INTRODUCTION: In 2011, 50.5% of Canadians were considered obese or overweight. The prevalence of obesity in the United States is approximately 10 percentage points higher. Although controversial, some studies highlight obese patients as being at increased risk of complications and poorer outcomes after total joint replacements. The majority of this data has been derived from the knee and hip arthroplasty literature. We report the effect of obesity on the functional outcome of patients who have undergone a total ankle replacement (TAR) for end-stage ankle arthritis (ESAA), as compared to normal weight individuals.

METHODS: We performed a prospective cohort study comparing outcomes of TAR in 39 obese (BMI ≥30) and 48 non-obese (BMI <30) patients with ESAA. The primary outcome measures were subjective patient outcome scores (AOS pain, AOS Disability, SF-36 PCS and SF-36 MCS). Secondary outcomes included complication and revision rates. Statistical analysis was performed using t-tests, Wilcoxon signed rank tests and Mann-Whitney U tests.

RESULTS: No significant difference existed between the two cohorts demographically. Both the obese and non-obese patients had significant improvement in AOS pain and disability, and SF-36 PCS scores from pre- to postoperatively (p<0.001). The obese group had significantly poorer preoperative scores for SF-36 PCS (p=0.01) than their non-obese counterparts, however the changes in AOS Pain, AOS Disability and SF-36 PCS scores from pre- to postoperatively were not significantly different between the two cohorts. SF-36 MCS scores did not change significantly in either group. There was no significant difference in the rate of complications or revisions between the groups (p=0.48). One (2.1%) deep infection occurred in a non-obese patient. Revisions for aseptic loosening, component failure or malposition occurred in 17.1% (N=5) of the obese cohort and 12.5% (N=5) of the non-obese cohort.

DISCUSSION AND CONCLUSION: Although obese patients have increased disability and poorer function preoperatively, TAR significantly and similarly improved pain and disability scores in both obese and non-obese patients with no significant difference in complication rate. We therefore maintain that TAR is a good treatment option for carefully selected ESAA patients of any BMI.