

**TITLE:** Determining the Safety and Efficacy of Gluteal Augmentation: A Systematic Review of Outcomes and Complications

**AUTHORS:** Sammy Sinno MD, Jessica B. Chang BS, Arif Chaudhry MD, Pierre B. Saadeh MD

**BACKGROUND:** Augmentation gluteoplasty is being performed more frequently in the past decade, with approximately 35,000 patients having undergone this procedure worldwide. The most popular methods for buttock augmentation involve silicone prostheses (subcutaneous, intramuscular, submuscular, or subfascial placement) and autologous fat grafting. A comparison of complications of these two techniques does not exist in our literature.

**METHODS:** The Pubmed, Medline, and Cochrane databases were searched through June 2014 for studies that achieved buttock augmentation through the use of silicone implant placement or autologous lipoinjection. A total of 41 articles that met inclusion criteria were included in the study. Complication outcomes of interest included wound dehiscence, infection, seroma, hematoma, asymmetry, and capsular contracture. Statistical data was cumulated and analyzed using SPSS software.

**RESULTS:** The authors reviewed 41 articles regarding the improvement of buttock contour using gluteal implants and autologous fat grafting. The most commonly reported complications in 2,244 patients receiving silicone implants were wound dehiscence (10.2%), seroma (4.9%), infection (1.9%), and transient sciatic paresthesias (1.1%), with an overall complication rate of 21.3% (n=478). The most commonly reported complications in 3,565 patients receiving autologous fat injection were seroma (3.5%), undercorrection (2.2%), infection (1.9%), and pain or sciatalgia (1.7%), with an overall complication rate of 9.9% (n=351). Of note, patient satisfaction after surgery was assessed differently among studies and could not be quantitatively compared.

**CONCLUSION:** Although gluteal augmentation is reputed to have complication rates as high as 38.1%, a systematic review of the two most popular techniques demonstrated substantially lower overall complication rates. The overall complication rate in autologous fat grafting (9.9%) is lower than that of silicone buttock implants (21.3%). A standardized method of measuring patient satisfaction is necessary to fully understand outcomes of these increasingly popular procedures.