from 9 teams sustained 37 groin injuries

Reported diagnoses:  
See diagram



## 1 Clinical entities

### Diagnostic criteria:



a. Adductor-related

Pain at resistance against adduction



Pain at palpation of the origin of the adductors



b. Inguinal-related

Pain location in inguinal canal region

Tenderness of inguinal canal

No palpable inguinal hernia is present

*More likely if pain is aggravated with resistance testing of the abdominal muscles OR on Valsalva/cough/sneeze*



c. Iliopsoas-related

Iliopsoas tenderness in abdominal region or at insertion at trochanter minor



d. Pubic-related

Local tenderness of the pubic symphysis and the immediately adjacent bone

There is no specific provocation test

*More likely when there is pain on resisted hip flexion AND/OR pain on stretching the hip flexors*

## 2 Hip-related

This category is often missed. The hip rotations, FABER (Flexion, Abduction, External rotation) and FADIR (Flexion, Adduction, Internal rotation) provocation tests can be used to rule out that symptoms originate from the hip joint when the test findings are negative. When the test findings are positive this does not increase the likelihood of hip pathology to be present. However the hip being related to the clinical pattern can not be excluded. Imaging can be considered.

## 3 Other causes

- For example (but not limited to):
- Stress fracture of the femur or pelvis
  - Sensory nerve entrapment
  - Bone and joint disease (in young adolescents)
  - Urological or gastrointestinal organs
  - Tumors