

NAJPOGOSTEJŠE POŠKODBE PRI HOKEJU

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Poškodbe pri hokeju

Injuries in men's international ice hockey: a 7-year study of the International Ice Hockey Federation Adult World Championship Tournaments and Olympic Winter Games

Markku Tuominen,¹ Michael J Stuart,² Mark Aubry,³ Pekka Kannus,⁴ Jari Parkkari⁵

Br J Sports Med 2014;0:1–7.



IIHF Daily Injury Report Form

IIHF Championship: _____

National Association: _____

Date: ____/____/____ (dd/mm/yy)

Using this form, please report if there were any injuries sustained by any player on your team during the above-mentioned day during this IIHF Championship. We would ask that you also report if there were no injuries sustained by players on your team during this day of this IIHF Championship. If an injury was sustained during this day then an IIHF Injury Report Form must be completed and submitted to the IIHF Medical Supervisor or, in his absence, to the IIHF Directorate Chairman providing the details of the injury sustained.

The definition of an injury used by the IIHF for reporting purposes is as follows:

1. An injury is considered reportable if a player misses a practice or a game because of an injury sustained during a practice or a game
2. The player does not return to the play for the remainder of the game following an injury
3. All concussions
4. All dental injuries
5. Any laceration which requires medical attention
6. All fractures

Please check (✓) the appropriate box below. Please provide the number of injuries sustained if you check article 'A'.

Injury Report

(✓)

A. During this day there were _____ injuries sustained by our team. (number)

B. During this day there were no injuries sustained by our team

Team Physician/Medical Representative: _____
(print name)

Signature: _____

Date: _____

Injury Report System/IRS				Injury Definition	
(only one injury/form)				The definition of an injury in the IIHF Injury Reporting System is as follows 1. An injury is considered reportable if a player misses a practice or a game because of an injury sustained during a practice or a game 2. The player doesn't return to the play for the remainder of the game following an injury 3. All concussions 4. Any dental injury 5. Any laceration which requires medical attention 6. All fractures	
Country: _____		IIHF Championship: _____		Date of injury: D ____ M ____ Y ____	
Zone of Injury A 1. No contact with boards 2. Contact with boards		Zone of Injury B Mark the area on the ice surface where the injury occurred. Note that Home and Visitor ends are marked to identify offensive and defensive activity			
Source of Diagnosis 1. Medical Doctor 2. Physiotherapist 3. Other _____		Player Information: 1. Age _____ 2. Height (cm) _____ 3. Weight (kg) _____ Position: 1. Centre 2. Wing 3. Defence 4. Goalie Nature of injury: 1. Acute 2. Recurrent: a. this season b. last season		Game / Period 1. warm up 2. 1st 3. 2nd 4. 3rd 5. OT Practice off-ice on-ice off-ice on-ice Even Strength 5/5 Penalty Killing 4/5 Power Play 5/4 Goalie 1. Yes 2. No	
Side / Body part: 1. N/A 2. Left 3. Right 4. Both Fill out a separate form for each injury 1. Head 10. Shoulder 19. Chest 28. Genitals 2. Face 11. Scapula 20. Abdomen 29. Hip 3. Neck 12. Upper arm 21. Kidneys 30. Thigh 4. Throat 13. Elbow 22. Upper Back 31. Knee 5. Jaw/Chin 14. Forearm 23. Lower Back 32. Leg 6. Teeth/Mouth 15. Wrist 24. Coccyx 33. Ankle 7. Eye 16. Hand 25. Buttocks 34. Foot 8. Ear 17. Thumb 26. Pelvis 35. Toes 9. Clavicle 18. Fingers 27. Groin 36. Other: _____		Dx/assessment: 1. Contusion 2. Sprain (Ligament) 3. Strain (Muscle-Tendon) 4. Laceration 5. Dislocation/Subluxation 6. Fracture 7. Neurotrauma/Concussion 8. Other _____ Time Lost: The amount of time player is expected to be out of play 1. Return same day 2. Less than 1 week 3. 1 to 3 weeks 4. More than 3 weeks		Cause of injury: 1. Type of Check a. Body Check b. Check from Behind c. Check to the Head 2. Stick Contact 3. Puck Contact 4. Unintended Collision 5. Fighting 6. Non-Contact 7. Skate 8. Other: _____ Was a penalty Called on the Play? 1. Yes 1. 2 min. 2. No 2. 2+2 min 3. 2+10 min 4. 5+20 min 5. Other: _____	
Dental: Mouthguard? 1. Yes 2. No Custom made? 1. Yes 2. No		Knee: Circle the appropriate structure involved: 1. ACL 2. PCL 3. MCL 4. LCL 5. Meniscus 6. PF* Grade: 1. ____ 2. ____ 3. ____		Diagnosis: ICD-code DG: _____ PF= Patellofemoral, Kneecap AC= Acromioclavicular Joint SC= Sternoclavicular Joint	
Shoulder: Circle the appropriate structure involved: 1. AC* 2. SC* 3. Glenohumeral Grade: 1. ____ 2. ____ 3. ____		Equipment: 1. Full Face mask a. shield b. cage 2. Visor 3. None			

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-IIHF,

-Analiza poškodb na svetovnih prvenstvih in olimpijskih igrah od l. 2006 – 2011,

-Incidenca posameznih poškodb,

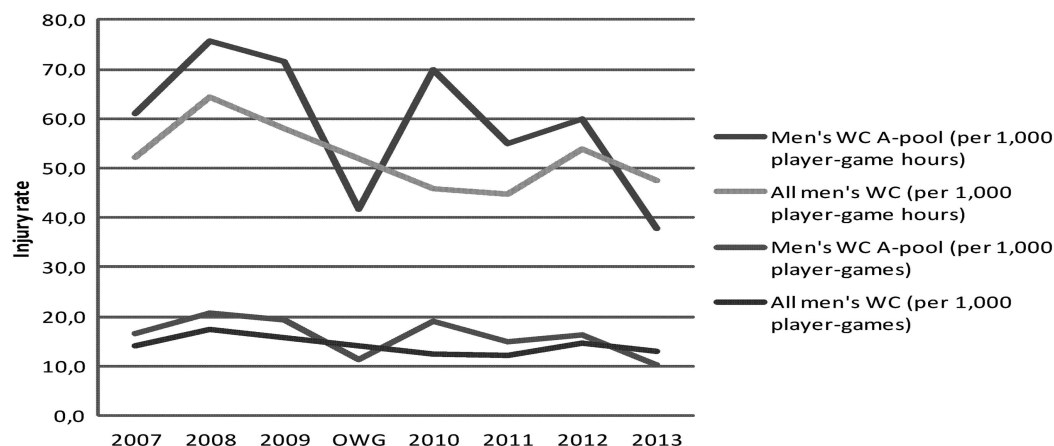
-Mehanizem poškodbe.

Poškodbe pri hokeju

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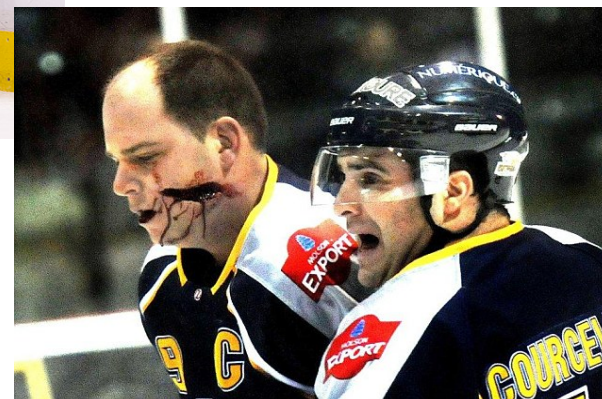
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VERJETNOST, DA SE IGRALEC POŠKODUJE:
1 – 1.2 poškodba na 20 odigranih ur tekme!
1 poškodba na 40 ur treninga

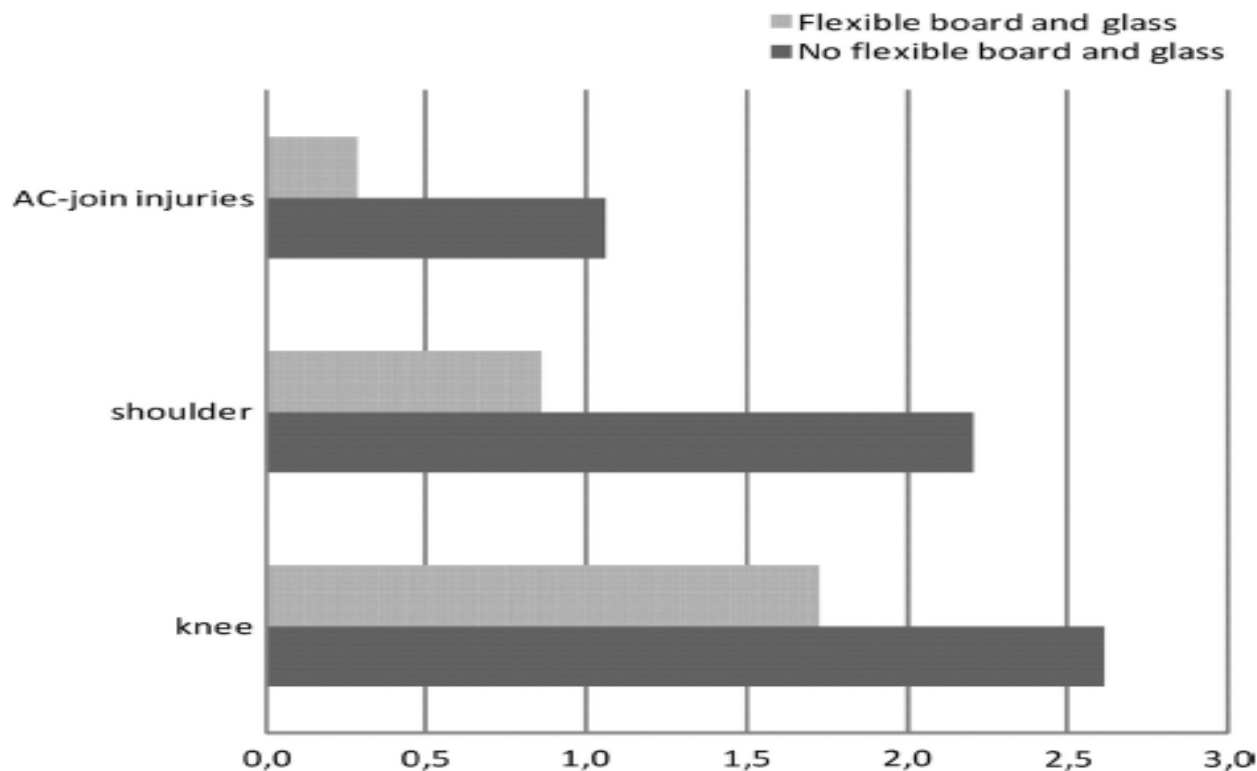
Vzroki za poškodbe pri hokeju

1. Hitrost
2. Ograda
3. Plošček
4. Palica
5. Rezilo drsalke
6. "Body check"



60,7% vseh poškodb zaradi udarca s ploščkom, s palico ali zaradi "body-check-a".

Število poškodb vs. material ograde

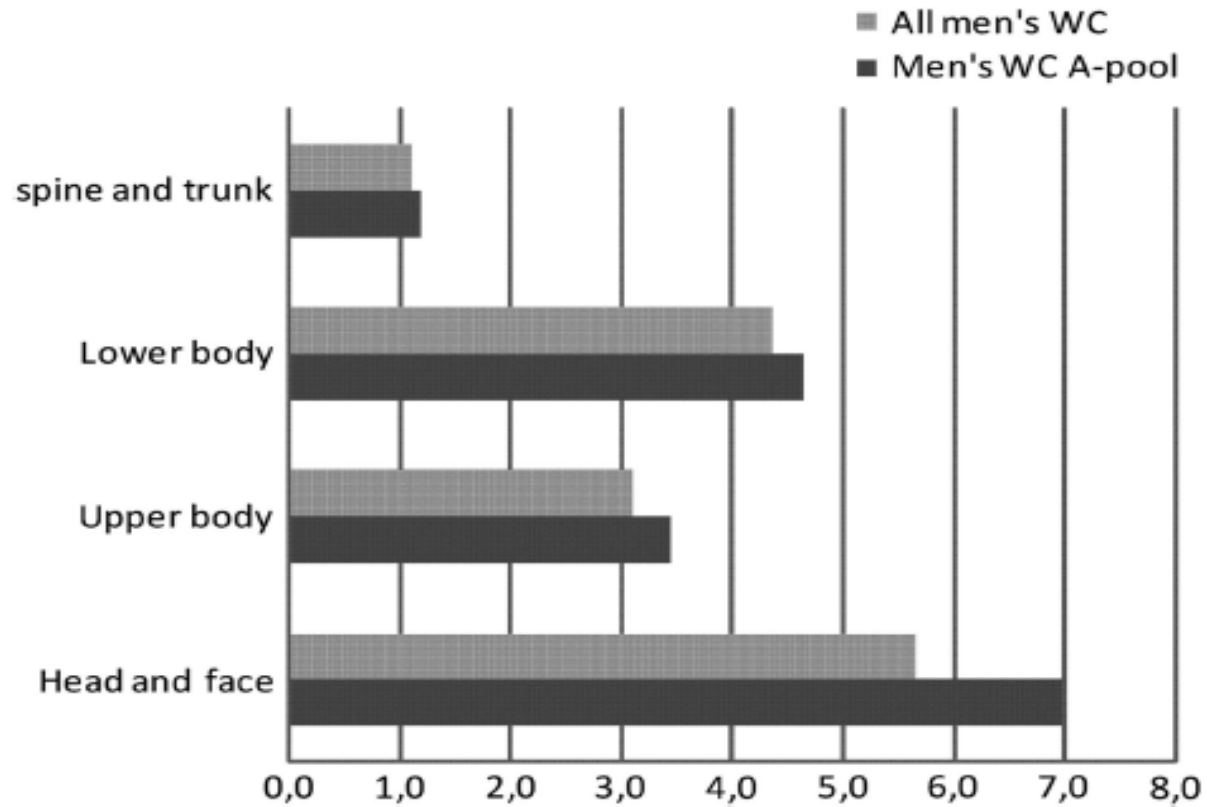


Mehke (fleksibilne) ograde so zmanjšale pojavnost (incidenco) poškodb za 29%!

Tipi poškodb



Poškodovani del telesa



Razlika v poškodbah pri ženskah in moških

Are There Differences in Ice Hockey Injuries Between Sexes?

A Systematic Review

Lauren MacCormick,* BS, Thomas M. Best,^{†‡§} MD, PhD, and David C. Flanigan,^{†‡||¶} MD
Investigation performed at The Ohio State University, Columbus, Ohio, USA

The Orthopaedic Journal of Sports Medicine, 2014

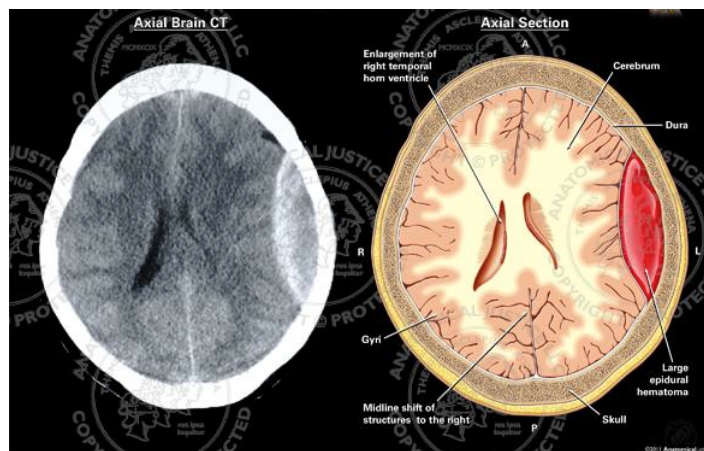
- Ni razlike v pojavnosti poškodb med spoloma
- Moški imajo več poškodb zgornjih udov (izpah ramenskega sklepa!, poškodba AC sklepa!)
- Ženske imajo več poškodb spodnjih udov (notranja stranska vez!)

Poškodba glave – pretres možganov, nezavest



- Incidenca do 10% vseh poškodb na WC!,
- Večina pretresov se pripeti v prvi tretjini (42 – 47%),
- Najbolj izpostavljeno igralno mesto je center (v 25%),

Poškodba glave – pretres možganov, nezavest



Pretres možganov, epiduralni – subduralni hematom, difuzna krvavitev – edem možganov,

Pravilno ukrepanje na ledu: zavarovanje vratne hrbtenice, položaj, sprostitev dihalnih poti, preverjanje življenskih funkcij, postopki oživljanja, varen transport (rešilec),

Opazovanje vsaj 48 ur!

Pogoji za postopno vrnitev na led: ni nevroloških izpadov, lucidno mišljenje, ni glavobola – bruhanja...

Zlom/dislokacija vratnih vretenc

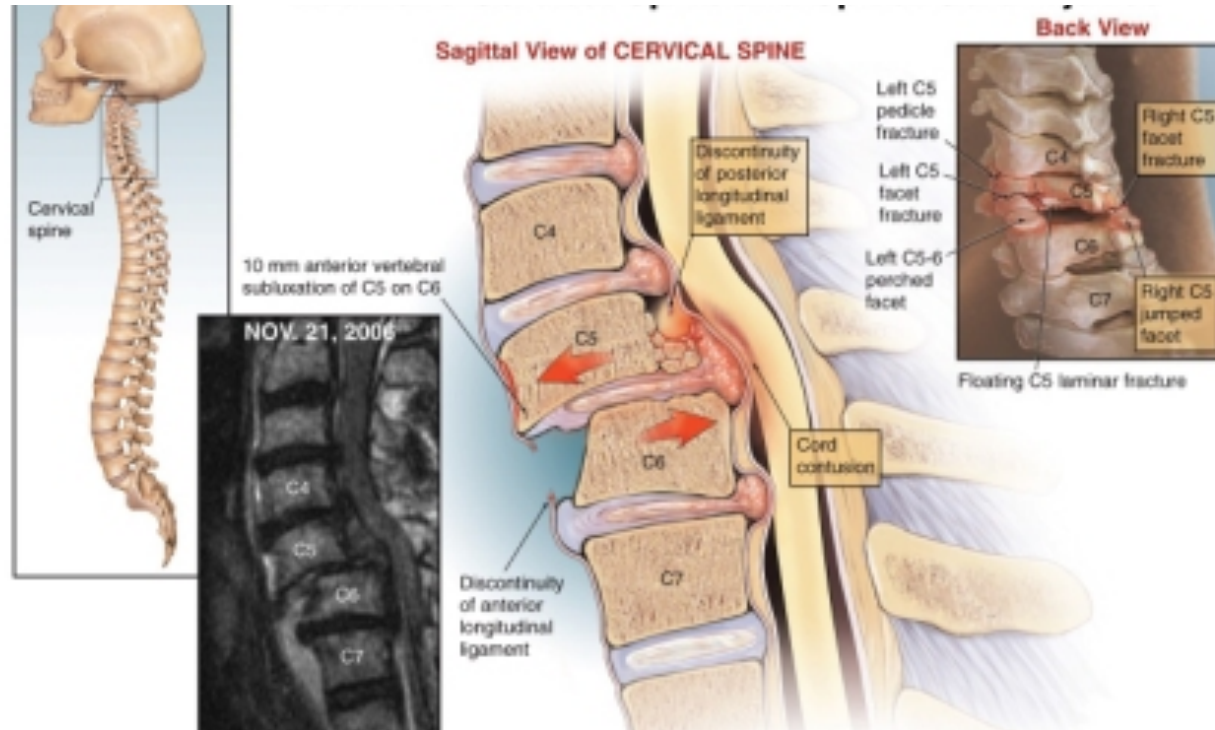


Canadian Ice Hockey Spinal Injuries Registry (data from 1943 to 2011):

- 355 cases documented (cca 10% severe),
- primarily males – 97.7%,
- cervical spine injuries – 78.9%
- impact with the boards – 64.2%, check or push from behind – 36.0%.

It is imperative **to continue educating players and team officials about spinal injury prevention and to reinforce the rules against checking or pushing from behind** to reduce the incidence of these serious injuries.

Zlom/dislokacija vratnih vretenc



Možne posledice zloma vratne hrbtenice:

- Motorične motnje v rokah in nogah!,
- Senzorični izpadi po koži rok, nog in trupa,
- Izguba kontrole uriniranja in odvajanja blata ter motnja spolne funkcije,
- Preležnine, okužbe,...
- Motnje dihanja, smrt (poškodba zgornjih vratnih vretenc).

Zlom/dislokacija vratnih vretenc

Najhujše posledice poškodbe vratnih vretenc so zaradi nepravilne oskrbe takoj po poškodbi, zaradi nepravilne prve pomoči nezvestnega!



Poškodbe obraza

Rane kože in podkožja

Zlom nosu in obnosnih sinusov

Zlomi obraznih kosti

Poškodbe očesa



Prva pomoč: zaustaviti krvavitev, sterilno pokriti, transport v ambulanto (slikanje, šivanje,...)

Cepljenje proti tetanusu in antibiotik!

Poškodbe zob



Izpah rame



Tveganje za ponovni izpah je odvisno od starosti

- ✦ Mladi pod 20 leti - preko 90%
- ✦ Starejši od 40 let - pod 10%

Izpah rame

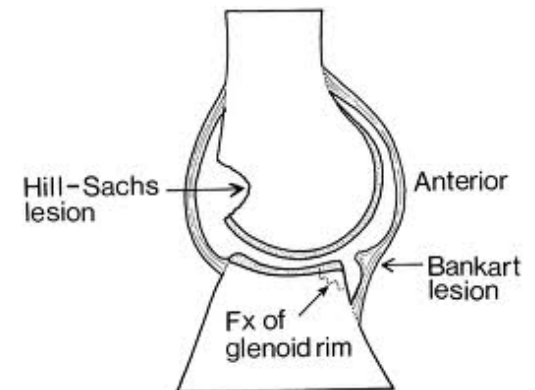
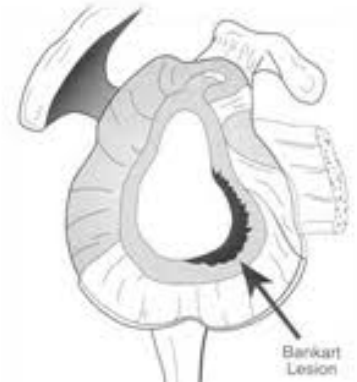
- Bankartova lezija labruma!
- kostna Bankartova lezija
- Hill Sachsova lezija!

Zlomi

glenoida
korakoida
humeralne glave
grčevin humerusa

Raztrganina mišic rotatorne manšeta (starejši)

Poškodba aksilarnega živca



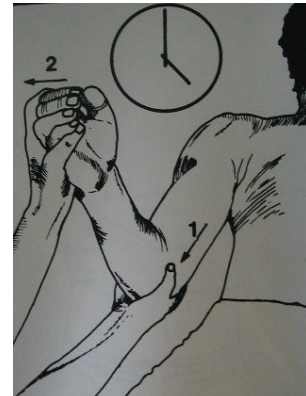
Izpah rame

Prva pomoč

imobilizacija in čimprejšnji prevoz na urgenco
(RTG!)

Repozicija

- Kocherjev maneuver
- Hipokratov maneuver



Imobilizacija 4-6 tednov v zunanji rotaciji!

Izpah rame

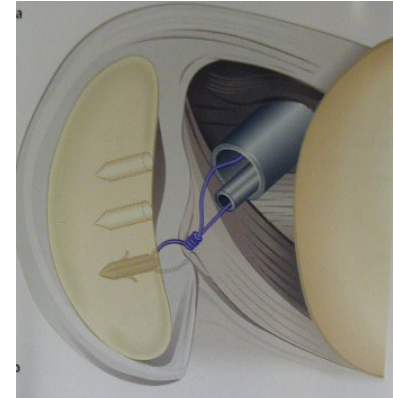
Operacija, če se izpah ponavlja!

Artroskopska Bankartova operacija

Odprta stabilizacija (HOKEJ!)

– Bristow - Latarjet operacija

Rehabilitacija min. 4 mesece



AC sindezmoliza

ZDRAVLJENJE:

...izberemo glede na tip poškodbe, glede na starost in fizične zahteve poškodovanca

- poškodbe tipa I in II zdravimo neoperativno,
- poškodbo tipa III lahko zdravimo konzervativno ali operativno
 - pri visoko aktivnih bolnikih in pri mlajših ženskah, da preprečimo deformacijo zaradi vertikalnega premika ključnice
- poškodbe tipa IV – VI zdravimo operativno

AC sindezmoliza

KONZERVATIVNO ZDRAVLJENJE

akromioklavikularna (AC) opornica, mitela le pri očitnem tipu I, analgetik, hlajenje

- AC ortoza (tip II in III?)



AC sindezmoliza

OPERATIVNO ZDRAVLJENJE

- poškodbe tipa III – VI
- preko 30 načinov OP zdravljenja popolne dislokacije AC-sklepa
- operativni poseg najbolje opraviti čimprej po poškodbi (lahko kasneje)

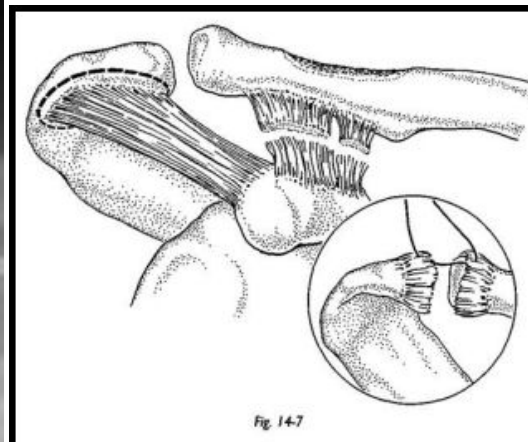
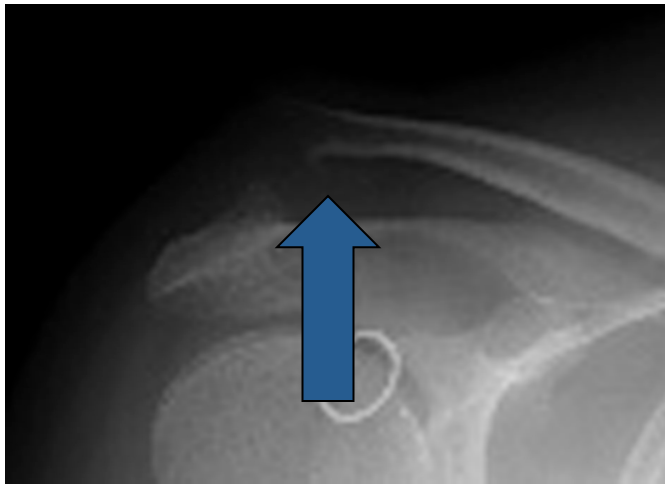


Fig. 14-7

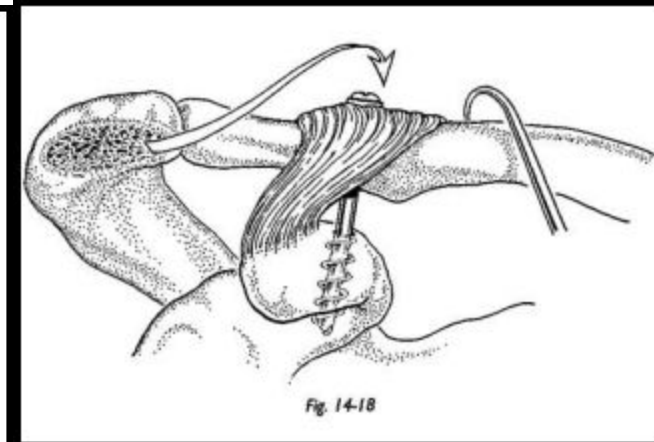
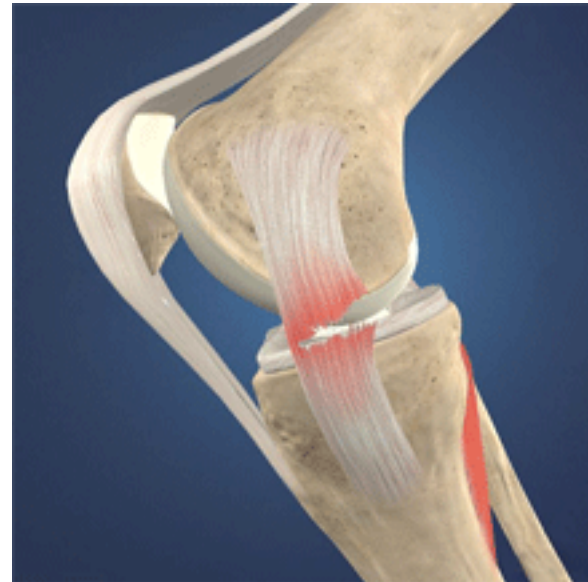


Fig. 14-18

Poškodba medialne kolateralne vezi kolena

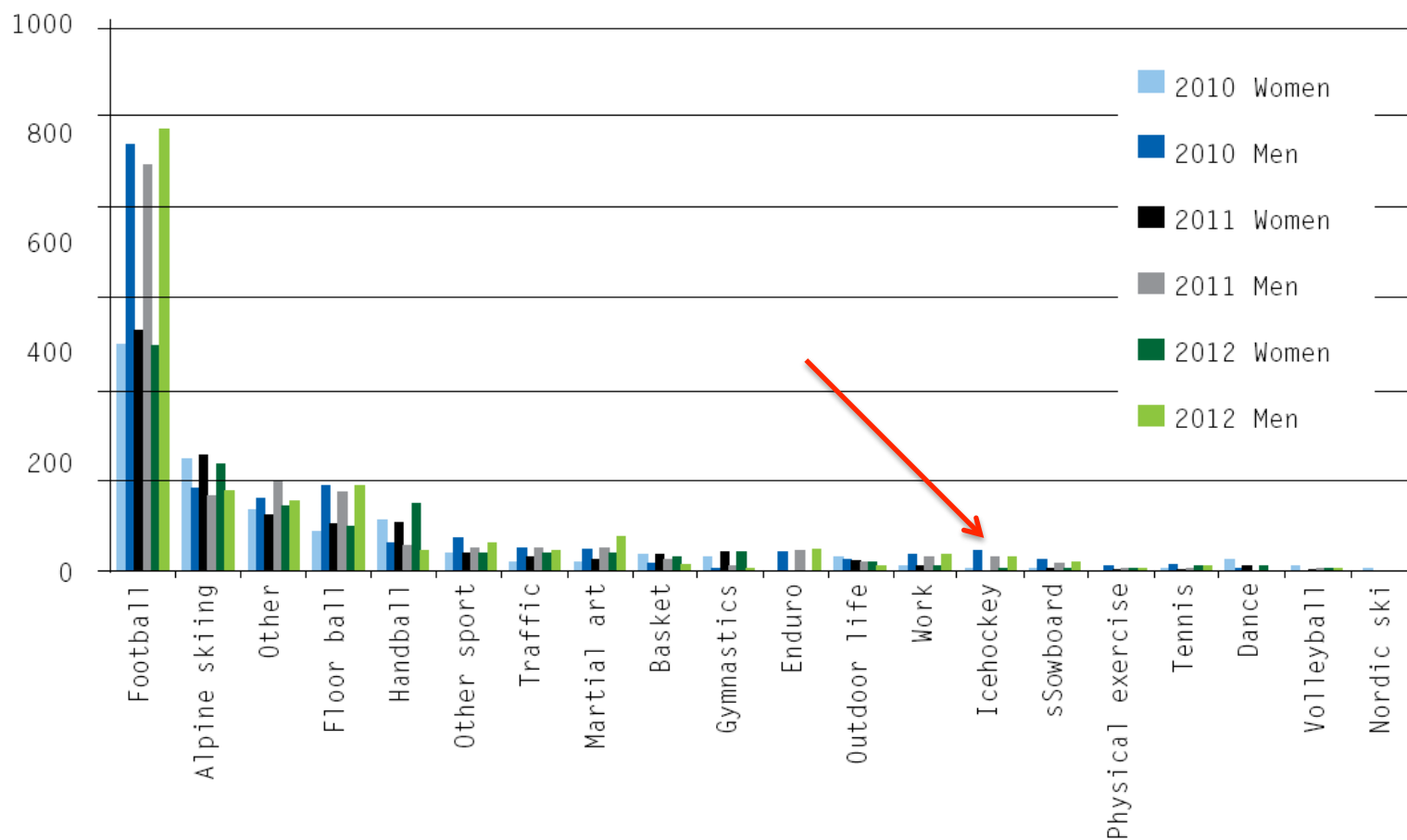


Zdravljenje:

- praviloma konzervativno (brez operacije)
- 2 – 12 tednov odvisno od stopnje poškodbe
- opornica

Poškodba sprednje križne vezi kolena

Number of primary ACL reconstructions, injury caused by sports



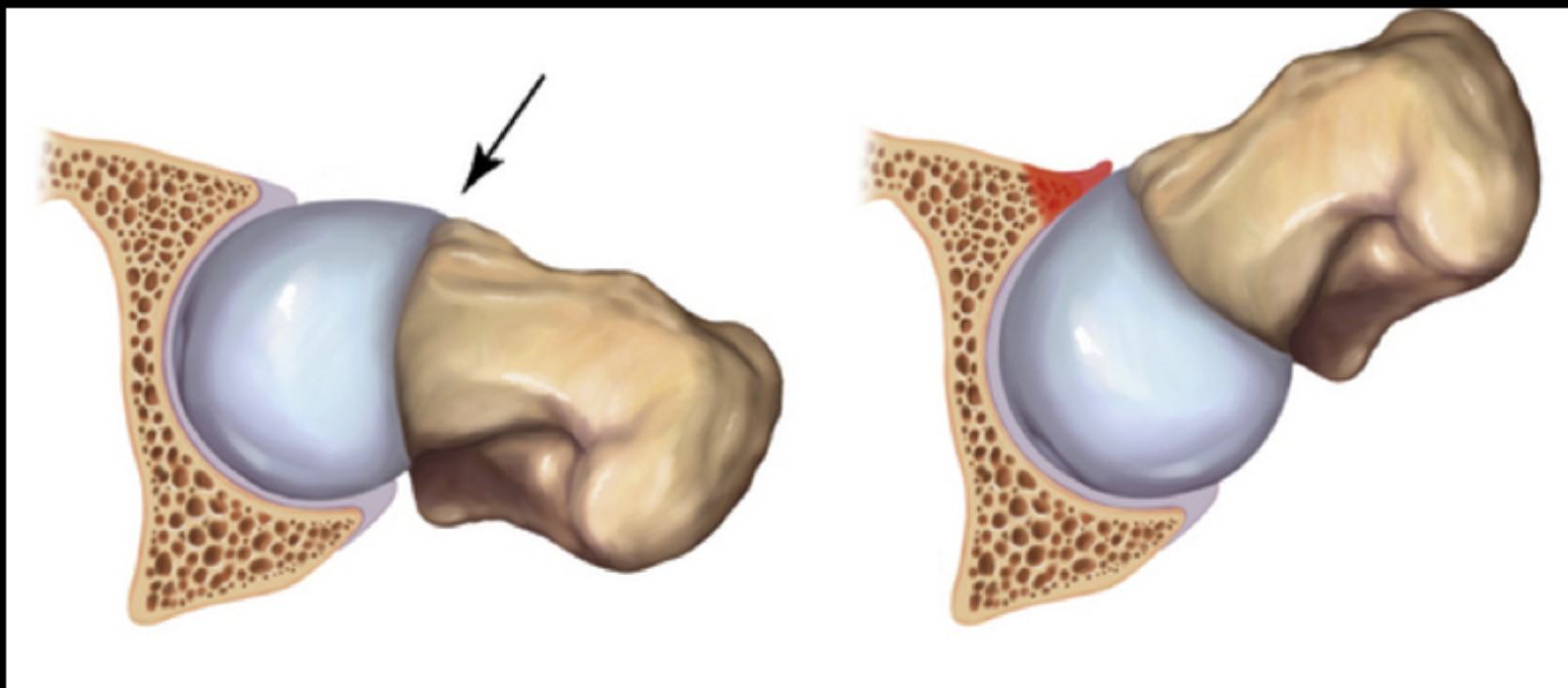
Preobremenitvena poškodba



Preobremenitvena poškodba



Preobremenitvena poškodba - asferična oblika glavice stegnenice



Utesnitveni sindrom kolka: poškodba labruma in hrustanca, obraba

