Skin surgery after massive weight loss

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Recent review date: 6/2025

Next review date: 10/2026

Policy contains: Body contouring; brachioplasty; massive weight loss; obesity; rhytidectomy; thighplasty.

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Coverage policy

Surgical excision of redundant skin of body areas (e.g., brachioplasty and thighplasty) following massive weight loss is clinically proven and, therefore, may be medically necessary when all of the following criteria are met (American Society of Plastic Surgeons, 2017; Mechanick, 2013):

- A plastic surgeon performs the surgical procedure to modify the skin envelope, subcutaneous layer, and/or investing fascia.
- Surgery will correct functional impairment caused by excessive skin and subcutaneous tissue redundancy.
- A functional impairment is defined as a direct and measurable reduction in physical performance of an organ or body part, resulting in difficulties in physical and motor tasks, independent movement, or performing basic life functions.
- There is photographic documentation of any of the following chronic or recurring conditions related to excess tissue and skin folds:
    - Intertrigo (bacterial or fungal infections).
    - Cellulitis.

- Folliculitis.
- Skin ulceration.
- Skin or subcutaneous abscesses.
- Monilial infection or fungal dermatitis.
- Skin necrosis.
- Documentation of failure of at least three months of conservative nonsurgical management by a physician other than the operating physician.
- Maintenance of a stable body weight during the most recent six months or longer.
- If massive weight loss occurs as a result of bariatric surgery, the procedure should not be performed for at least 12 to 18 months after the bariatric surgery.

Note: This policy does not apply to abdominoplasty or panniculectomy.

Limitations

All other indications for excising redundant or excessive skin after massive weight loss are not medically necessary, including, but not limited to:

- Improving cosmesis in the absence of a functional impairment.
- Relieving neck or back pain, as there is no evidence that reduction of redundant skin and tissue results in less spinal stress or improved posture or alignment.
- Repairing a diastasis recti.
- Minimizing the risk of hernia formation or recurrence.

Alternative covered services

- Analgesics.
- Antibiotics.
- Cortisone ointments.
- Drying agents.
- Topically applied skin barriers and supportive garments.

Background

Obesity and its associated medical morbidities carry substantial health risk. Treatments for obesity, including bariatric surgery, often result in massive weight loss. Definitions of massive weight loss vary and include loss of 100 pounds (approximately 45.45 kilograms) or more, 50% or greater loss of excess weight, or loss of an amount greater than 100% of the person's ideal body weight (Constantine, 2014; Michaels, 2011). Complications after bariatric surgery are common, ranging from 23% to 70%, mostly wound-related (Makarawung, 2022).

A sudden change in body mass index can lead to redundant skin and soft tissue with poor tone. Surplus skin and malpositioned adipose deposits result in musculoskeletal strain from increased tissue weight and can cause functional limitation with walking, maintaining adequate hygiene, bowel and bladder habits, and sexual activity, as well as psychological issues associated with poor body image (Giordano, 2015). Bariatric surgery is associated with various metabolic complications and deficiencies that can disturb wound healing and are not typically found in other causes of massive weight loss, such as diet and exercise or post-pregnancy (Giordano, 2015). Reshaping procedures may relieve these symptoms.

The term “body contouring” refers to any surgical procedure used to modify the skin envelope, subcutaneous layer, and/or investing fascia to rid the functional and esthetic impairment from skin after massive weight loss (Giordano, 2015). Several surgical techniques, each with its own modifications, may be used to address the needs of these patients, including (Giordano, 2015):

- Rhytidectomy (face and neck lift)
- Brachioplasty (arm lift) with or without liposuction
- Mastopexy (breast lift) with or without mammoplasty
- Body lift:
- Belt lipectomy (or lower body lift in which the lower body is treated front and back in its entirety)
- Upper body lift that treats excess skin folds in the back
- Thighplasty

Skin redundancy and quality, lipodystrophy, and adherent folds, as well as the presence of varicose veins, lymphedema, and overall scar evaluation must be considered with these complex and extensive procedures. The extent of the procedures and the patient’s health and comorbidities will determine the facility setting, the type of anesthesia needed, recovery time, and physician follow-up visits. Patients may be seen intermittently for one to two years as final body contour continues to mature (American Society of Plastic Surgeons, 2017).

Findings

Guidelines

Clinical guidance from the American Society of Plastic Surgeons supports body-contouring surgery for functional impairments caused by excess skin 12 to 18 months after bariatric surgery, once individuals have maintained a stable, near-normal weight for at least two to six months or have reached a body-mass-index range of 25 to 30 kilograms per meter squared (American Society of Plastic Surgeons, 2017).

Systematic Reviews and Meta-Analyses

High-level syntheses collectively show that body-contouring procedures can enhance health-related quality of life but carry substantial complication risks. A meta-analysis of 29 studies (n = 1,578) found that 9.9 percent of brachioplasty patients developed abnormal scarring and that re-intervention was required for aesthetic and non-aesthetic reasons in 7.46 percent and 1.62 percent of cases, respectively (Aljerian, 2022). Complementary reviews report meaningful improvements in body image, and in physical, psychological, and social functioning after contouring surgery (Jiang, 2021; Toma, 2018; Gilmartin, 2016). Conversely, pooled analyses highlight notable morbidity: a systematic review of 25 studies documented a 31.5 percent overall complication rate—seroma being most common—particularly among individuals whose body-mass index exceeded 30 kilograms per meter squared (Marouf, 2021); a broad meta-analysis encompassing 253 studies calculated a 1.60-fold higher risk of complications in post-bariatric versus non-bariatric patients (Hasanbegovic, 2014). Procedure-specific syntheses echo these findings: circumferential lower-trunk contouring demonstrated a 37 percent complication rate, chiefly wound dehiscence and hematoma, albeit from evidence of generally low reliability (Carloni, 2016); augmentation-mastopexy showed a 13.1 percent overall complication frequency with a 10.7 percent re-operation rate (Khavanin, 2014); and a mixed review of diverse contouring techniques recorded minor and major wound complication rates of 6.3 percent and 6.8 percent, respectively (Fischer, 2013).

Other Evidence

Observational studies provide additional context on postoperative trajectories and patient well-being. A cohort analysis reported that individuals who underwent body-contouring surgery after bariatric procedures achieved significantly greater reductions in body-mass index, total body-weight loss, and excess-weight loss than propensity-matched controls who did not pursue contouring (ElAbd, 2021). By contrast, a longitudinal survey revealed that patients who desired but did not receive contouring surgery exhibited lower body satisfaction and more depressive symptoms up to five years after their bariatric operation (Buer, 2022).

In 2025, we reorganized the findings section by evidence type. No new literature was found and policy changes were warranted.

References

On May 11, 2025, we searched PubMed and the databases of the Cochrane Library, the U.K. National Health Services Centre for Reviews and Dissemination, the Agency for Healthcare Research and Quality, and the Centers for Medicare & Medicaid Services. Search terms were “Body contouring;” “brachioplasty;” “massive weight loss;” “obesity;” “rhytidectomy;” “thighplasty”. We included the best available evidence according to established evidence hierarchies (typically systematic reviews, meta-analyses, and full economic analyses, where available) and professional guidelines based on such evidence and clinical expertise.

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Policy updates

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6/2023: Policy references updated.

6/2024: Policy references updated.

6/2025: Policy references updated.