Sports and Recreation Activity of Ankle Osteoarthritis Patients Before and After Realignment Surgery
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Precis/Summary:
Realignment surgery for varus/valgus ankle OA improves function, pain, and sports activity of patients. However, joint-abusing sports active patients show higher risk for revision surgery. Therefore, sports activity is recommended based on individual OA symptoms.

Abstract:
Background: Physical activity in sports and work challenges ankle fusion and arthroplasty. Realignment surgery to unload ankle osteoarthritis (OA) has been proposed as possible treatment alternative for asymmetric ankle OA. However, participation in sports after this procedure has not yet been analyzed.
Hypothesis: Realignment surgery significantly increases sports activity in patients with ankle OA. Sports activity correlates with ankle pain and function.
Study Design: Prospective Case Series (level of evidence: IV)
Methods: Clinical evaluation was performed preoperative and at follow-up after realignment surgery. Cohort consisted of 35 patients with posttraumatic asymmetric ankle OA (mean age 43 years; range, 23-68 years). Pain (visual analogue scale; VAS), function (American Orthopaedic Foot and Ankle Society (AOFAS) ankle score which includes pain, activity, walking ability, range of motion, stability, alignment), Swiss Ankle Activity Scale (SAAS, points); and sports frequency score (SFS, grade), OA and tibiotalar alignment grade (Takakura grade) were documented at both evaluations. The mean follow-up was 5 years (range, 3 to 10.5 years).
Results: The course of mean values from preoperative to follow-up were: VAS decreased (p=0.0001) from 7 to 2.7 points; ankle range of motion increased (p=0.001) from 33° to 38°; AOFAS score increased (p=0.0001) from 39 to 85 points; SFS increased (p=0.02) from 1.3 to 1.8; SAAS increased (p=0.0001) from 26 to 68 points; Takakura grade decreased (p=0.0001) from 2.3 to 1.3. SFS correlated with walking ability and not with AOFAS score, SAAS, and ROM. SAAS correlated with AOFAS score, VAS, walking ability, and not with ROM. At follow-up, the most common sports activities were hiking, biking, and swimming, however, running and jumping were possible as well. Patients needing revision surgery had a higher (p=0.003) SFS than patients who needed no revision.
Conclusion: Realignment surgery improves function, pain, and sports activity of ankle OA patients. However, joint-abusing sports active patients show higher risk for revision surgery. Therefore, sports activity is recommended based on individual OA symptoms during exercise.