

Early Weight Bearing After Fracture Fixation Does Not Affect Fracture Healing or Loss of Fixation Compared With Non-Weight Bearing

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Background/Purpose: Acute ankle fractures treated with operative fixation commonly results in 6 weeks of non-weight bearing (NWB). Our goal was to determine if early weight bearing (EWB) affected fracture healing, loss of fixation, wound complication, and return to work compared with at least 6 weeks of NWB after fracture fixation.

Methods: Consecutive patients operated on for AO classification 44B or C fractures with and without syndesmotic injuries were included in the analysis. Exclusions were those <18 years old, with preexisting neuropathy, diabetes, or concomitant injury precluding EWB (ie, ipsilateral tibial plateau fracture). EWB was defined as weight bearing as tolerated 2 weeks post fixation. These patients were placed in a postoperative controlled ankle movement boot and instructed to weight-bear as tolerated. EWB patients were treated by a single physician and data from the NWB cohort came from 4 others, all fellowship-trained orthopaedic trauma surgeons. Total implant counts were derived from radiographic images immediately postoperative. All other data extraction occurred via chart review.

Results: A total of 116 patients qualified for study. The EWB (n = 37) and NWB (n = 79) groups had no statistically significant differences in demographics, fracture type, total hardware implanted (8.62 vs 9.25, P = 0.304), days to return to work (146 vs 155, P = 0.778), wound complication (3 vs 10, P = 0.546), reoperation rates, time to reoperation, or days to union (149 vs 117, P = 0.151). While there was no difference in the rates of return to surgery for loss of fixation, EWB patient trended toward earlier return to surgery. Further subgroup analysis for open fractures (n = 10) also revealed no statistically significant difference in wound complication (P = 1.00).

Conclusion: Successful treatment of 44B or C ankle fractures is possible using both EWB and NWB protocols. EWB had no obvious positive effect on return to work or days to union, nor did it appear to increase the risk of fixation failure. However, our data did indicate a trend to earlier reoperation in the EWB group. This suggests patients with constructs doomed to fail may fail sooner with EWB, which may offer the benefit of earlier corrective operations, allowing the patient to progress sooner toward full recovery.