



Introduction

An upcoming total joint arthroplasty (TJA) offers motivation for patients with severe obesity to lose weight to optimize clinical outcomes. This study assessed the efficacy of a preoperative weight loss intervention using a remote dietitian and mobile app compared to a control group who received standard care (physical therapy and/or nutritionist).

Methods

In this ongoing study, participants with a body mass index (BMI) >40 – 47 kg/m² scheduled for TJA were recruited. Participants randomized to the control group received standard care and those randomized to the intervention group were connected with a remote dietitian.

Outcomes were weight change from baseline to 12 weeks, as well as behavioral and functional parameters. Outcome and demographic data were collected using medical chart review as well as pre- and post-intervention surveys and phone interviews. Laboratory tests were used to assess nutritional status.

Table 1: Baseline and Final Weight and BMI

	Standard Care		Intervention	
	Baseline	End	Baseline	End
Weight Mean (SD)	260.48 (23.41)	253.45 (27.96)	274.44 (28.5)	266.18 (26.77)
BMI Mean (SD)	43.73 (2.26)	43.43 (5.18)	43.53 (1.66)	44.32 (5.48)

Results

Patients receiving standard care had a mean baseline BMI of 43.7 kg/m² ± 2.3 mean and 43.4 kg/m² ± 5.2 after 12 weeks. Patients in the intervention group had a mean baseline BMI of 43.5 kg/m² ± 1.7 and BMI of 44.3 kg/m² ± 5.5 after 12 weeks (Table 1)

Limitations

The biggest limitation of this study was that it was conducted throughout the COVID-19 pandemic, so data was obtained from home scale weight measurements instead of clinic measurements.

Conclusion

Visits with a remote dietician and tracking one's diet offer opportunities for preoperative lifestyle changes that may otherwise be unavailable. This is especially relevant for limiting in-person visits as occurred during the COVID-19. This ongoing clinical trial will continue to enroll patients and future studies are needed to determine beneficial methods for weight reduction in patients slated to undergo TJA..

References

1. de Luis DA et.al, Eur Rev Med Pharmacol Sci. 2012;16(13 PG-1814–1820):1814–20.
2. Liljensoe A et. al. Scand J Surg. 2021 Mar;110(1):3-12.