



Weight Training: is it for everyone?

The epidemiology of injuries across the weight-training sports.

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Strength sports such as weightlifting, powerlifting, bodybuilding, strongman, Highland Games, and CrossFit can be considered to have a high risk of injury due to the heavy loads commonly used during training and during competitions.

The objective of the researchers was to highlight the epidemiology of injuries in predominantly muscular sports. This literature review identified 184 studies, but recognised and counted 20 that met the selection criteria.

The researchers found that the six sports mentioned above have a very low injury rate compared to the main team sports. As a result, 18 injuries were recorded for every 1000 hours of amateur soccer practice (Clausen, 2014) and 81 injuries / 1000h for professional rugby (Williams, 2013).

Here are the results by 1000 hours of training and / or competition (number of participants x number of hours):

Highland Games: 7.5 injuries
Strongman: 5.3 injuries
Power lifting: 3.6 injuries
CrossFit: 3.1 injuries
Weight lifting: 2.8 injuries
Bodybuilding: 0.6 injury



The anatomical sites most often affected by the injury census are the shoulders, lower back, knees, elbows and wrists. The main types of injuries are strains, tendinitis, and sprains. In addition, researchers did not find significant differences in injury by age, gender, weight, and athlete competition.

Although these weight-training sports have obvious similarities in the epidemiology of injuries, some differences remain in the anatomical site, cause or severity. Further research is needed to shed light on these data, especially for Highland Games and Strongman, who have only one study each in this literature review.

Although the authors are aware that the inclusion of 20 studies for a literature review is a small sample compared to epidemiological studies of other traditional sports, it is nevertheless worth mentioning that the rate of injury revealed here is clearly lower than what is found in the usual sports mode.

In conclusion, the predominantly muscular sports seem to have epidemiological characteristics of relatively similar injuries, regardless of the athlete's age, gender, weight or level of competition. The injury rates are much lower than those reported for many team sports. On average, the injury rates are 2 to 4 injuries per 1000 hours of training and / or competition, are minor or moderately severe and mainly affect the shoulders, lower back and knees.