

Bariatric Surgery Improves Patient-Reported Musculoskeletal Function

M CAMPBELL[1,2], E CONATY[3], M ATTAAR[1,2], H WU[1,2], H WONG[1,2], K KUCHTA[1], S HAGGERTY[1], W DENHAM[1], J LINN[1], Z BUTT[4], and M UJIKI[1]

1 NorthShore University Health System, Evanston, IL, United States
2 University of Chicago Medical Center, Chicago, IL, United States
3 Loyola University Chicago Stritch School of Medicine
4 Northwestern University Feinberg School of Medicine

INTRODUCTION

- Obesity is associated with impairments in musculoskeletal (MSK) function, such as decreased ability to bend, lift, carry, push and walk.
- Studies have shown that objective MSK function improves after bariatric surgery.
- Quality of life (QOL) studies reporting subjective MSK function are limited by small sample sizes and lack of use of surgery-specific QOL measurements.

AIM

- This study aims to assess the effect of bariatric surgery on patient-reported quality of life (QOL) metrics of musculoskeletal function.

METHODS

- 576 patients who underwent primary bariatric surgery between 2012 and 2020 at a single institution were included. Revisional procedures were excluded.
- Patient-reported outcomes were assessed using Surgical Outcomes Measurement System (SOMS) upper and lower extremity function questionnaires at time of pre-operative consult, and routine post-operative follow-up visits at 2 weeks, 6 weeks, 3 months, 6 months, 1 year, and 2 years.
- Data were analyzed using a statistical mixed effects model.

RESULTS

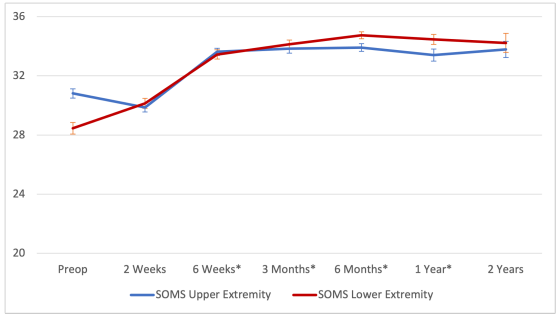


Figure 1. SOMS scores for upper extremity (maximum 35) and lower extremity (maximum 36) over time. Note: higher scores indicate better function. *p<0.05 compared to pre-operative baseline

Multivariable Predictors for SOMS Physical Functioning Over Time				
	Upper Extremity		**Lower Extremity**	
	Estimate (SE)	p-value	Estimate (SE)	p-value
Time				
Preop	Reference	-	Reference	-
2 Weeks	-1.107 (0.565)	0.0527	1.166 (0.646)	0.0742
6 Weeks	3.880 (4.126)	0.3493	6.164 (4.685)	0.1915
3 Months	3.446 (1.444)	0.0188	5.957 (1.733)	0.0009
6 Months	2.774 (0.852)	0.0015	4.996 (0.992)	<.0001
1 Year	2.548 (0.831)	0.0027	4.809 (0.969)	<.0001
2 Years	1.924 (1.001)	0.0574	3.762 (1.168)	0.0018
5 Years	1.907 (1.893)	0.3161	3.593 (2.197)	0.1053
Female vs. Male	-1.927 (0.602)	0.0018	-1.401 (0.743)	0.0625
Age, per year increase	-0.054 (0.021)	0.0113	-0.086 (0.026)	0.0012
BMI, per unit increase	-0.113 (0.037)	0.0030	-0.153 (0.045)	0.0010

Table 1. Multivariable analysis demonstrated both older age at time of surgery and higher BMI at all time points as associated with lower (worse) scores of upper extremity function (age *p*=0.011, BMI *p*=0.003) and lower extremity function (age *p*=0.001, BMI *p*=0.001).

CONCLUSIONS

- Bariatric surgery results in significant improvement in patient-reported scores of upper and lower extremity musculoskeletal function beginning 6 weeks post-operatively which are sustained through 1-year follow-up.
- This has particular implication on overall patient QOL and physical activity levels which are likely to contribute to an increased ability to maintain weight loss.

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CONTACT INFORMATION

Michelle L. Campbell, M.D.
michelle.campbell2@uchospitals.edu

NorthShore University HealthSystem