

Immediate Weight Bearing After Operative Treatment of Bimalleolar and Trimalleolar Ankle Fractures: Does It Get Patients Back to Work Earlier?

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Purpose: Open reduction and internal fixation is standard treatment for displaced ankle fractures. Postoperatively, most physicians utilize a 6-8 week period of non-weight bearing (NWB). Recent studies have shown improved functional outcomes for early weight bearing as tolerated (WBAT) protocols, although no benefit in return to work has been demonstrated. We evaluated the effect of immediate WBAT on return to work after operative treatment of ankle fractures. Secondly, we determined the effect of the physical job demand on return to work. We hypothesized that immediate WBAT after operative management of bimalleolar and trimalleolar ankle fractures would result in an earlier return to work.

Methods: We retrospectively reviewed a prospective ankle outcome registry for patients operatively managed from 2010-2015. Prior to the initiation of a WBAT protocol in 2013, patients underwent immobilization and NWB for 6 weeks. Work status, physical job demand, return to light duty, and return to full duty were recorded during survey. Demographics, fixation technique, and AO/OTA and Lauge-Hansen classification were collected for all patients. A stepwise multiple linear regression and a 2-sided t test were performed.

Results: 34 patients (49%) were treated WBAT and 35 were treated NWB. 65% in WBAT and 71% in NWB ($P = 0.60$) were AO/OTA 44B. All patients returned to work postoperatively. A similar percentage of patients returned to light work in each (32% for WBAT vs 40% for NWB, $P = 0.49$). The WBAT group returned to work earlier than the NWB group approaching statistical significance (5.5 ± 4.7 vs 8.3 ± 8.1 weeks, $P = 0.08$). In subgroup analysis, examining patients with higher physical demands, the WBAT protocol resulted in statistically significant earlier return to work ($n = 19$, 5.7 ± 3.3 weeks) compared to NWB ($n = 26$, 10.0 ± 8.6 weeks) ($P = 0.04$). Longer time to weight bearing ($\beta = 0.08$, $P = 0.04$) and treatment by physician A ($\beta = 0.41$, $P = 0.01$) were predictors of longer return to full work. Sedentary job demand ($\beta = -0.42$, $P = 0.01$) and return to full work with no light work period ($\beta = -0.49$, $P < 0.01$) were predictors of shorter return to full work.

Conclusion: For those with non-sedentary jobs, early WBAT after operatively managed ankle fractures results in earlier return to work. In a carefully selected patient population with high-demand vocations, early WBAT may result in economic benefits through an earlier return to work.