



When The Going Gets Tough: A Systematic Review Of Ironman Distance Triathlon Injuries

***John-Henry Rhind^{*1} Corresponding Author, Debashis Dass¹, Andrew Barnett^{1,2}, Michael R Carmont^{2,3}**

The Department of Trauma & Orthopaedic Surgery, Robert Jones Agnes Hunt Hospital, Oswestry, United Kingdom

Abstract:

Objective: The distribution of injuries affecting Ironman athletes is yet to be fully understood. A systematic review was performed of the clinical literature to determine the epidemiology of musculoskeletal injuries affecting Ironman athletes.

Design: Systematic review

Data Sources: Searched databases in Feb 2020 were PubMed, Medline, EMBASE, EMCARE, and CINHAL databases.

Eligibility Criteria: Published observational research articles relating to the incidence or prevalence of musculoskeletal injuries in Ironman triathletes, written in the English language and not restricted by age or gender from 1980 onwards.

Results: Of the 975 studies identified on the initial search, 8 studies met the inclusion criteria for analysis. The mean age (SD) of the Ironman athletes in these studies was 35.1 (2.7) years. Overuse injuries were most frequent, incidence range 37-91%. Acute injury incidence range, 24-27%. The knee and spine were the most frequent localisation of injury. Running was the most frequent aetiology. Elite athletes had a lower incidence of overuse injury, 37%. The highest acute injury incidence (27%) was recorded in non-elite athletes. The quality of the studies was relatively poor with no study satisfying >50% of the quality assessment tool questions and only two studies were prospective, the rest were retrospective cross-sectional studies.

Conclusion: There is a lack of literature reporting on musculoskeletal injuries in Ironman athletes. Overuse injuries, particularly the knee sustained during running are the most common injuries reported. Elite Ironman athletes may have a lower incidence of both overuse and acute injuries.



Publication of speakers:

1. Rhind, John-Henry & Ramhamadany, Eamon & Collins, Ruairaidh & Govilkar, Siddharth & Dass, Debashis & Hay, Stuart. (2020). An analysis of virtual fracture clinics in orthopaedic trauma in the UK during the coronavirus crisis. *EFORT Open Reviews*. 5. 442-448. 10.1302/2058-5241.5.200041.
2. Rhind, John-Henry & Baker, Camilla & Roberts, Philip. (2020). Total Hip Arthroplasty in the Obese Patient: Tips and Tricks and Review of the Literature. *Indian Journal of Orthopaedics*. 54. 10.1007/s43465-020-00164-w.
3. Rhind, John-Henry & Quinn, Dominic & Cosbey, Lucy & Mobley, Douglas & Britton, Ingrid & Lim, Justin. (2020). Cattle-Related Trauma: A 5 Year Retrospective Review In A Adult Major Trauma Centre. 10.21203/rs.3.rs-34195/v1.
4. Govilkar, S & Dover, C & Dass, Debashis & Rhind, John-Henry & Ramhamadany, E & Ford, D & Potter, R & Cool, Paul & Meyer, C & Singh, R & Kelly, C. (2020). From Elective Orthopaedic Centre to a COVID-19 Trauma Unit: Rapid transformation.
5. Rhind, John-Henry & Gulihar, Abhinav & Smith, Andrew. (2018). Trans-triquetral Perilunate fracture dislocation. *Trauma Case Reports*. 14. 10.1016/j.tcr.2018.01.003.

[International Conference on Sports Medicine, Physical Rehabilitation & Physiotherapy | November 12-13, 2021](#)

Citation: John-Henry Rhind; When The Going Gets Tough: A Systematic Review Of Ironman Distance Triathlon Injuries; November 12-13, 2021.