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Recommended citation(APA):
Schram, B., Pope, R. R., & Orr, R. M. (2016). *Injuries associated with sport participation amongst Australian Army Personnel*. Australasian Military Medicine Association (AMMA) Conference 2016, Melbourne, Australia.

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Injuries Associated with Sport Participation Amongst Australian Army Personnel



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Background

- Sport is a leading cause of injuries in Australian Army personnel
(Rudzki, 1992; ADF Health Status Report, 2000; McDonald et al., 2016)
- Physical training is linked to the highest number of working days lost, hospital admissions, sick and light duties days. Sporting injuries are another significant factor

(Senate Committee Hansard 17 Aug 2004)



Background

- Injuries are of detriment to military capability and interrupt active duty.
- Limited detailed research exists regarding injuries associated with sports participation in army personnel.





Aim

- The purpose of this study was to investigate patterns of injury from sport participation in Australian Regular Army (ARA) personnel, in order to guide prevention strategies.

This research was supported by a grant from the Defence Health Foundation



Methods

- Retrospective cohort study, covering 01 Jul 2012 – 30 Jun 2014
- Incident data for Australian Army personnel were extracted from WHSCAR database by system administrators & made non-identifiable



Methods

- **Inclusion Criteria:**
 - Australian Regular Army personnel;
 - a MPI or SPI that occurred while the person was ‘on duty’;
 - the injury was caused by sporting participation; and
 - the injury occurred between 01 July 2012 and 30 June 2014,
- **Exclusion Criteria:**
 - related to personnel from a foreign defence service, on secondment; or
 - contained missing or incomplete data



Methods

- Data analysis:
 - Descriptive statistical analysis of sporting injuries



Methods

- Ethics approval from ADHREC (LERP14-024) & BUHREC (RO1907)
- Abstract approved for presentation by JHC (160805)



Results

- A total of 9828 injuries were reported amongst the ARA personnel.
 - Sports accounted for (n=1092, 11.11%).



Results

	MPI	%	SPI	%	MPI & SPI	%
Soccer	238	23.52%	16	20.00%	254	23.26%
Rugby union/league	228	22.53%	22	27.50%	250	22.89%
Touch Football	189	18.68%	14	17.50%	203	18.59%
Australian Rules	120	11.86%	11	13.75%	131	12.00%
Basketball/netball	125	12.35%	5	6.25%	130	11.90%
Volleyball	61	6.03%	7	8.75%	68	6.23%



Results

- Injured sites
 - Ankle, n=212, 21.90%;
 - Knee, n=166, 17.15%; and
 - Shoulder, n=112, 11.57%
- Nature of injury
 - soft tissue injury, n=533, 55.06%;
 - Dislocation, n=123, 12.71%; and
 - Fractures, n=115, 11.88%





Results

- Mechanisms
 - contact with objects (n=340, 35.12%),
 - falls (n=265, 27.38%) and
 - muscular stress (n=250, 25.83%)





Discussion

- Sports participation is still a leading cause of injuries in ARA personnel,
 - Soccer and Rugby being the leading sports
- The ankle, knee and shoulder are the joints most commonly injured
- Current injury rates, locations and mechanisms are similar to those reported in historical defence injury reports.



Concluding remarks

- Given that sporting injuries have a negative impact on force readiness...
- ...and that current injury rates, locations and mechanisms are similar to those reported in historical defence injury reports...
- ...a renewed focus, with on-going attention, should be given to sporting injuries in the ARA



Concluding remarks

- This study/presentation provides guidance on which sports Defence should focus on with preventive efforts if it wishes to have a strong impact on sports-related ARA injury rates



Acknowledgement

- The Defence Health Foundation





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