Medical Coverage Policy

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Coverage Policy Number 0152

Breast Reduction

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INSTRUCTIONS FOR USE
The following Coverage Policy applies to health benefit plans administered by Cigna Companies. Certain Cigna Companies and/or lines of business only provide utilization review services to clients and do not make coverage determinations. References to standard benefit plan language and coverage determinations do not apply to those clients. Coverage Policies are intended to provide guidance in interpreting certain standard benefit plans administered by Cigna Companies. Please note, the terms of a customer's particular benefit plan document [Group Service Agreement, Evidence of Coverage, Certificate of Coverage, Summary Plan Description (SPD) or similar plan document] may differ significantly from the standard benefit plans upon which these Coverage Policies are based. For example, a customer's benefit plan document may contain a specific exclusion related to a topic addressed in a Coverage Policy. In the event of a conflict, a customer's benefit plan document always supersedes the information in the Coverage Policies. In the absence of a controlling federal or state coverage mandate, benefits are ultimately determined by the terms of the applicable benefit plan document. Coverage determinations in each specific instance require consideration of 1) the terms of the applicable benefit plan document in effect on the date of service; 2) any applicable laws/regulations; 3) any relevant collateral source materials including Coverage Policies and; 4) the specific facts of the particular situation. Each coverage request should be reviewed on its own merits. Medical directors are expected to exercise clinical judgment and have discretion in making individual coverage determinations. Coverage Policies relate exclusively to the administration of health benefit plans. Coverage Policies are not recommendations for treatment and should never be used as treatment guidelines. In certain markets, delegated vendor guidelines may be used to support medical necessity and other coverage determinations.

Overview

This Coverage Policy addresses breast reduction for symptomatic macromastia and breast reduction surgery on the nondiseased/contralateral breast following a mastectomy or lumpectomy.

Coverage Policy

Coverage for breast reduction varies across plans. Please refer to the customer's benefit plan document for coverage details.

Breast reduction surgery on the nondiseased/contralateral breast when performed to produce a symmetrical appearance following a mastectomy or lumpectomy is considered medically necessary.

If coverage for breast reduction is available, the following conditions of coverage apply.

Breast reduction is considered medically necessary for the treatment of macromastia (i.e., large breasts) in women at least 18 years of age, or with completed breast growth, when ALL the following criteria are met:

- macromastia is causing at least ONE of the following conditions/symptoms that has been unresponsive to medical management:
  - shoulder, upper back/ neck pain, and/or ulnar nerve palsy for which no other etiology has been found on appropriate evaluation
  - intertrigo, dermatitis, eczema, or hidradenitis at the inframammary fold
- preoperative photographs confirm the presence of:
  - significant breast hypertrophy
  - shoulder grooving from bra straps and/or intertrigo (if stated to be present)
- average grams of tissue to be removed per breast are above the 22nd percentile on the Schnur Sliding Scale (see Appendix A) based on the individual's body surface area (BSA) or regardless of BSA, more than 1 kg of breast tissue will be removed per breast

Note: Nipple and areola reconstruction (CPT® code 19350) is considered an integral part of a breast reduction (CPT® code 19318) and is not separately reimbursable.

Breast reduction for either of the following indications is considered cosmetic in nature and not medically necessary:

- Surgery is being performed to treat psychological symptomatology or psychosocial complaints, in the absence of significant physical, objective signs.
- Surgery is being performed for the sole purpose of improving appearance.

Breast reduction is considered not medically necessary for either of the following:

- As part of a staged procedure before mastectomy.
- Known BRCA1, BRCA2, p53 or PTEN mutation confirmed by genetic testing in the absence of symptomatic macromastia meeting the above medical necessity criteria.

Correction of benign inverted nipples (CPT® code 19355) is considered cosmetic in nature and not medically necessary.

Suction lipectomy or ultrasonically-assisted suction lipectomy (liposuction) as a sole method of treatment for symptomatic macromastia is considered unproven.

General Background

Macromastia (i.e., female breast hypertrophy) is the development of abnormally large breasts. Normal breast development begins at approximately five weeks' gestation and continues until a woman is in her early twenties, with the rate of development and degree of asymmetry often varying. Spontaneous massive growth of the breasts during puberty and adolescence is thought to be the result of excessive end-organ sensitivity to gonadal hormones. It is more commonly bilateral, often occurs over a brief period, and most commonly affects adolescent girls. Management is individualized and may range from reassurance or the use of supportive brassieres. It is recommended that surgery be delayed until late adolescence to allow complete breast development (Conner and Merritt, 2020, McGrath and Pomerantz, 2012).

The presence of macromastia may cause clinical manifestations when the excessive breast weight adversely affects the supporting structures of the shoulders, neck and trunk. Increased weight on the shoulders can cause pain, fatigue in the cervical and thoracic spine, which can lead to poor posture, thoracic kyphosis and occipital headaches. Grooving or ulceration of the skin on the shoulders, pressure on the brachial plexus causing neurological symptoms in the arms and skin conditions occurring at the inframammary fold such as intertrigo, dermatitis, eczema, or hidradenitis (inflammation of the apocrine sweat glands resulting in obstruction of the

ducts) may also exist. The presence of these persistent signs and painful symptoms distinguish macromastia from large, normal breasts and may prompt the need for surgical intervention (McGrath and Pomerantz, 2012; American Society of Plastic Surgeons [ASPS], 2011/2017; Schnur, et al., 1997).

Medical management of conditions/symptoms may include any of the following: weight loss, acupuncture, massage therapy, chiropractic treatment, adequate bra support (proper fit and wide strap support): nonsteroidal anti-inflammatory drugs (NSAIDS)/analgesia; and physical therapy, when a functional impairment exists (Hansen and Chang, 2021; Collins, et al., 2002).

Reduction mammoplasty is the surgical excision of a substantial portion of the breast, including the skin and the underlying glandular tissue, until a clinically normal size is obtained. Relocation of the nipple, which may result in decreased sensation and altered lactation, may also be required during this procedure. Therefore, it has been recommended that surgery should not be performed on an individual until the breasts are fully developed. Complications range from mild to severe and may be early or late. The most common early complication independent of reduction technique is delayed wound healing. Late complications can include, but are not limited to, seroma, scars and pseudoptosis. A BMI ≥30 kg/m^2 and smoking may increase the risk of complications. Persons who are obese or irradiated are more likely to develop infections, and smokers experienced a higher incidence of wound dehiscence than did nonsmokers (Zhang, et al., 2016; McGrath and Pomerantz, 2012; Nahai, et al., 2008; Greydanus, et al., 2006).

Amaral et al. (2011) reported on racial and socioeconomic disparities in reduction mammoplasty. Their analysis of the 2007 Nationwide Inpatient Sample database for differences in race and payer mix revealed that Black and Hispanic patients ($p<0.0001$) were more likely to undergo reduction mammoplasty.

The available techniques for breast reduction differ according to the pattern of skin resection, as well as the method for removing breast tissue and moving the nipple. Factors identified on the preoperative breast evaluation that are used for determining the best approach include preoperative breast size and degree of ptosis, desired postoperative breast size, skin quality, and a history of prior breast surgery. Among these, preoperative breast size and estimated breast reduction volume are the most important factors influencing the technique selected. Generally, breast hypertrophy is stratified according to the estimated volume to be resected:

- small reductions remove 200 to 400 grams per side
- moderate reductions remove 400 to 700 grams per side
- large reductions remove 700 to 1200 grams per side
- reductions in patients with gigantomastia involve massive reductions of more than 1200 grams per side

Several methods are available to help surgeons estimate breast resection volumes. The two most common methods are the Schnur sliding scale and the Descamps formula. The Schnur sliding scale estimates resection weight based on the patient's body surface area. The Descamps method estimates resection volume based on a regression analysis (Hansen and Chang, 2021).

The Schnur Sliding Scale is an evaluation tool that may be used to determine the appropriate amount of tissue to be removed compared to a patient's total body surface area (BSA). This can be instrumental in determining if breast reduction is being planned for a purely cosmetic reason or as a medically necessary procedure. In a survey of plastic surgeons, Schnur et al. (1991) concluded that women whose removed breast weight was less than the 5th percentile sought the procedure for cosmetic reasons and all women whose breast weight was greater than the 22nd percentile sought the procedure for medical reasons. A calculation for BSA is: BSA (in m^2) = [height (cm)] $^{0.718}$ X [weight (kilograms [kg])] $^{0.427}$ X .007449.

Generally, most patients do not require hospitalization after breast reduction surgery. An overnight stay with observation may be necessary for some women with medical comorbidities. Patients who experience severe postoperative nausea and vomiting may require extended observation or admission for intravenous fluid therapy and antiemetics (Hansen and Chang, 2021).

Breast tissue regrowth following initial breast reduction in adolescence has been reported (Greydanus, et al., 2006). The growth of the female breast is generally described by five stages referred to as Tanner stages or sexually maturity rating (SMR) stages. A number of clinical correlations are noted with the SMR stages, including

the timing of breast reduction at stage V (i.e., mature stage) (DeSilva, et al., 2006). In a review of elective plastic surgical procedures in adolescence, McGrath and Schooler (2004) stated “Breast development is variable but usually plateaus at 15–16 years of age. Reduction mammoplasty is postponed until breast maturity is reached. Occasionally, surgery is considered earlier when severe symptoms are encountered; there is a risk of recurrent hypertrophy, however.” In general, breast maturity should have been reached prior to considering breast reduction surgery.

Nipple inversion or retraction is when the nipple is pulled in and points inward instead of out. It can affect one breast or both and can be acquired or congenital. The cause of acquired nipple inversion can be due to benign or malignant causes. Congenital nipple inversion is usually bilateral and is benign (Killelea and Sowden, 2020). Correction of nipple inversion is considered cosmetic in nature and not medically indicated.

Reduction mammoplasty has been proposed for an individual with a known BRCA1, BRCA2, TP53 or PTEN mutation in the absence of symptomatic macromastia or as a part of staged procedure before mastectomy. There is a paucity of evidence in the peer-reviewed scientific literature addressing these indications. The 2021 National Comprehensive Cancer Network® (NCCN®) guideline on Breast Cancer Risk Reduction states that risk-reducing mastectomy should generally be considered only in women with a pathogenic/likely pathogenic genetic mutation conferring a high risk for breast cancer. The 2021 guideline on Genetic/Familial High-risk Assessment: Breast, Ovarian, and Pancreatic supports the discussion of the option of risk reducing mastectomy for women on a case by case basis. The NCCN guidelines do not address reduction mammoplasty for an individual with a known BRCA1, BRCA2, p53 or PTEN mutation or reduction mammoplasty as part of a staged procedure before mastectomy.

It has also been proposed that staged breast reduction in patients with large and ptotic breasts decrease rates of major flap necrosis before nipple-sparing mastectomy and preserve the viability of the nipple. There is an insufficient quantity of evidence in the published peer-reviewed scientific literature to support the safety and effectiveness of this procedure. Studies are primarily in the form of case series and retrospective reviews with small patient populations (Yazar et al., 2021; Economides et al., 2019; Saliban et al., 2019; Spear et al., 2012). Spear et al. (2012) first described the procedure in a case series of 15 patients (24 breasts) who underwent nipple-sparing mastectomy after mastopexy or reduction. Complications occurred in four (17%) of the 24 breasts including skin flap necrosis (n=2 breasts), minimal partial nipple-areola complex necrosis (n=3 breasts) and an expander explanted for infection related to skin flap necrosis (n=1 breast). Successful nipple-sparing mastectomy and prior mastopexy or reduction (without residual effects of the nipple-areola complex or skin flap necrosis) occurred in 14 patients (23 breasts, 96%).

Literature Review

Controlled clinical studies assessing the effectiveness of surgical removal of modest amounts of breast tissue in reducing neck, shoulder, and back pain and related disabilities in women are lacking. Despite the lack of controlled studies, reduction mammoplasty has become the standard of care for a subset of individuals with symptomatic macromastia. Evidence suggests that calculating breast reduction in correlation to each patient’s body weight and height can have an effect on reducing preoperative signs and persistent physical conditions. (Cunningham, et al., 2005; Blomqvist, et al., 2004; Souto, et al., 2003; Collins, et al., 2002; Ayhan, et al., 2002; Bruhlmann, et al., 1998).

Chadbourne et al. (2001) conducted a systematic review and meta-analysis of 29 studies of 4173 patients to determine whether reduction mammoplasty improves measurable outcomes in women with breast hypertrophy. Experimental and observational studies were included; no randomized controlled trials were found. Outcomes assessed were postoperative physical signs and symptoms such as shoulder pain, shoulder (bra strap) grooving, and quality-of-life domains, such as physical and psychological functioning, and were expressed primarily as risk differences. The mean body mass index of the patients was 27.5 kg/m^2 in the observational studies and 29.6 kg/m^2 in the experimental studies. The average tissue mass removed per breast was approximately 1400 grams. The authors concluded that reduction mammoplasty was associated with a statistically significant improvement in physical signs and symptoms involving shoulder pain, shoulder grooving, upper/lower back pain, neck pain, intertrigo, breast pain, headache, and pain/numbness in the hands. The quality-of-life parameter of physical functioning was also statistically significant, while psychological functioning was not significant. The evidence

suggests that women undergoing reduction mammoplasty for breast hypertrophy have significant postoperative improvement in preoperative signs and symptoms, quality of life, or both.

Breast Reduction by Liposuction
Suction lipectomy or ultrasonically-assisted suction lipectomy (liposuction) as a sole procedure has been introduced as an alternative method in reducing breast size. The effectiveness of liposuction, in terms of removing glandular breast tissue, rather than fatty tissue in the breast, remains to be demonstrated. Evidence supporting the effects of this approach on patient outcomes has been limited to retrospective/prospective uncontrolled studies and case series, and there are minimal long-term data comparing this technique to the standard surgical approach (Hayes, 2019; Moskovitz, et al., 2007; Sadove, et al., 2005).

A Hayes Search and Summary on reduction mammoplasty by liposuction alone concluded that there is insufficient published evidence to assess the safety and/or impact on health outcomes or patient management of liposuction as a stand-alone procedure for reduction mammoplasty in patients with macromastia (Hayes, 2019).

Professional Societies/Organizations
American Society of Plastic Surgeons (ASPS): The 2011 update (reaffirmed 2017, 2021) to the 2002 ASPS policy statement, insurance coverage criteria for third-party payors for reduction mammaplasty, recommends that justification for reduction mammaplasty should be based on the probability of relieving the clinical signs and symptoms of macromastia, not the degree of breast hypertrophy present (cup size or amount of tissue removed). Symptomatic breast hypertrophy is defined as a syndrome of persistent neck and shoulder pain, painful shoulder grooving from brassiere straps, chronic intertriginous rash of the inframammary fold, and frequent episodes of headache, backache, and neuropathies caused by heavy breasts caused by an increase in the volume and weight of breast tissue beyond normal proportions. These policy recommendations are based on the 2011 ASPS evidence based companion guideline for Reduction Mammaplasty.

Appendix A
Schnur Sliding Scale

Body Surface Area and Cutoff Weight of Breast Tissue Removed

Breast Reduction (gm)		
Body Surface Area (m^2)	**Lower 5%**	**Lower 22%**
1.35	127	199
1.40	139	218
1.45	152	238
1.50	166	260
1.55	181	284
1.60	198	310
1.65	216	338
1.70	236	370
1.75	258	404
1.80	282	441
1.85	308	482
1.90	336	527
1.95	367	575
2.00	401	628
2.05	439	687
2.10	479	750
2.15	523	819
2.20	572	895
2.25	625	978
2.30	682	1068
2.35	745	1167
2.40	814	1275

2.45	890	1393
2.50	972	1522
2.55	1062	1662

Schnur Sliding Scale (Schnur, et al., 1991)

Use Outside of the US
No relevant information.

Medicare Coverage Determinations

	Contractor	Policy Name/Number	Revision Effective Date
NCD		No National Coverage Determination found	
LCD	National Government Services, Inc.	Reduction Mammaplasty/L35001	11/07/2019
LCD	First Coast Service Options, Inc.	Reduction Mammaplasty/L33939	1/08/2019
LCD	Palmetto	Cosmetic and Reconstructive Surgery/L33428	10/24/2019
LCD	Wisconsin Physicians	Cosmetic and Reconstructive Surgery/L34698	1/01/2021
LCD	Noridian	Plastic Surgery/L35163 and L37020	10/01/2019

Note: Please review the current Medicare Policy for the most up-to-date information.

Coding/Billing Information

Note: 1) This list of codes may not be all-inclusive.
2) Deleted codes and codes which are not effective at the time the service is rendered may not be eligible for reimbursement.

Considered Medically Necessary when criteria in the applicable policy statements listed above are met:

CPT®* Codes	**Description**
19318	Breast reduction

Considered integral to and/or not covered when performed with breast reduction:

CPT®* Codes	**Description**
19350	Nipple/areola reconstruction

Considered Cosmetic/Not Medically Necessary:

CPT®* Codes	**Description**
19355	Correction of inverted nipples

Considered Unproven when performed as a sole method of treatment for symptomatic macromastia:

CPT®* Codes	**Description**
15877	Suction assisted lipectomy; trunk

***Current Procedural Terminology (CPT®) ©2020 American Medical Association: Chicago, IL.**

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