

The risk of abdominal injury to women during sport

Associate Professor Caroline Finch

Director, Sports Injury Prevention Research Unit, School of Health Sciences, Deakin University

The risk of abdominal injuries during sport is very low. Although trauma to a mother and baby is a theoretically potential risk during sport, there is no published information about the magnitude of this low risk. Recent debate has focussed on the risk of trauma to pregnant women during sport and the subsequent risk of adverse pregnancy outcomes. Whilst there is an emerging literature about the risk of adverse outcomes following severe and catastrophic trauma to pregnant women, this literature almost exclusively focuses on road trauma victims or the result of domestic violence. Apart from isolated studies of activities such as horse riding and diving, there have been no published studies that have described injuries to pregnant women during sport and subsequent pregnancy outcomes.

This paper will describe the risk of abdominal injuries in women participants across a range of sports. An extensive search of the available literature could not identify any studies which had discussed this issue specifically in pregnant women. Studies which have reported injuries in athletes have generally found abdominal/chest injuries to account for fewer than 2% of all injuries, even in contact sports. Most of these published studies do not differentiate between the chest and abdomen and provide no specific details on the exact nature of injury or its mechanism. This makes it extremely difficult to quantify the risk of abdominal injury in women athletes and to identify causal mechanisms.

Given the limitations of the published studies, an examination of data from two Victorian general injury databases (one describing hospital admissions, the other hospital emergency department presentations) was undertaken to describe sports-related abdominal injuries treated in the hospital setting. Data was also obtained from four large Australian sports-injury specific databases: the Sports Medicine Injury Surveillance (SMIS) database, injuries treated during Masters games competition, injuries treated during the World Police and Fire Games and the Western Australian sports injury study. These analyses confirmed that the risk of abdominal injury during sport is very low.

In conclusion, currently there is not an adequate evidence-base for quantifying the risk of abdominal injuries during sport in women, let alone pregnant women or for justifying a ban of sport on this basis. Recommendations for future epidemiological sports injury studies and the potential for linkages with perinatal morbidity and mortality databases will be presented.