



# GROIN INJURY

## FACT SHEET

### INTRODUCTION

High incidence of groin injuries are associated with sports that multiple and fast movements of changing directions. Injury commonly occurs when:

- ✦ Reaching for ball or over-stretch of the groin muscles
- ✦ Quick change of direction
- ✦ Stopping
- ✦ Starting
- ✦ Kicking
- ✦ Strong contractions of the muscles on the inside of the thigh (adductor muscles)

### Biomechanics and muscle function

- 1- The adductor muscles pull the leg towards the midline or slow down the movement of the leg out to the side
- 2- The abdominal muscles have a connection to the groin muscles and can also give pain in the groin when injured
- 3- The bones of the pelvis join in the front and may also give rise to pain (osteitis pubis).
- 4- There is a canal (inguinal canal) through the abdominal muscles which may get torn or stretched leading to a hernia (abdominal lining pushing through) or sports hernia (tear -no hernia)

### Injury presentation and signs

May have pain with:

- ✦ Running, turning and changing directions
- ✦ Stretching the leg outwards i.e. stretching the

adductor muscles

- ✦ Pulling your leg in towards the other leg i.e. contracting the adductor muscles
- ✦ Performing a sit-up, coughing or sneezing i.e. contracting the abdominal muscles and applying pressure on the (inguinal) canal and pelvic joint

### Stages to Recovery

We advise that you attend your appropriately qualified sports medicine practitioner to receive a modern evidence based management of your recovery and rehabilitation.

### Stage 1: The Acute Phase of a New Injury

- ✦ Decrease inflammation using:
- ✦ Immobilisation: crutches if appropriate
- ✦ Rest Ice Compression Elevation
- ✦ Appropriate medication
- ✦ Acupuncture

### Stage 2: The Subacute Stage

### Stage 3: Rehabilitation

- ✦ Early Rehabilitation
- ✦ Middle Rehabilitation
- ✦ End Stage Rehabilitation

### RETURN TO SPORT

Only when player is able to undertake a full training and competition load, with no aggravation of the injury, should full recovery be presumed.'

Sports Physiotherapy  
Applied Science and Practice

### Full return to fitness

'Only when a player is 'able to take a full part in training activities and available for a match'

Medical Scientific and Welfare Committee, UCD

### Modern Training Recommendations

- Brooks et al '06, American Journal Orthopaedic Society for Sports Medicine.
- Passive and active warm-up and muscle stretching before training and competition have been advocated as effective injury prevention strategies.
- Improving pelvic stability decreased incidents of hamstring and groin muscle strain.
- Decreased flexibility of the groin adductors has been found to increase the risk of groin muscle injury in soccer players (Ekstrand and Gillquist 1983).
- Decreased muscle strength of the adductor muscles has been found to increase the risk of groin muscle injuries. Adductor muscle strength of about 90% compared to the abductor muscles (pulling the leg out to the side) has been found to decrease occurrence of groin injuries (Nicholas and Tyler 2002).
- Need to avoid errors in training and conditions and in rehabilitation procedures to reduce the high level of recurrent hamstring

and muscle injuries.

### References

- Orchard J, Verall GM Groin injuries in the Australian Football League. *ISMJ* 2000;1(1)
- Ekstrand J, Gillquist J The availability of soccer injuries. *International Journal of Sports Medicine* 1983;4:124-128
- Nicholas SJ, Tyler TF. Adductor muscle strains in sport. *Sports Medicine* 2002;32(5):339-344