

TREATMENT OF SPORTSMEN.....

Trainers /coaches/physio's

Family

Fans

Mental coaches





Fig. 1.1 Main injury location for female athletes during international athletics championships from 2007 to 2014

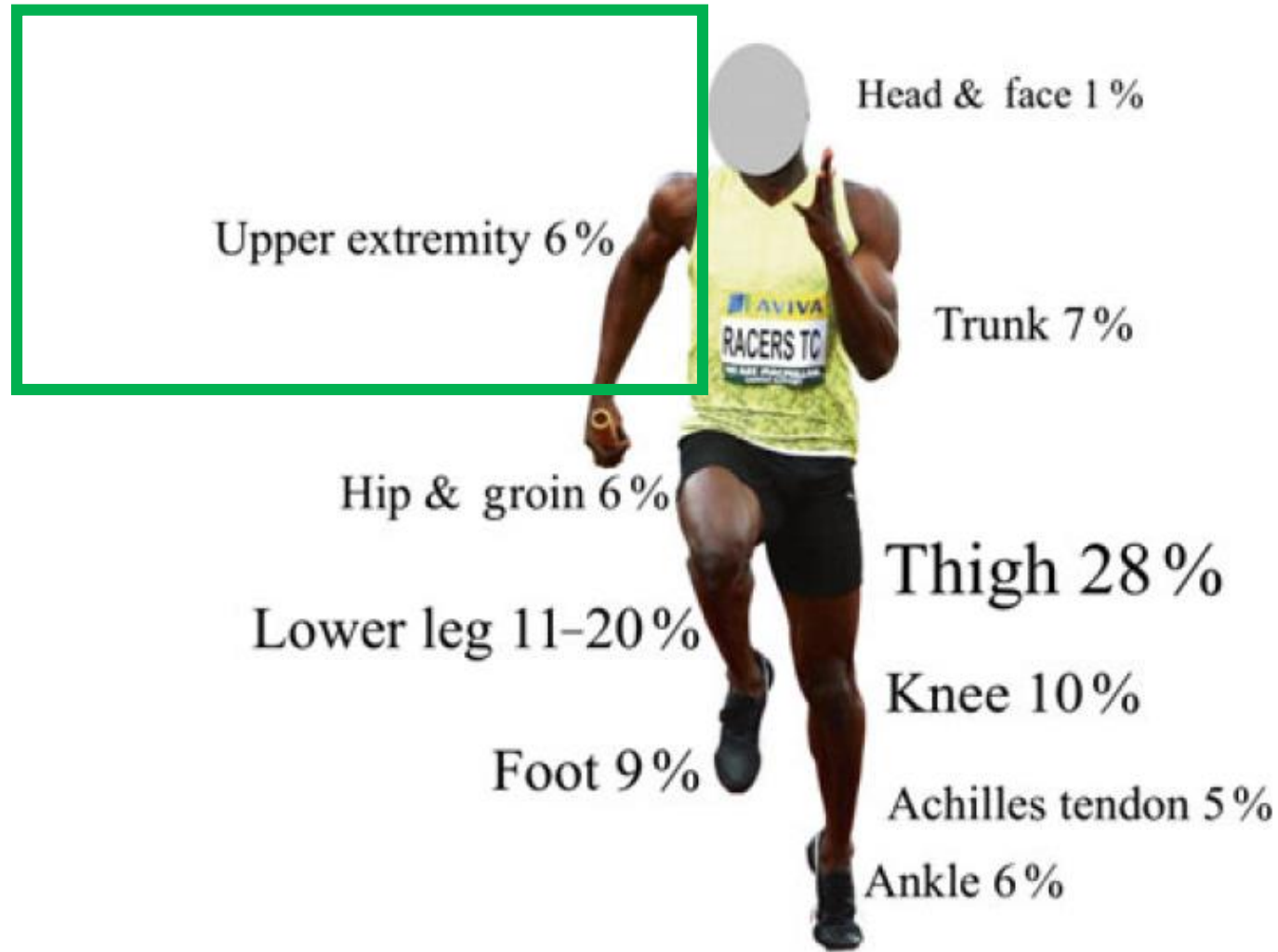
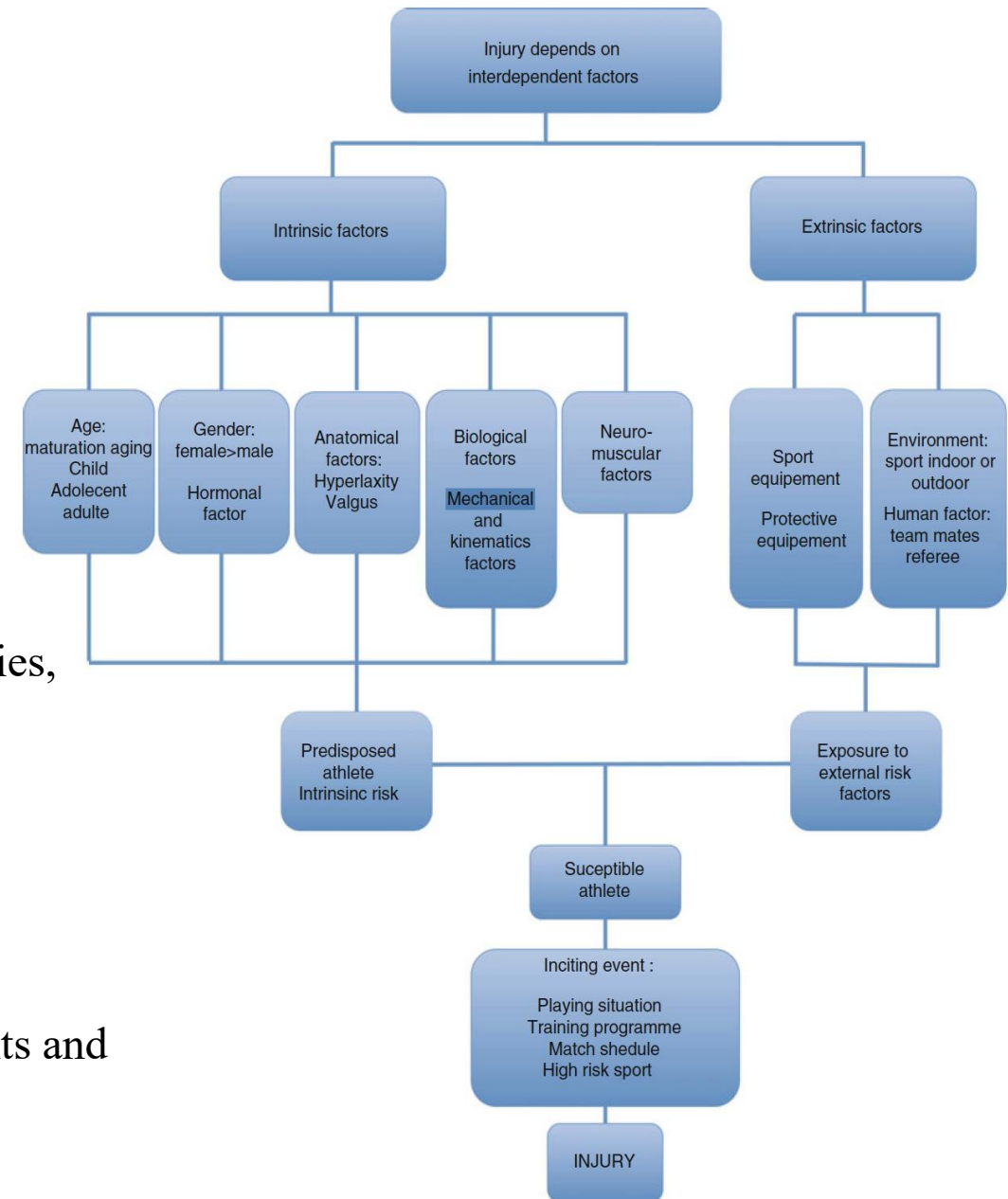


Fig. 1.2 Main injury location for male athletes during international athletics championships from 2007 to 2014 [18]

Table 1.1 Injuries during the last four Olympic Games

	Number of different sports/ events	Number of registered athletes	Incidence of injuries per 1000 registered athletes	Percentage of time-loss injuries	Main location or diagnoses	Main causes	Disciplines with higher injury risk
Summer OG 2008 [35]	28/302	10,977	96.1	50	Ankle sprain Thigh strain	Contact with another athlete (33 %), overuse (22 %), noncontact (20 %)	Football (soccer), taekwondo, hockey, handball, weightlifting, and boxing
					Thigh, knee, and lumbar spine Sprain, strain, and contusion	Overuse (25 %), noncontact trauma (20 %), contact with another athlete (14 %), contact with a stationary object (12 %)	Taekwondo, football, BMX, handball, mountain biking, athletics, weightlifting, hockey, and badminton
					Face, head and cervical spine, and knee Contusion, sprain, strain	Noncontact trauma (23.0 %), contact with a stagnant object (21.8 %), contact with another athlete (14.5 %)	Bobsleigh, ice hockey, short track, alpine freestyle, and snowboard cross
Winter OG 2014 [62]	1198	2,780	140	59	Knee sprain (first time-loss injury diagnosis)	Contact with a stationary object (25 %), overuse with gradual onset (14 %), noncontact trauma (13 %)	Aerial skiing, snowboard slopestyle, snowboard cross, slopestyle skiing, half-pipe skiing, moguls skiing, alpine skiing, and snowboard half-pipe

During the 2009 FINA World Championships (Aquatics Championships), Mountjoy et al. [47] reported 66 injuries per 1000 registered athletes, including 13 % of time-loss injuries, using the consensual methods from the multi-event competition [38]. Most injuries affected the upper extremity (37 %), followed by the lower extremity (28 %), head/neck (19 %), and trunk (16 %).



1. Male athletes seem to have a higher risk of severe sports-related injuries, while women are more affected by overuse than men.

2. To prevent secondary injuries, athletes should receive high-quality training and the correct amount of training and recovery and have a healthy lifestyle.

3. Good training equipment is essential to prevent sports-related accidents and overuse injury.

4.. Exhaustion and overtraining must be avoided.

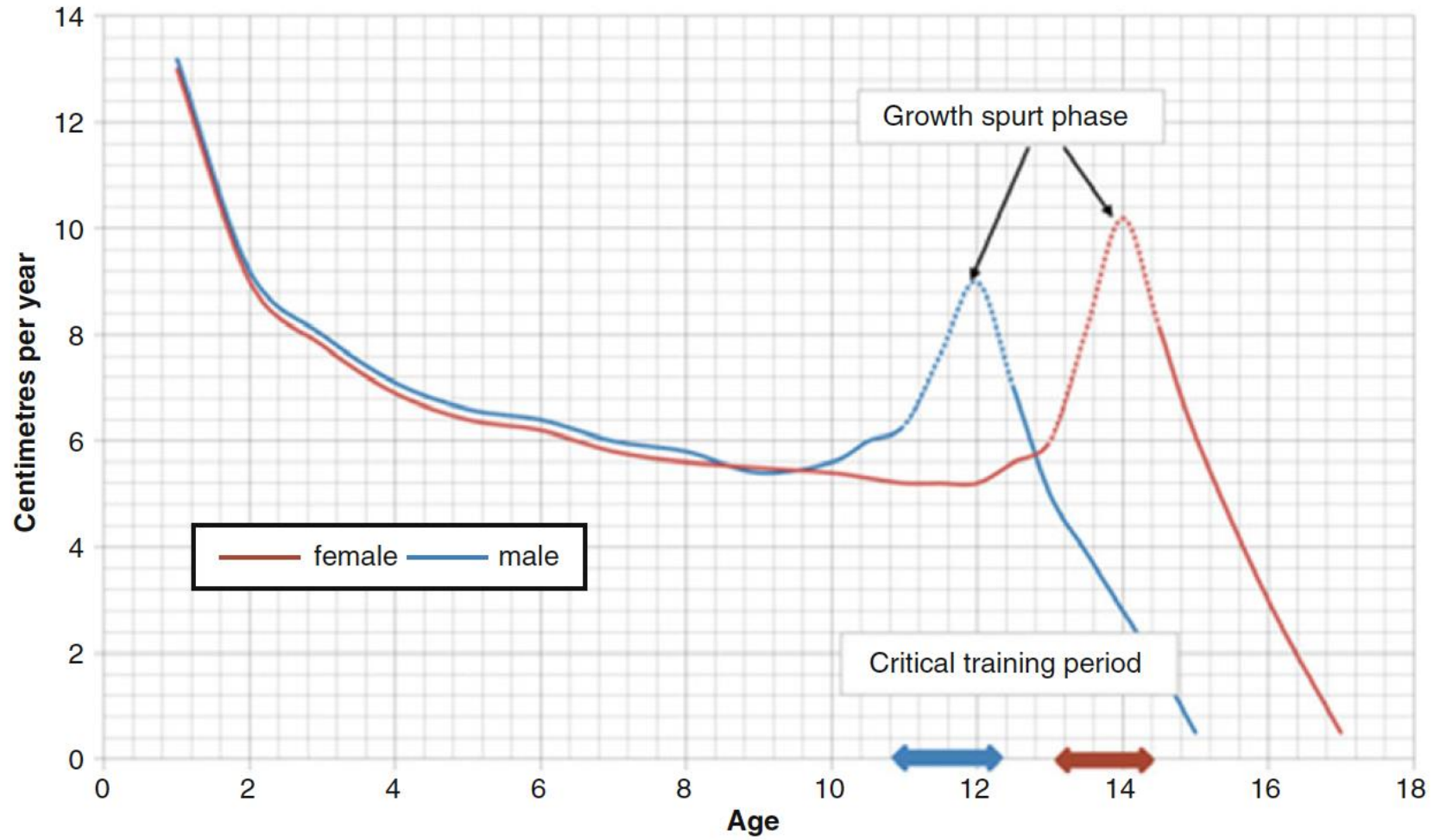


Fig.6.3 Peak velocity height curve for girls and boys showing the growth spurt phase and critical training or exercise phases

Prevalence rates of wrist pain varied from 32% to 73% in four of the six included studies on prevalence.

Table 1. Number of young athletes (< 18 years) performing wrist-loading focus sports in the Netherlands⁷

Sport	Number of young athletes
Gymnastics	175 061
Field hockey	158 701
Tennis	147 864
Volleyball	53 854
Judo	38 659
Rowing	3093

Clinicians should be aware that gymnasts aged 10-14 years, with high-training intensity and earlier onset of training are possibly at risk for wrist pain.

Prevalence, incidence and risk factors for overuse injuries of the wrist in young athletes: a systematic review

British Journal of Sports Medicine 2015; 49(18): 1189-1196



CONTENT VALIDITY of the SOS-WRIST questionnaire

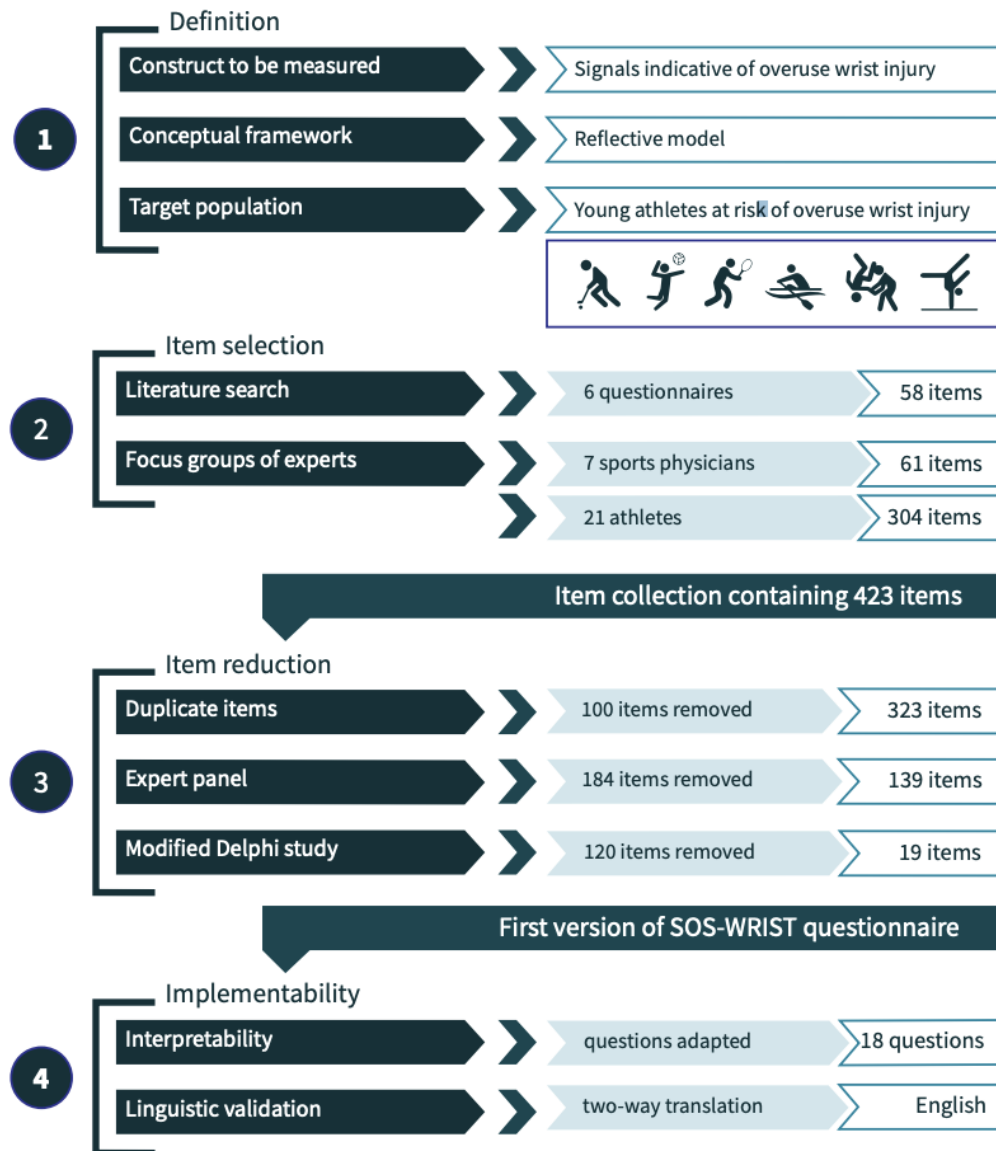
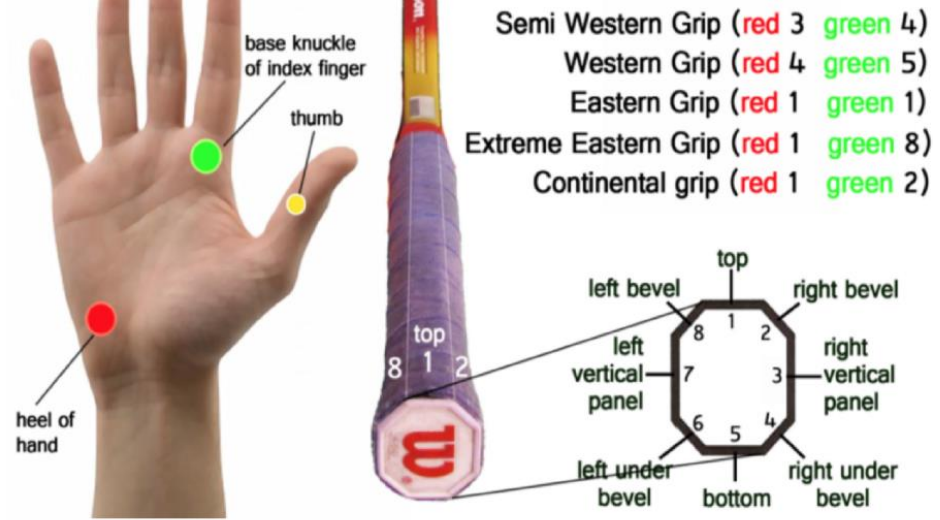


Table 4. The SOS-WRIST questionnaire in Dutch

1. Heb je vóór deze klachten wel eens last (bijvoorbeeld pijn, ongemak) van je pols gehad?
 Ja Nee Ik weet het niet
2. Heb je je pols de afgelopen 3 maanden meer gebruikt dan daarvoor, bijvoorbeeld door vaker en/of zwaarder te gaan trainen of sporten?
 Ja Nee Ik weet het niet
3. Kun je je een duidelijk moment herinneren waarop de pijn in je pols begonnen is?
 Ja Nee
4. Doet het pijn als je je pols gebruikt tijdens je sport?
 Vaak Soms Nooit
5. Heb je pijn in je pols als je je pols niet gebruikt?
 Vaak Soms Nooit
6. Wordt de pijn in je pols erger als je je pols gebruikt, bijvoorbeeld bij sporten of als je iets zwaars optilt?
 Vaak Soms Nooit
7. Blijft de pijn in je pols bestaan als je één of twee dagen niet hebt gesport?
 Ja Een beetje Nee
8. Heb je pijn in je pols als je je pols maximaal naar voren of naar achteren buigt? (zie plaatje)
 Vaak Soms Nooit
9. Heb je pijn in je pols als je jezelf omhoog opduwt met je armen, bijvoorbeeld vanuit een stoel of bed?
 Vaak Soms Nooit
10. Is je pols gezwollen?
 Ja Nee Ik weet het niet
11. Kun je minder goed kracht zetten met je hand dan normaal, bijvoorbeeld bij knijpen?
 Vaak Soms Nooit Ik weet het niet
12. Heb je pijn in je pols bij bankdrukken, opdrukken, of bij 'planken' op je handen?
 Vaak Soms Nooit Dat doe ik nooit
13. Heb je pijn in je pols als je met je armen ergens aan hangt, bijvoorbeeld een rekstok, of jezelf optrekt?
 Vaak Soms Nooit Dat doe ik nooit
14. Ben je minder vaak gaan trainen door je polsklachten?
 Ja Nee
15. Sla je bepaalde onderdelen van je training over of lever je minder inspanning door je polsklachten?
 Vaak Soms Nooit
16. Gebruik je je pols anders dan normaal om je pols geen pijn te doen?
 Vaak Soms Nooit
17. Heb je door je polsklachten meer moeite met het omdraaien van een sleutel in een slot?
 Vaak Soms Nooit Dat doe ik altijd met mijn andere hand
18. Heb je door je polsklachten moeite met schrijven als je langer dan 5 tot 10 minuten schrijft?
 Vaak Soms Nooit Dat doe ik altijd met mijn andere hand

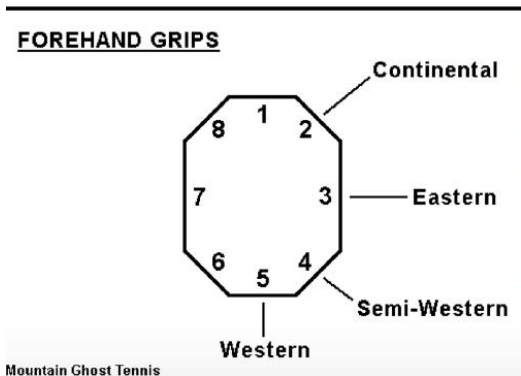
Hand grip position



4 types: semi western, full western, eastern, continental

Western style associated with ulnar sided wrist pathology (ECU, TFCC)

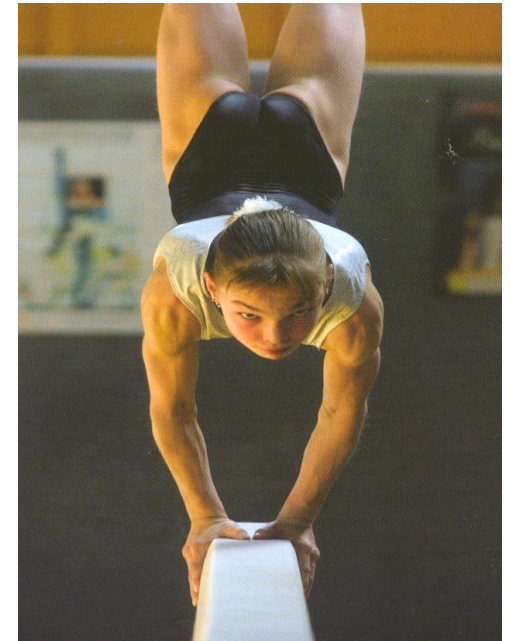
Eastern grip associated with with radial sided injuries (Quervain, intersection syndrome)



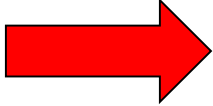
Ulnaire polsklachten

Differentiaal diagnose:

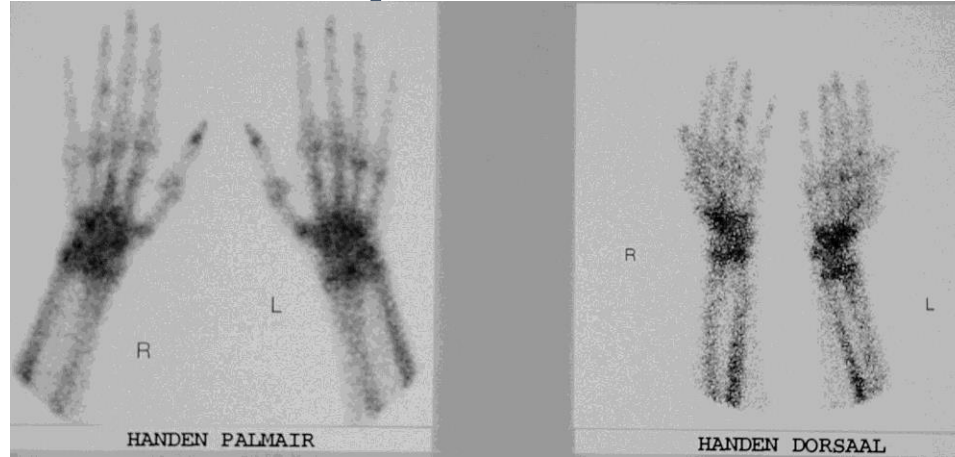
- 1. Articulair
- 2. Ossaal
- 3. Weke delen
-



Ulnaire polsklachten

- 1. Articulair/ Ossaal 
 - Carpi-ulnair
 - D.R.U.
 - Triquetrum-pisiforme/CMC 5
- 2. Weke delen
-

Articulair: carpi-ulnair



- Lang processus styloideus
- Ulna +



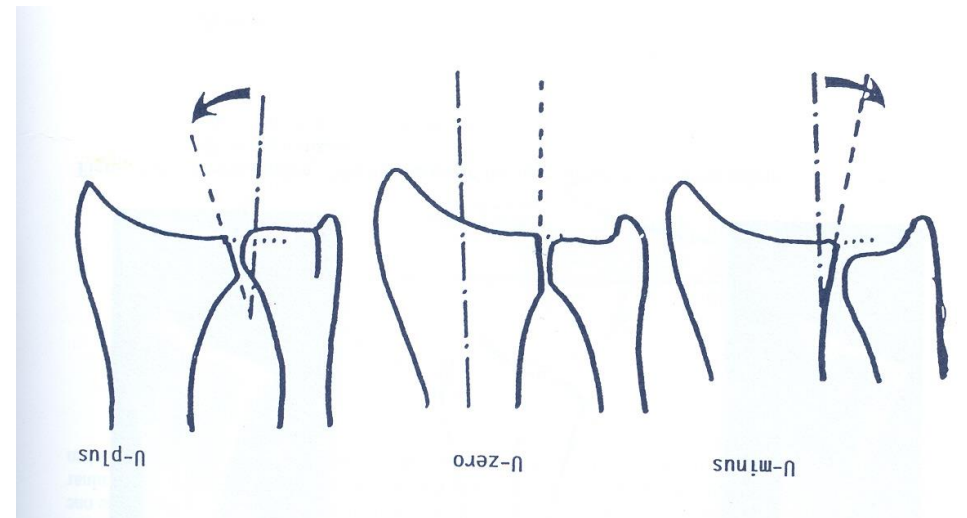


M 28 Y, gymnast, fall from 2 m



Articulair: DRU

- Incongruentie
 - Instabiliteit
 - Artritis/chondromalacie
 - Degeneratie
-
- Verschillende types DRU gewricht



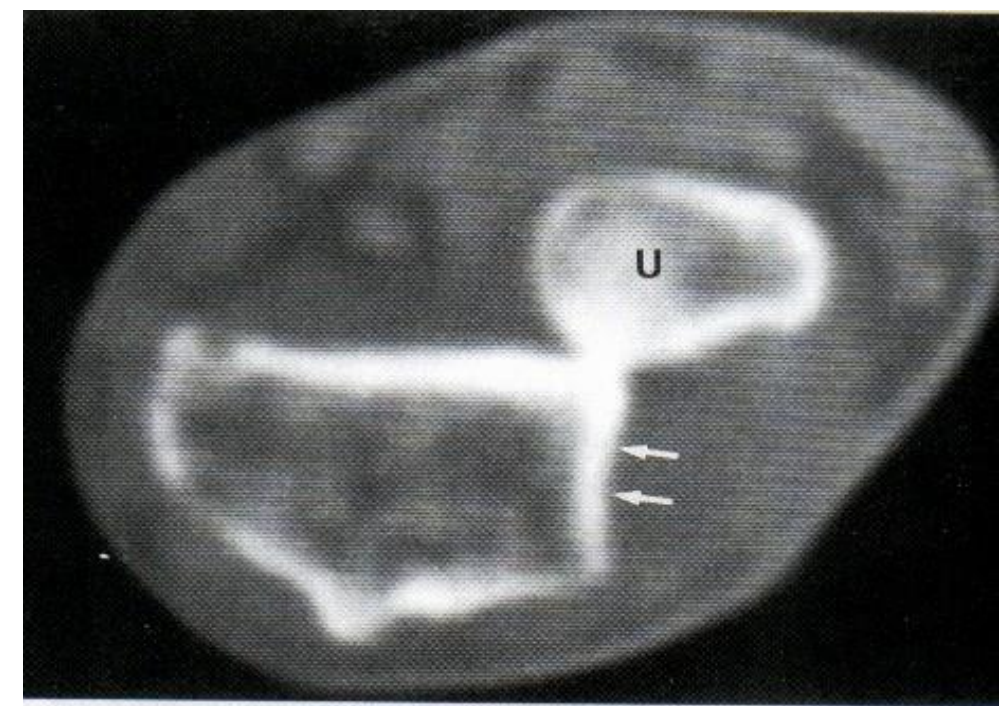
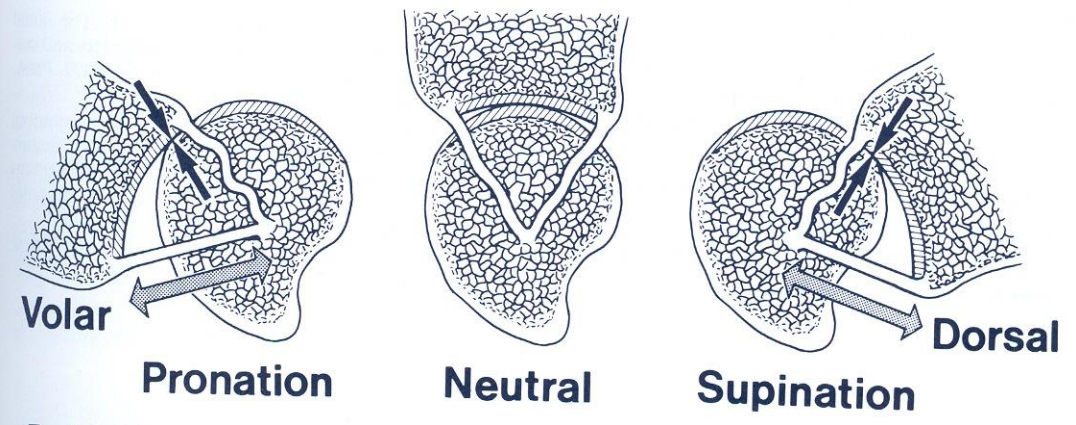
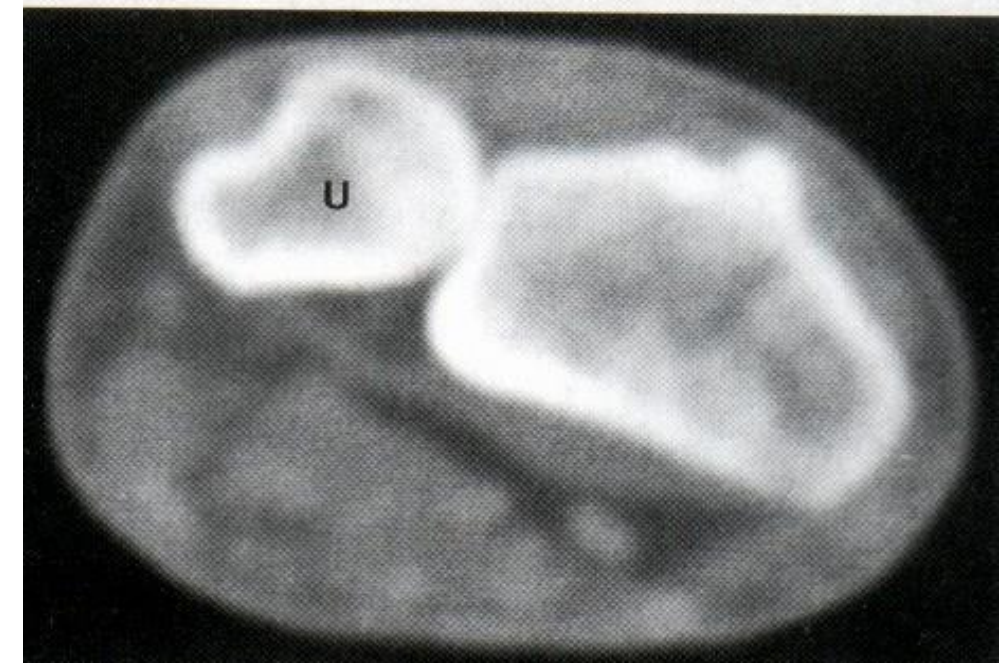


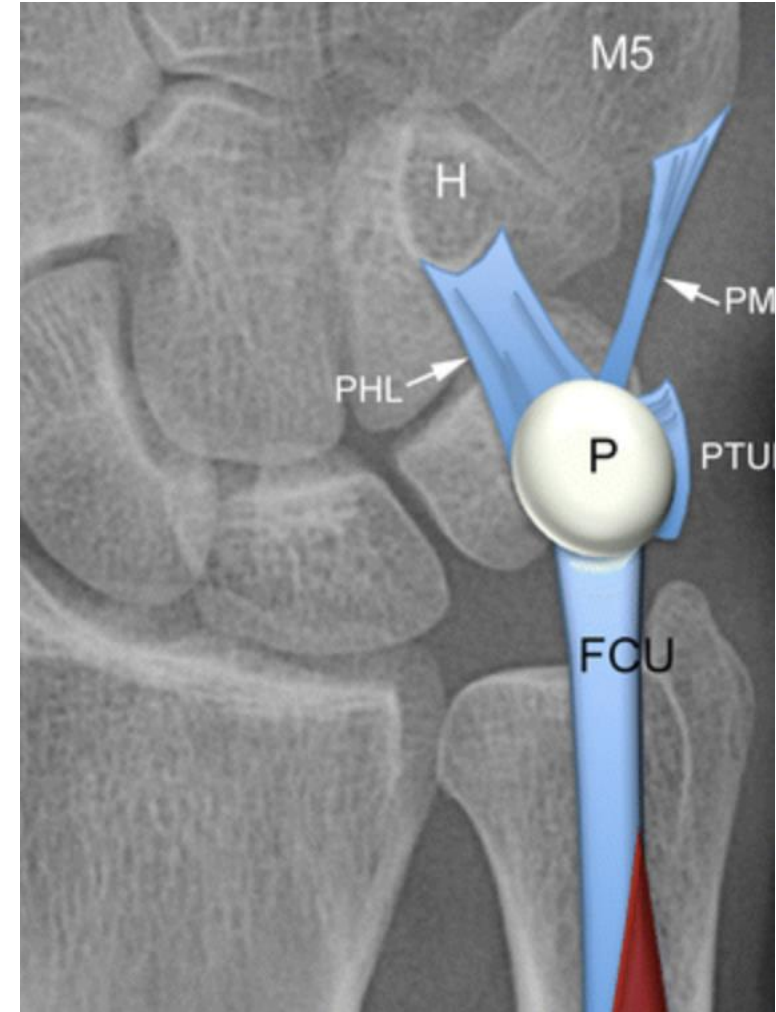
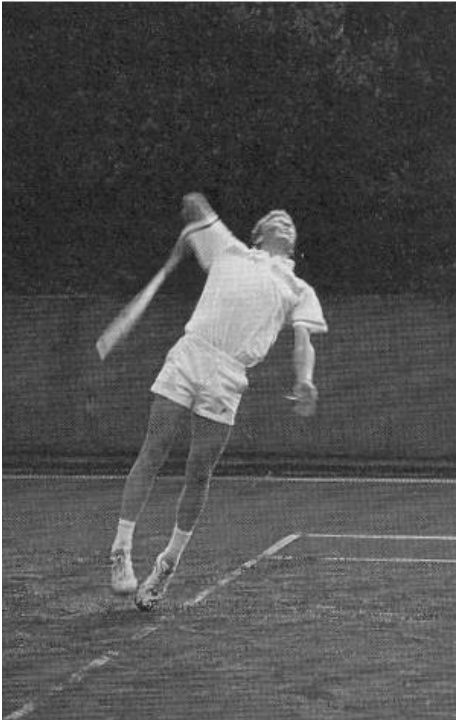
Fig. 25a





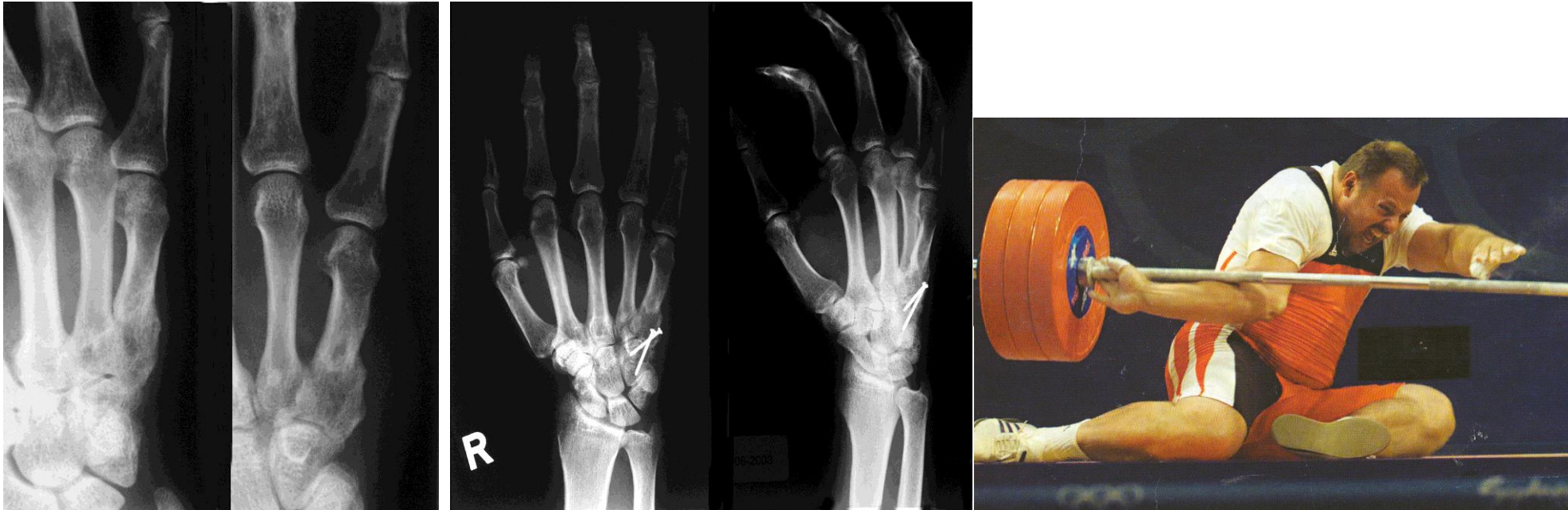
Articulair: Piso Triquetraal

- Artrose
- Fractuur
- Chondraal



Articulair: CMC 5

- Artrose
- Fractuur
- chondraal

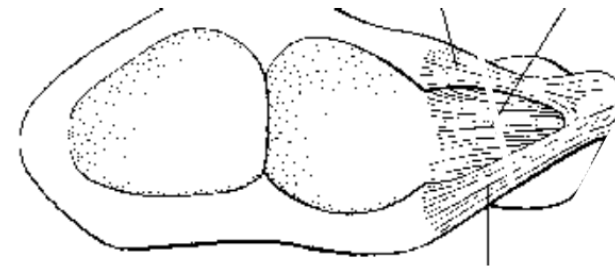


TFCC (Triangular fibrocartilage complex)

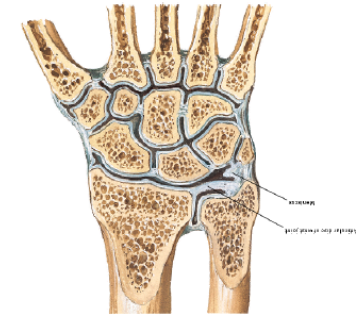
Volaire radio-ulnaire ligament



Figuur 1.7. Het TFCC van palmar.



TFC
Processus
styloideus ulnae

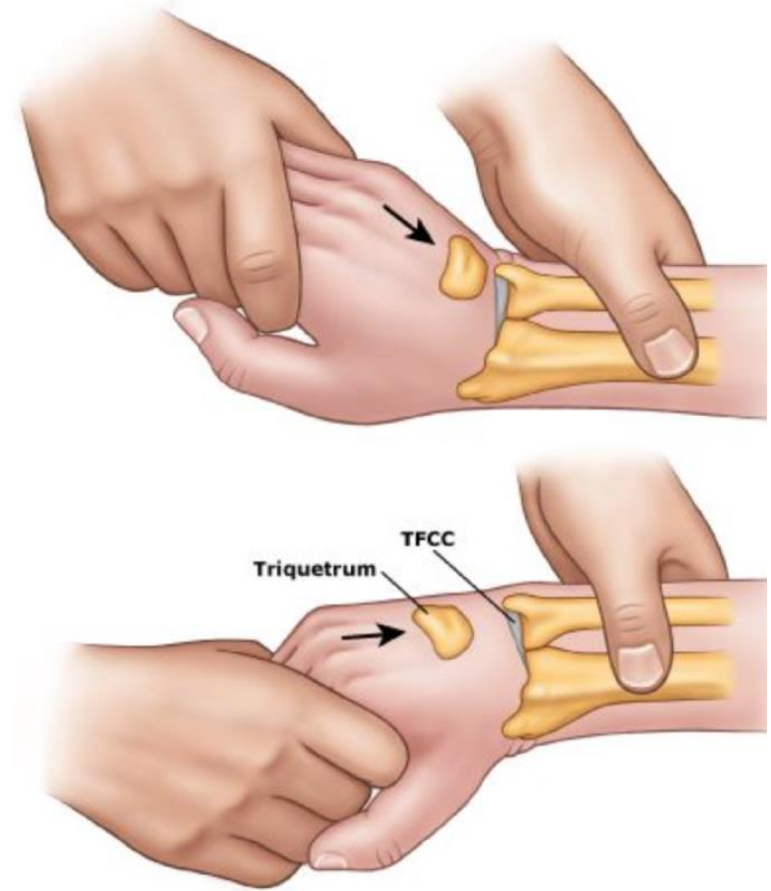


Dorsale radio-ulnaire ligament

Ulna-carpale ligaments

tendonsheaths ECU

TFCC compression tests



TFCC-laesion / ulno-carpal abutment
Positive if painfull/ clicking/crepitus

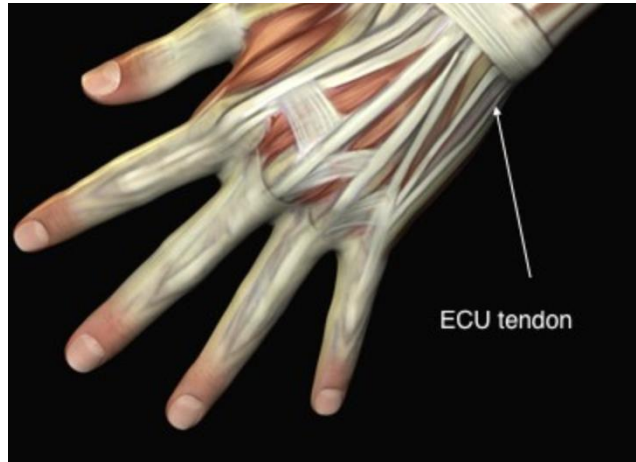
TFCC-laesion

- 30-40% > 40 Y has TFCC laesion on MRI

Tx:

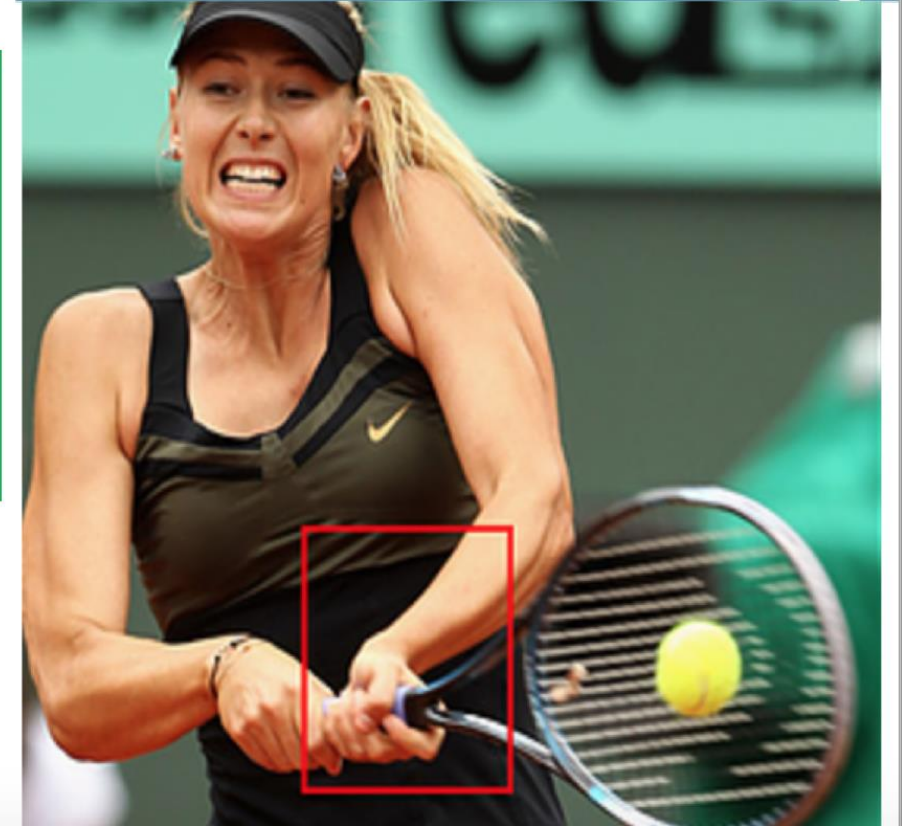
- Conservative (rest, NSAID's)
- Surgical: Arthroscopy/ fixation/ shortening osteotomy of the ulna

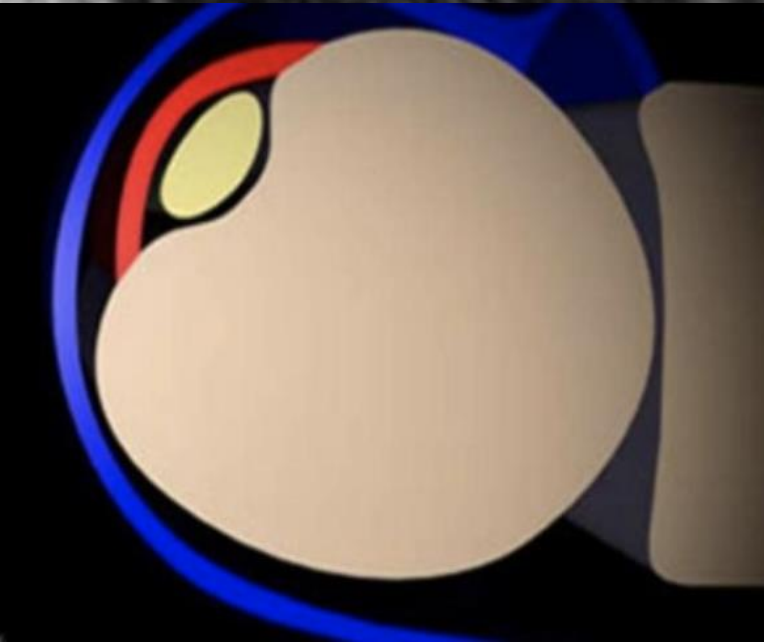
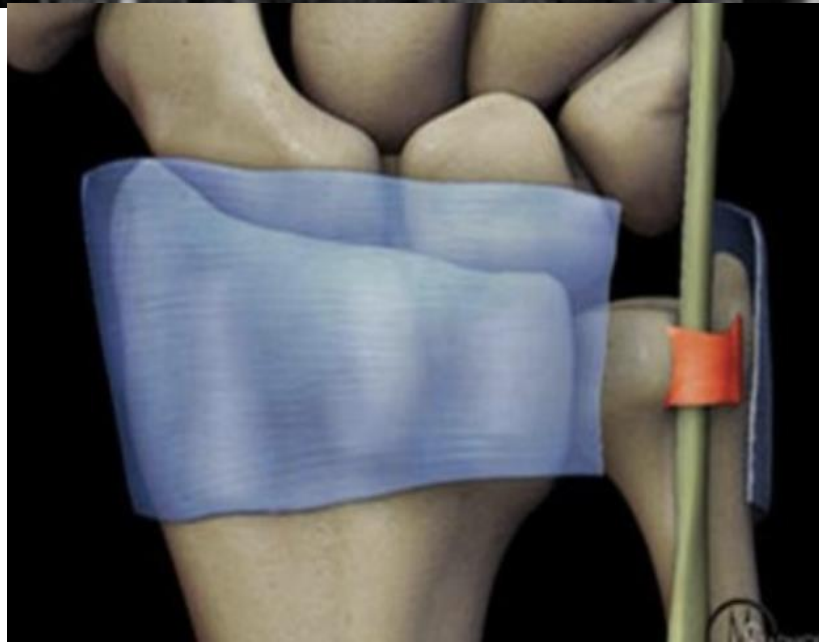
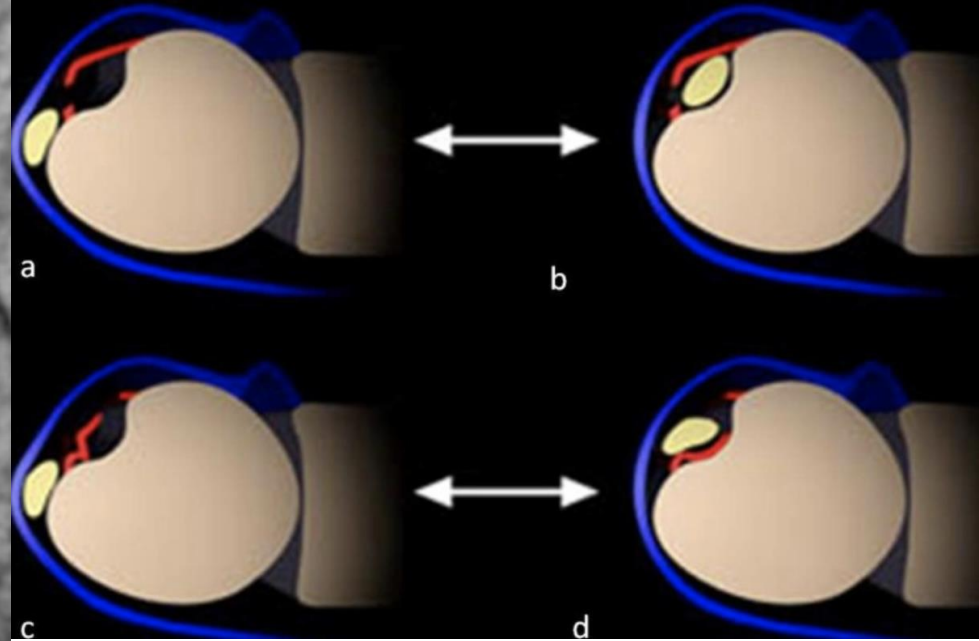
E.C.U.



-ECU subluxation
by sudden volar flexion and ulnar deviation
(fe low fore hand)

-ECU tendinitis by 2 handed backhand





Cureus. 2018 Apr; 10(4): e2489.

Published online 2018 Apr 16. doi: [10.7759/cureus.2489](https://doi.org/10.7759/cureus.2489)

PMCID: PMC6003798

PMID: [29922530](https://pubmed.ncbi.nlm.nih.gov/29922530/)

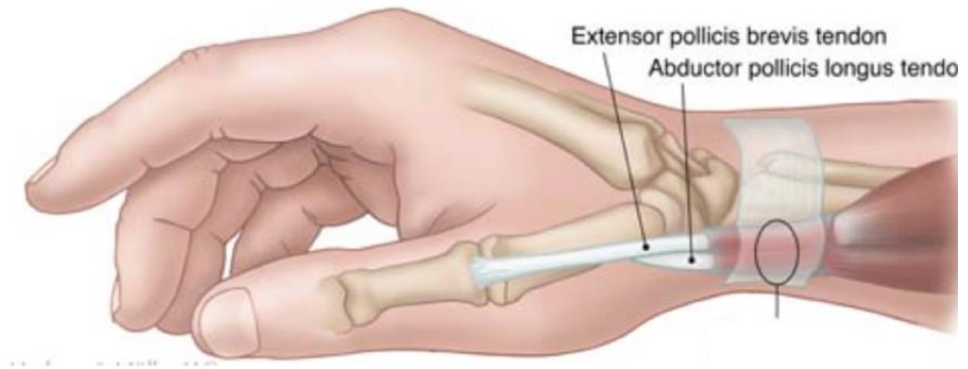
Tennis Players and Water Polo Athletes Now Have Something in Common to Talk About: MRI Findings of Extensor Carpi Ulnaris Chronic Subsheat Injury

Monitoring Editor: Alexander Muacevic and John R Adler

[Nishant Gupta](#),¹ [Neeraj Bhatt](#),² [Itisha Bansal](#),³ [Shuo Li](#),² and [Yogesh Kumar](#)²

M. Quervain

- Synovial inflammation of APL en EPB
- Pijn radiair side, local swelling and
- Finkelstein positief



Effectiveness of Conservative, Surgical, and Postsurgical Interventions for Trigger Finger, Dupuytren Disease, and De Quervain Disease: A Systematic Review

Bionka M Huisstede ¹, Saskia Gladdines ², Manon S Randsdorp ³, Bart W Koes ³

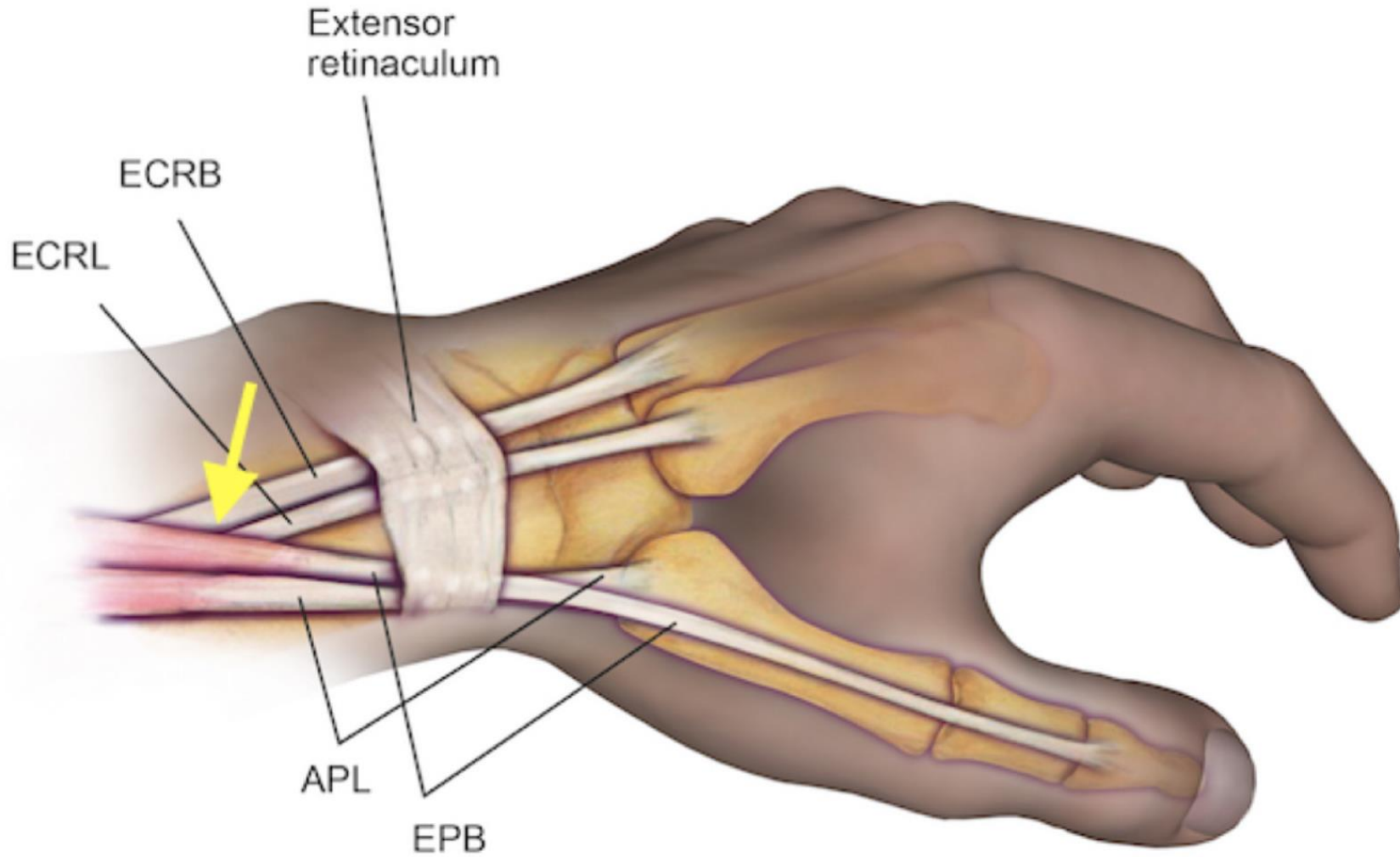


-Moderate evidence was found for the effect of corticosteroid injection on the very short term for trigger finger, De Quervain disease.

-A thumb splint as additive to a corticosteroid injection seems to be effective (moderate evidence) for De Quervain disease (short term and midterm).

- For Dupuytren disease, use of a corticosteroid injection within a percutaneous needle aponeurotomy in the midterm and tamoxifen versus a placebo before or after a fasciectomy seems to promising (moderate evidence). We also found moderate evidence for splinting after Dupuytren surgery in the short term

Intersection syndrome: rowers/gymnasts/tennis eastern



Gymnast wrist



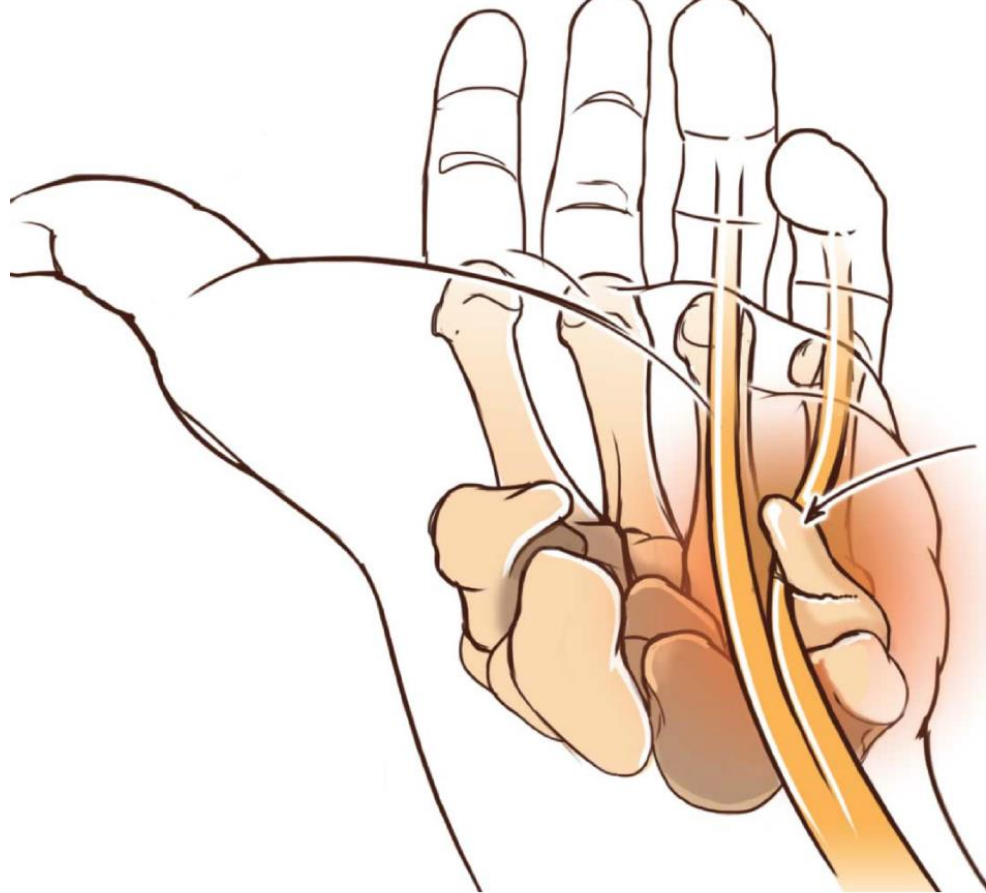
Nearly one third of all Olympic summer sports require repetitive loading of the wrist. In the Netherlands, six of these popular sports are performed by large numbers of athletes aged 25 years or younger: gymnastics, tennis, field hockey, judo, volleyball and rowing.

CASE REPORT

Stress fracture of the hook of the hamate

A R Guha, H Marynissen

Br J Sports Med 2002;36:224-225



Hook of Hamate



medicine (Baltimore), 2018 Nov;97(46):e13275. doi: 10.1097/MD.00000000000013275.

olated hook of hamate fracture in sports that require a strong grip comprehensive literature review.

Jim H¹, Kwon B¹, Kim J², Nam K¹.



This projection is called the hook,
Which is the most prominent bony
structure in contact with the racquet.
With impact (or a fall on the ground)
the excessive force on the hamate.





-gymnasts aged 10-14 years, with high-training intensity and earlier onset of training

Western style associated with ulnar sided wrist pathology (ECU, TFCC)
Eastern grip associated with with radial sided injuries (Quervain, intersection syndrome)

- Know anatomy
- Know your network
- Know your athlete