

FDRS 2023 April 14-16



FAT DISORDERS
RESOURCE SOCIETY

Mobility Improvements with Lipedema Reduction Surgery

By: Dr. Thomas Wright

Lipedema.net 

DISCLOSURES

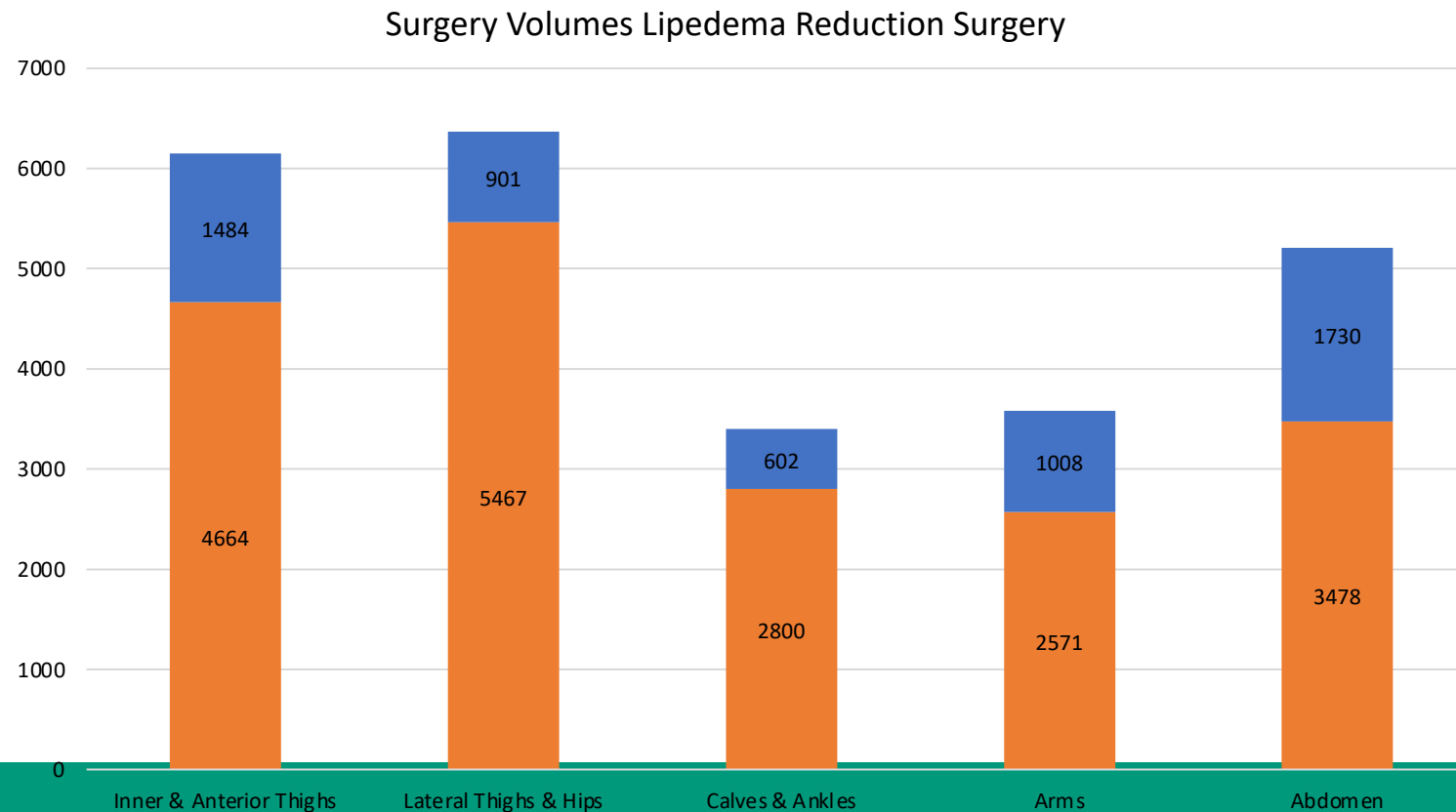
Dr. Wright has had research support and is a paid speaker for Tactile Medical.

Lipedema Reduction Surgery

Large volume lipedema reduction surgery can debulk excess connective tissue, improving knee mechanics including alignment, flexion, and gait

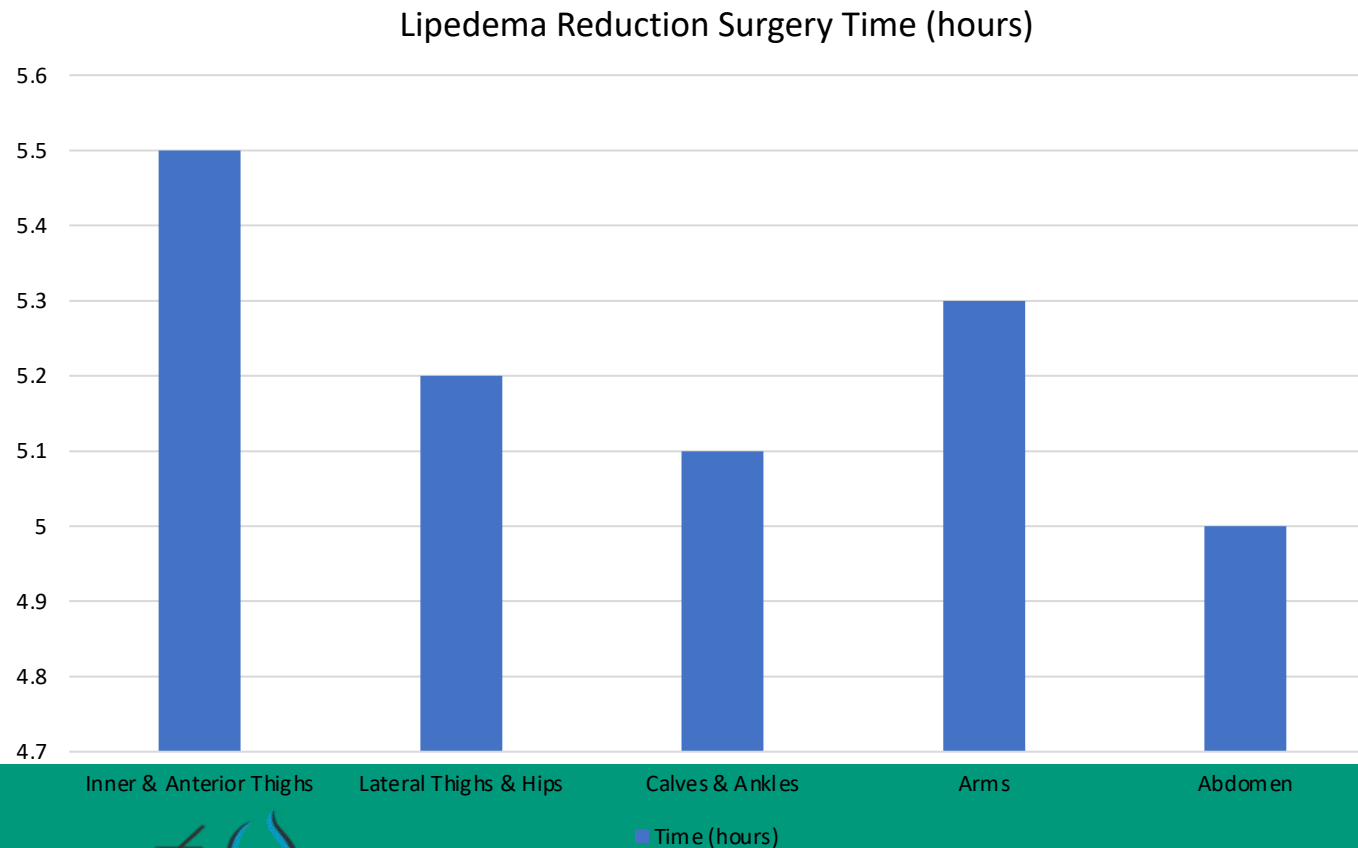
Surgical volumes

Avg total Aspirate 5 Liters. Maximum Aspirate 13.8 Liters



Surgical times

The average time for lipedema reduction surgery was 5.26 hours.



Knee range of motion, valgus, & gait



Knee Flexion Measured with 2 overlapping Long Arm Goniometers: **Red arrow actual flexion of 95 degrees** Green Arrow: Normal Expected Flexion 135

Knee Flexion Required for Activity

Activity	Approximate knee flexion required*
Walking without a limp on flat ground	75°
Stair climbing	90°
Cycling	90°
Jogging	105°
Running	120°
Sprinting	140°
Getting out of a car	135°
Getting in or out of a bathtub	135°

Knee range of motion, valgus, & gait

- **Following Lipedema Reduction Surgery, knee flexion improved by 8 - 9 degrees.**
- **Gait improved from 21% with a normal gait pre-op to 79% with a normal gait post-op.**
- **Knee Alignment improved 3 degrees**

	PRE valgus	POST valgus	PRE valgus	POST valgus	PRE knee flexion	POST knee flexion	PRE knee flexion	POST knee flexion
	LEFT	LEFT	RIGHT	RIGHT	LEFT	LEFT	RIGHT	RIGHT
Average	6	3	6	3	116	125	115	124

*all of these results are statistically significant

What are PROMIS & SF-36?

Both PROMIS and RAND SF-36 are widely used and highly validated medical outcome measurement tools. The NIH developed PROMIS is normalized to the US population.

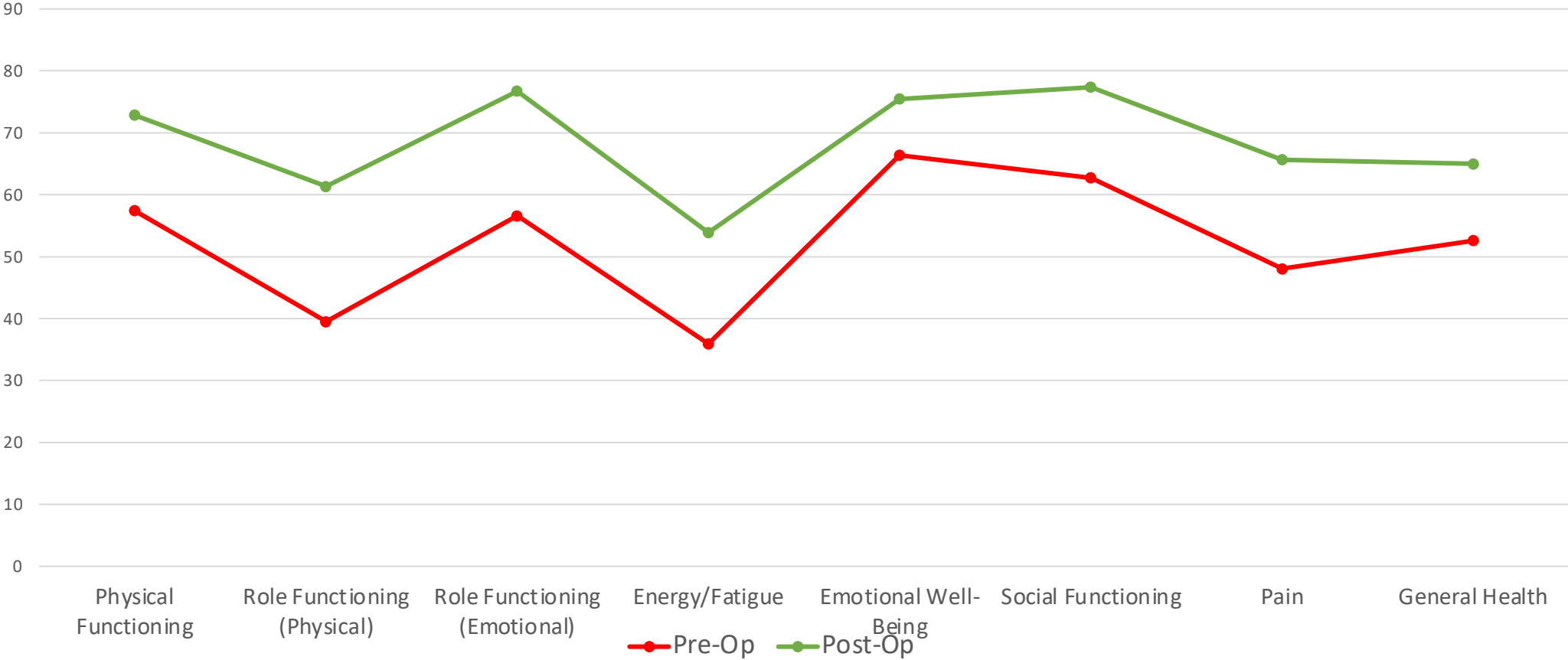
RAND SF-36 results lipedema reduction surgery

Scale	Pre-Op	Post-Op	Normal Population Mean
Physical functioning	57.44	72.85	70.61
Role functioning/physical	39.51	61.34	52.97
Role functioning/emotional	56.6	76.73	65.78
Energy/fatigue	35.93	53.89	52.15
Emotional well-being	66.37	75.48	70.38
Social functioning	62.74	77.36	78.77
Pain	48.06	65.65	70.77
General health	52.59	64.97	56.99

*These improvements are statistically significant $p < .009$ or less

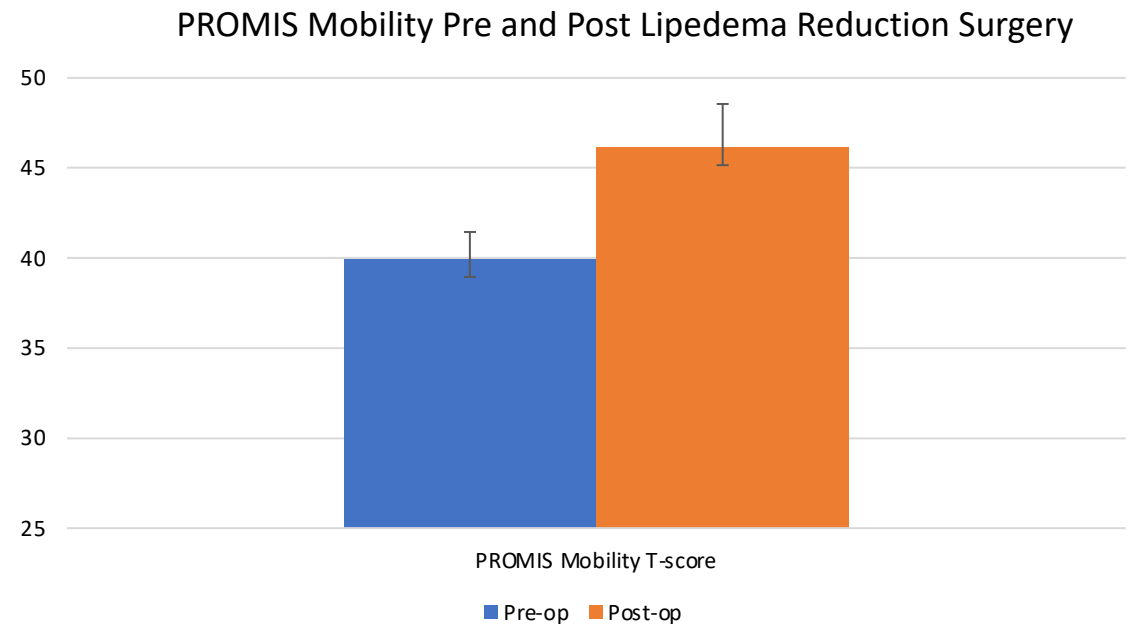
RAND SF-36 results lipedema reduction surgery

SF-36 Domain Outcomes Pre & Post Lipedema Reduction Surgery



PROMIS outcomes of lipedema reduction surgery

- The composite mobility score improved significantly from 39.95 to 46.15. [16 percent improvement in the t-score.]
- The population mean is 50.



PROMIS outcomes of lipedema reduction surgery

- *15.6% increase in ability to walk at a normal speed**
- *11.2% increase in ability to stand up from an armless straight chair**
- *18.5% increase in ability to go up and down stairs at a normal pace**
- *10.7% increase in ability to go for a walk of at least 15 minutes**
- 15.1% increase in ability to get up from the floor from lying on back without help**
- 10.3% increase in ability to jump up and down**
- *7.8% increase in ability to climb up five steps**
- *17.6% increase in ability to run a short distance, such as to catch a bus**
- 11.7% increase in ability to stand unsupported for 30 minutes**
- 13.7% increase in ability to stand for one hour**
- 10.7% increase in ability to stand up on tiptoes**

*These outcomes measures correlate with objectively measured modified Physical Performance Tests mPPT for Walking Velocity, Stair Ascent and Sit to Stand tests. Houck 2020 J Geriatr Phys.

LRS Comparable Improvements to TKA

- **Gait, Knee Function, Knee Alignment ~ =**
- **Improvement in specific Physical Activities of Daily Living : Walking speed , Stair Ascent, Sit to Stand**
- **Correlates with future disability and mortality**
- **Improvements in Global Health Measure, Quality of Life & overall mobility**
- **TKA avg cost 60-100K**

Thank YOU!!!

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Crowne Plaza Atlanta Perimeter at Ravinia
Atlanta, GA

www.fatdisorders.org/events