

## **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:** 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:** Data was analyzed at 12 month follow-up. African-Americans (n=1821) had highest BMI, hypertension, obstructive sleep apnea (OSA), leg edema (p<0.0001), and lowest cholelithiasis, liver disease, psychological impairment, support group (p<0.0001), gout (p=0.006). Caucasians (n=16,797) at had highest abdominal hernia and panniculitis, cholelithiasis, GERD, depression, dyslipidemia, musculoskeletal pain, PCOS, pseudotumor cerebri, and support group (p<0.01), and lowest BMI, diabetes (p<0.001). Hispanics (n=1,314) women were lowest in GERD, diabetes, hypertension, alcohol, back pain, depression, dyslipidemia, leg edema, psychological impairment (p<0.001), angina (p<0.05). Asians (n=30) had highest diabetes, liver disease, alcohol, back pain, mental health diagnosis, impaired function, and psychological impairment (p<0.001), CHF and angina (p<0.05), and lowest in abdominal hernia and panniculitis, cholelithiasis, OSA, asthma, gout, PCOS, pseudotumor cerebri, and stress urinary incontinence (SUI; p<0.01). Other (n=793) had highest asthma and SUI (p<0.0001), and lowest mental health diagnosis, impaired function, support group (p<0.01) and CHF (p<0.05) (n=4). Obesity hypoventilation, PVD, and tobacco/substance abuse did not vary between racial groups.

**Conclusions:** LRYGB outcomes vary widely among women by race. African-Americans had highest BMI, hypertension and OSA but had lowest hepatobiliary problems. Despite lowest BMI and highest support group, Caucasians were highest in 9 co-morbidities and lowest only in diabetes. Hispanics were lowest in 10 co-morbidities, highest in none. Asians had highest rates of alcohol consumption, diabetes, liver disease, and behavioral/psychological problems, yet resolved 9 co-morbidities best. The Other group was highest in asthma and SUI, lowest in 4. This advance knowledge of co-morbidities encountered in different racial groups in women undergoing LRYGB can facilitate pre-operative planning and peri-operative management.