

## Parachuting injuries: a follow-up communication

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From 1981 to 1985, 193 611 sport parachute jumps were made in the Netherlands of which 267 were reported to have resulted in injury; a detailed report was presented in this journal by Steinberg<sup>1</sup>. The present communication reports on the results of a follow-up study of that report, based on questionnaires and radiological data. Attention was paid to the accuracy of the types of the reported injuries, the injury distribution, the injury mechanisms, absenteeism from work and to persisting complaints.

A total of 79 questionnaires representing 83 injuries were returned and evaluated; 40 of these, representing 44 injuries, were related to radiographs.

Generally, the types of injury agreed with the layman injury reports. The injury distribution in this follow-up study was similar to that of the primary report. Of the 83 injuries, 74 (89%) were fractures. Ankle, lower leg and vertebral fractures (42%, 15% and 12% respectively) were most frequent. The most frequently diagnosed type of ankle fracture was Weber B (35.5%). The majority of the reported so-called 'splint-bone' (fibular) fractures represented ankle fractures, as was already surmised in the primary report.

Most accidents occurred because of deviation from the regular landing procedures, the injury mechanism depending both upon the way of landing and body position. These showed considerable variation between individuals, so no predominant injury mechanism can be indicated. The existence of a typical 'parachuting fracture' was not found.

Calcaneal fractures resulted in the longest periods of absenteeism from work, followed by lower leg, spinal and ankle fractures (median: 32, 21, 12 and 8.5 weeks respectively).

Persisting complaints at the time of follow-up, i.e.  $\geq 3$  years after trauma, were most frequent after calcaneal, ankle, lower leg and spinal fractures (75%, 55%, 27% and 25% respectively).

When the ratios of number of participants *versus* number of injuries are compared, sport parachutists are shown to experience 1/25th as many injuries as participants in 'regular' sports in the Netherlands. The length of the average period of absenteeism from work as a result of parachuting injuries was 1/12th of that due to injuries in 'regular' sports in the Netherlands.

### References

- 1 Steinberg PJ. Injuries to Dutch sport parachutists. *Br J Sports Med* 1988; 22: 25-30.

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