



# RACIAL DIVERSITY AMONG WOMEN AFTER BARIATRIC SURGERY: OUTCOMES VARIATION BY ETHNICITY IN FEMALES FOLLOWING LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS (LRYGB)

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## BACKGROUND

The effects of Laparoscopic Roux-en-Y Gastric Bypass (LRYGB) on weight and obesity-related comorbidities are well-known. However, few investigations have addressed variations in post-LRYGB results among females of different racial groups.

## OBJECTIVE

The purpose of this study was to identify variations in outcomes by race in women who underwent LRYGB.

## METHODS

Data from 65,325 LRYGB women in the Surgical Review Corporation's BOLD database was analyzed retrospectively in five racial groups: African-American (AA; n=7,745), Caucasian (C; n=49,184), Hispanic (H; n=5,374), Asian (A; n=145), and Other (O; Pacific Islander, Native American, or >1 race self-reported; n=2,877). Data (BMI and 33 co-morbidities) was collected at baseline and 2, 6, 12, 18, 24 months LRYGB. Statistics: General Linear Models included baseline and post-operative data, and were modified for binomial distribution of dichotomous variables.

## RESULTS

Laparoscopic Roux en Y Gastric Bypass By Race, BOLD Database 12 month Outcomes						
Outcome	African American (%) n=1821	Caucasian (%) n=30	Other (%) n=16797	Asian (%) n=1314	Hispanic (%) n=793	p value
<b>Cardio-Pulmonary(%)</b>						
CHF	1.87	1.41	0.63	3.33	0.68	0.0169
HTN	45.11	30.45	27.97	33.33	23.44	<.0001
Obesity Hypoventilation	1.54	1.18	0.76	0	0.76	0.2336
OSA	25.55	23.06	18.73	13.33	16.59	<.0001
Angina	1.48	1.49	0.63	3.33	0.53	0.0145
Asthma	18.41	14.61	15.44	0	14.08	<.0001
Alcohol Use	18.46	21.22	20	30	15.14	<.0001
Pulm HTN	1.76	1.26	1.27	0	1.52	0.4007
<b>Abdomen/Hepatobiliary(%)</b>						
Abdominal Hernia	3.68	4.87	2.41	0	2.66	<.0001
Cholelithiasis	17.25	27.51	19.87	16.67	20.7	<.0001
GERD	25.22	25.71	21.9	20	19.48	<.0001
Liver Disease	3.46	6.64	4.05	16.67	4.79	<.0001
Abdominal Skin Pain	5.77	9.6	6.46	3.33	4.19	<.0001
Back Pain	32.09	33.4	29.75	46.67	25.57	<.0001
Mental Health Diagnosis	6.81	11.33	6.58	20	7.08	<.0001
Depression	21.1	37.04	24.94	23.33	19.79	<.0001
Gout	2.42	1.53	1.01	0	0.91	0.0059
Lipids	19.89	26.62	24.68	20	14.38	<.0001
Stress Urinary Incontinence	11.65	18.35	20.76	6.67	13.09	<.0001
<b>Metabolism(%)</b>						
Glucose Metabolism	16.21	12.78	12.53	20	14.92	0.0002
Pseudotumor Cerebri	1.1	2.05	1.27	0	1.14	0.005
Polycystic Ovarian Syndrome	3.63	5.56	4.05	3.33	4.57	0.0023
<b>Muskuloskeletal (%)</b>						
Muskuloskeletal	29.51	30.84	24.56	23.33	20.02	<.0001
Lower Extremity Edema	16.7	15.1	12.28	13.33	9.74	<.0001
Peripheral Vascular Disease	0.71	0.85	0.63	0	0.61	0.7778
<b>Psychological</b>						
Support Group	12.8	17.58	13.37	16.67	15.07	<.0001
Psychological Impairment	10.49	17.23	10.63	23.33	9.97	<.0001
<b>Social</b>						
Substance Abuse	0.49	0.27	0.51	0	0.53	0.1935
Tobacco Use	3.41	4.43	4.81	6.67	4.41	0.2955
Functional Status	2.69	2.26	1.14	6.67	1.37	0.0093

## CONCLUSIONS

LRYGB outcomes vary widely among women by race.

- **African-Americans** had **highest** BMI, OSA, HTN; **lowest** hepatobiliary
- **Caucasians** were **highest** in support group and **9 co-morbidities** and **lowest** BMI, diabetes.
- **Hispanics** were **highest** in none, **lowest** in 10 co-morbidities
- **Asians** had **highest** rates of alcohol consumption, diabetes, liver disease, and behavioral/psychological problems, **lowest** in 9 co-morbidities
- **Other** was **highest** in asthma and SUI, **lowest** in 4 comorbidities.

This advance knowledge of co-morbidities encountered in different racial groups in women undergoing LRYGB can facilitate pre-operative planning and peri-operative management.