

Orthopaedic Sports Injuries in an Aging Population: Current Trends and Future Projections

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INTRODUCTION:

The elderly population in the United States (US) is growing quickly and staying active longer. However, there is limited information on sports-related injuries in older adults. The purpose of our study was to 1) determine the national estimate, incidence, and etiologies of sports-related orthopaedic injuries in adults 65 and older in the US over a 10-year period, 2) identify current trends in sports-related injuries in the elderly, 3) predict national elderly sports-related injuries and total number of orthopaedic surgeons through 2040.

METHODS:

The National Electronic Injury Surveillance System database was used to identify all patients 65 and older with sports-related orthopaedic injuries in US emergency departments from 2012 to 2021. Orthopaedic surgeon estimates were calculated using the Physician Compare database. Population data was obtained from US Census estimates and used to calculate annual incidence rates of injuries per 100,000 and to project total injuries through 2040. Injury characteristics were analyzed using Wilcoxon Rank-Sum tests and Chi-square or Fisher exact tests.

RESULTS: There were an estimated 772,973 total sports-related orthopaedic injuries in the elderly from 2012 to 2021. The mean age was 73.0 and 45.0% of injuries occurred in females. There was a significant increase in injuries from 55,684 in 2012 to 93,221 in 2021 ($p < 0.001$). Similarly, there was a significant increase in the national incidence of sports-related musculoskeletal injuries from 134 per 100,000 in 2012 to 167 per 100,000 in 2021 ($p = 0.014$). There is projected to be up to 207,570 sports-related orthopaedic injuries in the elderly by 2040, an increase of 123% from 2021 (Figure 1). The number of orthopaedic surgeons is only projected to increase by 7.9% over the same time period.

DISCUSSION AND CONCLUSION: Sports-related orthopaedic injuries in the elderly have been increasing in both number and incidence. By 2040, the total number of sports-related injuries in the elderly may reach up to 207,570, an increase of 123% from 2021. Orthopaedic surgeons should be prepared to treat an increasing number of active elderly patients.

