

Osteoarthritis of the Hip Joint in Former Elite Athletes

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Introduction

There is some controversy concerning whether top-performance sport can lead to osteoarthritis of the hip joint. The objective of this study was to assess the changes found in the hip joints of former elite throwers, jumpers and endurance athletes at least 10 years after their retirement from active competitive sport and to compare these with age and BMI matched controls.

Material and Methods

Radiographs of the hips of 39 throwers (19 javelin, 20 shotput / discus), 67 jumpers (22 high jump, 25 long / triple jump, 20 pole vault) and 20 marathon runners, all listed in the German Athletic Associations top performer lists from 1972 to 1986, were classified according to Kellgren and Lawrence and compared with age and BMI matched controls (nonathletes).

Results

In throwers, 31 hips (9 in controls) showed stage II osteoarthritic changes and 12 hips (5 in controls) stage III out of a total of 78. In jumpers, 24 hips (18 in controls) were classified as stage II and 9 (2) as stage III of a total of 134. In marathon runners, 9 (4) showed stage II changes while 1 (0) showed stage III of a total of 40. No significant side-to-side differences exist between throwers and jumpers.

Conclusions

Athletes participating at high competitive level in track and field disciplines have a greater risk of developing osteoarthritis of the hip joint compared with age and BMI- matched controls. Body composition is one of the most important preselection factors for the choice of discipline in youth and seems to be an additional factor in the development of degenerative changes.