

**Objective** To determine in retired international athletes: (1) the prevalence of significant injury and early retirement, and (2) if those with generalised joint hypermobility (GJH) are more likely to sustain a significant injury.

**Design** Cross-sectional study.

**Setting** Data from a survey of retired Olympic athletes.

**Patients (or Participants)** 605 retired athletes, aged 40–97 years, 40% female ( $n = 244$ ) who had competed internationally for Great Britain at the Summer and/or Winter Olympic Games.

**Interventions (or Assessment of Risk Factors)** Data collected on reasons for retirement from competitive sport including the type and location of significant injury. A validated line drawing instrument was used to measure generalised joint hypermobility (GJH) (Beighton > 3/9).

**Main Outcome Measurements** Injury-forced retirement from a competitive sports career.

**Results** Of those who replied to the questionnaire ( $n = 714$ ), 84.7% ( $n = 605$ ) were retired from sport, and 21.8% ( $n = 132$ ) of those retired from sport reported that they had retired early because of injury. The main locations of injuries that were reported to be responsible for retirement from sport were the lower back (25.8%), knee (25.0%), lower leg (8.3%), ankle (7.6%), Achilles tendon (6.8%), shoulder (6.8%), hip (5.3%), and thigh (5.3%). The main types of injury reported to be responsible for early retirement from sport were soft tissue related (23.9%), injuries to the intervertebral disc (19.0%), intervertebral joint (18.2%), and cartilage injuries at the hip and knee (9.1%). Overall, GJH was not associated with a significant injury in female [OR 1.25; 95% CI, 0.62–2.50] or male athletes [OR 0.76; 95% CI, 0.35–1.65].

**Conclusions** Injury is a major cause of early retirement among high-level athletes. However, those with GJH were no more likely to sustain a significant injury.

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#### EPIDEMIOLOGY AND IMPACT OF TRAVELLER'S DIARRHOEA ON PARTICIPANTS OF THE PRE-OLYMPIC TEST EVENT 'READY STEADY TOKYO 2019'

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**Background** Mass gatherings at major sport events such as Olympic Games pose unique health risks because having the large number of people in a small space can aid the spread of infectious diseases. That can also pose risks for athletes' health and can endanger their performance. Water quality testing of the fields of play (FOP) in Tokyo are showing potential environmental problems (temperature and water pollution) that could endanger the health and safety of the athletes. It is necessary to develop adequate preventive and mitigation measures that would be used in Tokyo Olympics. This research aims to provide international and local authorities with evidence-base for such an intervention.

**Hypothesis** Athletes of open water sports are more prone to gastrointestinal infections (TD) due to the exposure of polluted water on the FOP. This hypothesis has been tested by

investigating data obtained from the survey and identifying the influence of contact with the water of the FOP on athletes' health.

**Design** Cross sectional study.

**Setting** Pre-Olympic test event Ready Steady Tokyo 2019 (17–22 August)

**Patients (or Participants)** athletes (sailing and triathlon) and their accompanying teams on shore.

**Main Outcome Measurements** Surveys among athletes in contact with the water and their accompanying teams on shore. The whole population defined in investigation was approached. Anonymous TD questionnaire was distributed in hard copy and collected on the last day of the event. The online version was available for one month after the event for participants that omitted to fulfill it on site. Data were processed using MedCalc statistical software. The incidence of diarrhea, its duration, the number of stools, impact on performance was recorded.

**Results** The study presents the epidemiology and the impact of TD to athletes participating at Pre-Olympic test event Ready Steady Tokyo 2019.

**Conclusions** Conclusions on risk are made and compared with the data from Rio 2016 Olympics.

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#### THE RETIRED OLYMPIAN MUSCULOSKELETAL HEALTH STUDY (ROMHS) COHORT: RECRUITMENT OF 3,357 OLYMPIANS AND 1,735 GENERAL POPULATION CONTROLS

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**Background** Elite athletes are exposed to high physiological training and competition loads and associated increased injury risk. While there is a wealth of evidence reporting the prevalence of injuries seasonally and during major games events, there are few studies examining injury risk across an elite athlete's entire sporting-career.

**Objective** Recruit a representative sample of Olympians who have retired from elite competition, and general population controls, in order to examine Olympic-career injury patterns and risk, and their association with current health status.

**Design** Cross-sectional survey of sporting and injury history, and general health.

**Setting** Olympians and the general population, from 209 countries worldwide.

**Patients (or Participants)** Athletes who had competed at a Summer and/or Winter Olympic Games and considered themselves retired from Olympic level training and competition;