

Impact of Obesity on Outcomes in Breast Reconstruction: A Systematic Review and Meta-Analysis

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Abstract : Background: Increased rates of both breast cancer and obesity have resulted in more women seeking breast reconstruction. These women may be at increased risk for perioperative complications. A systematic review was conducted to assess the outcomes in obese women who have undergone breast reconstruction following mastectomy. Methods: Cochrane, PUBMED and EMBASE electronic databases were screened and data was extracted from included studies. The clinical outcomes assessed were surgical complications, medical complications, length of postoperative hospital stay, reoperation rate and patient satisfaction. Results: 33 studies met the inclusion criteria for the review and 29 provided enough data to be included in the meta-analysis (71368 patients, 20061 of which were obese). Obese women were 2.3 times more likely to experience surgical complications (95 percent CI 2.19 to 2.39; $P < 0.00001$), 2.8 times more likely to have medical complications (95 percent CI 2.41 to 3.26; $P < 0.00001$) and had a 1.9 times higher risk of reoperation (95 percent CI 1.75 to 2.07; $P < 0.00001$). The most common complication, wound dehiscence, was 2.5 times more likely in obese women (95 percent CI 1.80 to 3.52; $P < 0.00001$). Sensitivity analysis confirmed that obese women were more likely to experience surgical complications (RR 2.36, 95% CI 2.22-2.52; $P < 0.00001$). Conclusions: This study provides evidence that obesity increases the risk of complications in both implant and autologous reconstruction. Additional prospective and observational studies are needed to determine if weight reduction prior to reconstruction reduces the perioperative risks associated with obesity.

Keywords : autologous reconstruction, breast cancer, breast reconstruction, literature review, obesity, oncology, prosthetic reconstruction

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