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Policy Effective Date	01/01/2026

Liposuction for Lipedema and Lymphedema

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Disclaimer

Carefully check state regulations and/or the member contract.

Each benefit plan, summary plan description or contract defines which services are covered, which services are excluded, and which services are subject to dollar caps or other limitations, conditions or exclusions. Members and their providers have the responsibility for consulting the member's benefit plan, summary plan description or contract to determine if there are any exclusions or other benefit limitations applicable to this service or supply. **If there is a discrepancy between a Medical Policy and a member's benefit plan, summary plan description or contract, the benefit plan, summary plan description or contract will govern.**

Legislative Mandates

EXCEPTION: For Illinois only: Illinois Public Act 103-0123 (IL HB 1384) Coverage for Reconstructive Services requires the following policies amended, delivered, issued, or renewed on or after January 1, 2025 (Individual and family PPO/HMO/POS; Student; Group [Small Group; Mid-Market; Large Group Fully Insured PPO/HMO/POS] or Medicaid), to provide coverage for medically necessary services that are intended to restore physical appearance on structures of the body damaged by trauma.

EXCEPTION: For HCSC members residing in the state of Arkansas, § 23-99-405 related to coverage of mastectomy and reconstruction services, should an enrollee elect reconstruction after a mastectomy, requires coverage for surgery and reconstruction of the breast on which the mastectomy has been performed, surgery and reconstruction of the other breast to produce a symmetrical appearance, and prostheses and coverage for physical complications at all stages of a mastectomy, including lymphedema. This applies to the following: Fully Insured Group, Student, Small Group, Mid-Market, Large Group, HMO, EPO, PPO, POS. Unless indicated by the group, this mandate or coverage will not apply to ASO groups.

Coverage

Lipectomy or liposuction **may be considered medically necessary** in individuals with documented lipedema when *all* of the following criteria are met (1 through 7):

1. A diagnosis of lipedema has been documented, including *all* of the following:
 - a. Bilateral and symmetrical manifestation with minimal involvement of the feet, unless concomitant lymphedema is present; and
 - b. Disproportionate adipocyte hypertrophy of the affected extremity; and
 - c. Photographs of the area to be treated documenting disproportional adipose distribution consistent with diagnosis; and
 - d. Pressure-induced pain and tenderness on palpation; and
 - e. Failure of the limb adipose hypertrophy to respond to recommended medically supervised weight loss modalities or bariatric surgery, in concomitant class II or III obesity; and
 - f. Extent of fibrotic tissue, if present, is expected to be amenable to liposuction; and
2. Signs and symptoms have not responded to at least 3 consecutive months of optimal conservative medical management, including one or more of the following:
 - a. Compression garments; or
 - b. Manual therapy; or
 - c. Conservative management is not feasible due to the presence of contraindicating complications (e.g., active infection); and
3. For each anatomical region being considered for treatment, *either* of the following criteria are met:
 - a. There is documented significant functional impairment as a direct result of change in limb volume from lipedema; or
 - b. There are documented medical complication(s) as a result of lipedema (e.g., severe aching discomfort, pain or tenderness, severe maceration, severe recurrent skin infection, or severe venous insufficiency); and
4. Lipectomy or liposuction is reasonably expected to improve the functional impairment or medical complications; and
5. The plan of care includes the use of compression garments as instructed and to continue conservative treatment postoperatively to maintain benefits; and
6. Photographic documentation is consistent with the diagnosis of lipedema in the affected extremities, including limb symmetry; and
7. Surgical treatment is performed by a hospital-credentialed, board-certified plastic surgeon experienced in the treatment of lipedema.

Lipectomy or liposuction **may be considered medically necessary** in individuals with documented lymphedema when *all* of the following criteria are met (1 through 6):

1. Signs and symptoms have not responded to at least 3 consecutive months of optimal conservative medical management, including *one or more* of the following:
 - a. Compression garments; or
 - b. Manual lymphatic drainage; or
 - c. Complex/complete decongestive therapy (CDT); or
 - d. Conservative management is not feasible due to the presence of contraindicating complications (e.g., active infection); and

2. For each anatomical region being considered for treatment, *either* of the following criteria are met:
 - a. There is documented significant functional impairment as a direct result of change in limb volume; or
 - b. There are documented medical complication(s) as a result of lymphedema (e.g., severe recurrent infection or neurological dysfunction); and
3. Lipectomy or liposuction is reasonably expected to improve the functional impairment; and
4. The plan of care includes the use of compression garments as instructed and to continue conservative treatment postoperatively to maintain benefits; and
5. Photographic documentation is consistent with the diagnosis of lymphedema in the affected extremities, including limb asymmetry; and
6. Surgical treatment is performed by a hospital-credentialed, board-certified plastic surgeon experienced in the treatment of lymphedema.

Lipectomy or liposuction **is considered experimental, investigational and/or unproven** for the treatment of lymphedema or lipedema in all other situations where the above criteria are not met.

Policy Guidelines

Some patients with lipedema may present with concomitant lymphedema. As a result, these patients may not have a negative Stemmer sign or absence of pitting edema.

Liposuction for lipedema may need to be completed in stages when the total volume of liposuction exceeds the clinical standard of 5000cc total aspirate during the initial procedure. Repeat procedures may also need to be considered on an individual basis as surgical intervention, including liposuction, is not considered curative.

Description

Lipedema is a disorder characterized by a large amount of subcutaneous fat in the extremities, typically the legs and thighs. The adipose tissue may be painful. In contrast, lymphedema is the accumulation of interstitial fluid due to impaired lymphatic flow. This increase in interstitial fluid may lead to the accumulation and hypertrophy of fat cells. Liposuction, consisting of the removal of fat cells with a cannula and tumescent anesthesia is being investigated as a treatment option for both lipedema and lymphedema.

Lipedema

Lipedema, also known as lipoedema, is a rare disorder characterized by a large amount of subcutaneous fat in the extremities. The cause is unknown but is most frequently seen in women with a family history. The exact prevalence is uncertain as it does not have a diagnosis in the International Classification of Diseases (ICD-10). Lipedema is often misdiagnosed as obesity or lymphedema. Lipedema is typically observed in the legs and thighs without affecting

the feet, and the adipose tissue is painful. The arms may also be affected without edema of the hands. Symptoms include heaviness, pain (particularly with pressure), loss of strength, easy bruising, and a reduction in daily activity levels that affects the health and quality of life of the individual. The excessive fat deposits are typically unresponsive to traditional weight loss interventions and there is no cure. Untreated lipedema may result in secondary problems including osteoarthritis and reduced mobility. Over time, the weight of the excessive fat build-up can impair the ability to walk. Initially, the lymphatic system can cope with the increased amount of interstitial fluid, but in the later stages, secondary lymphedema (lipolymphoedema) can occur if the fatty deposits compromise the lymphatic system.

Lymphedema

Lymphedema is an accumulation of fluid due to disruption of lymphatic drainage. It is characterized by nonpitting swelling of an extremity or trunk, and is associated with wound healing impairment, recurrent skin infections, and decreased quality of life. Lymphedema can be caused by congenital or inherited abnormalities in the lymphatic system (primary lymphedema) but is most often caused by acquired damage to the lymphatic system (secondary lymphedema). Breast cancer treatment (surgical removal of lymph nodes and radiotherapy) is one of the most common causes of secondary lymphedema. In a systematic review of 72 studies (N=29,612 women), DiSipio et al. (2013) reported that nearly 20% of breast cancer survivors will develop arm lymphedema. (1) The risk factors with robust evidence for the development of lymphedema included extensive surgical procedures (such as axillary lymph node dissection, a higher number of lymph nodes removed, and mastectomy) as well as being overweight or obese. A diagnosis of secondary lymphedema is based on history (e.g., cancer treatment, trauma) and physical examination (localized, progressive edema and asymmetric limb measurements) when other causes of edema can be excluded. Imaging, such as MRI, computed tomography, ultrasound, or lymphoscintigraphy, may be used to differentiate lymphedema from other causes of edema in diagnostically challenging cases. The International Society of Lymphology has provided guidance for staging lymphedema (2023) based on "softness" or "firmness" of the limb and the changes with an elevation of the limb. (2)

Notable differences between lipedema and lymphedema are described in Table 1.

Table 1. Characteristics of Lipedema and Lymphedema

Characteristics	Lipedema	Lymphedema
Pathophysiology	Genetic, primary	Defects in lymph vessels, primary or secondary
Age of onset	Puberty	Any age
Sex	Female	Both sexes
Involvement	Bilateral, mainly legs	Unilateral or bilateral, mainly arms and legs
Symmetry	Symmetric	May be asymmetric
Disproportion	Yes	No
Involvement of feet or hands	No	Yes

Easy Bruising	Yes	No
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Adapted from Schavit et al. (2018) (3)

Treatment

Initial conservative therapy includes exercise and weight loss, compression garments, and manual lymphatic drainage. Complete decongestive therapy involves health professionals who address skin and nail care, therapeutic exercise, manual lymphatic drainage, and limb compression, which is performed daily for 5 days per week. The maintenance phase is intended to conserve the benefit in the first phase and is self-administered. For those who have failed conservative measures, pneumatic compression pumps, and, occasionally, surgery are used as treatment options.

Liposuction has been proposed as a treatment option for both lipedema and lymphedema.

Regulatory Status

Liposuction is a surgical procedure and, as such, is not subject to regulation by the U.S. Food and Drug Administration.

Rationale

Medical policies assess the clinical evidence to determine whether the use of a technology improves the net health outcome. Broadly defined, health outcomes are length of life, quality of life, and ability to function including benefits and harms. Every clinical condition has specific outcomes that are important to patients and to managing the course of that condition. Validated outcome measures are necessary to ascertain whether a condition improves or worsens; and whether the magnitude of that change is clinically significant. The net health outcome is a balance of benefits and harms.

To assess whether the evidence is sufficient to draw conclusions about the net health outcome of a technology, 2 domains are examined: the relevance and the quality and credibility. To be relevant, studies must represent 1 or more intended clinical use of the technology in the intended population and compare an effective and appropriate alternative at a comparable intensity. For some conditions, the alternative will be supportive care or surveillance. The quality and credibility of the evidence depend on study design and conduct, minimizing bias and confounding that can generate incorrect findings. The randomized controlled trial (RCT) is preferred to assess efficacy; however, in some circumstances, nonrandomized studies may be adequate. Randomized controlled trials are rarely large enough or long enough to capture less common adverse events and long-term effects. Other types of studies can be used for these purposes and to assess generalizability to broader clinical populations and settings of clinical practice.

Lipedema

Clinical Context and Therapy Purpose

There is no cure for lipedema. The goal of therapy is to reduce symptoms, disability, and functional limitations, and prevent disease progression. Conservative treatment includes manual lymphatic drainage, compression stockings, intermittent pneumatic compression, skin care, and exercise. Individuals with lipedema may have obesity as a comorbidity, and diet is frequently prescribed. Conservative care may alleviate symptoms, but treatments are short-lived and may require repeat treatment within days. For individuals who do not respond to conservative treatment, liposuction may be recommended.

The purpose of liposuction in individuals who have lipedema is to provide a treatment option that is an alternative to or an improvement on existing therapies.

The following PICO was used to select literature to inform this policy.

Populations

The relevant population of interest is individuals with lipedema/lipoedema or lipolymphedema who have failed to respond to conservative therapy.

In stage I lipedema the skin is smooth, and the subcutaneous layer is thickened, soft, and with an even structure. In stage II lipedema the skin becomes uneven and subcutaneous nodules develop. In stage III lipedema there are bulging protrusions of fat along with tender subcutaneous tissue. In an advanced stage, sometimes referred to as stage IV lipedema, the excess fat can impair lymphatic vessel function leading to secondary lymphedema (lipolymphedema).

Interventions

The therapy being considered is liposuction using specialized techniques. Tumescent infused in the subcutaneous tissues causes the fat cells to swell and vessels to constrict; micro-cannulas are then used to suction the fat. Procedures use local anesthetics in the tumescent fluid and do not require general anesthesia. Specialized techniques for liposuction may include power-assisted, which uses a variable speed motor for reciprocating motion, laser-assisted, ultrasound-assisted, radiofrequency-assisted, and water-assisted. (4) Water-assisted liposuction (WAL) is a technique that uses pulsating jets of tumescent solution to dislodge fatty tissue with simultaneous suction of the fat and tumescent fluid. A small, randomized trial from 2007 on cosmetic indications suggests a reduction in pain and ecchymosis with WAL compared to traditional liposuction. (5)

Liposuction reduces the amount of fatty tissue but does not eliminate it, and multiple sessions may be needed.

Comparators

Conservative treatment (decongestive therapy) consists of manual lymphatic drainage, compression garments, intermittent pneumatic compression, skin care, and exercise. Diet is also used to prevent or treat obesity associated with lipedema.

Outcomes

The general outcomes of interest are symptoms, change in disease status, functional outcomes, and quality of life.

Reported outcomes for lipedema are reduction in size of extremities, circumferential measurement, restriction of movement, spontaneous pain or discomfort, sensitivity to pressure, edema/swelling, bruising, trophic skin changes, and quality of life.

Study Selection Criteria

Methodologically credible studies were selected using the following principles:

- To assess efficacy outcomes, comparative controlled prospective trials were sought, with a preference for RCTs;
- In the absence of such trials, comparative observational studies were sought, with a preference for prospective studies;
- To assess long-term outcomes and adverse events, single-arm studies that capture longer periods of follow-up and/or larger populations were sought;
- Studies with duplicative or overlapping populations were excluded.

Systematic Reviews

The Canadian Agency for Drugs and Technologies in Health (2019) conducted a qualitative systematic review of liposuction for the treatment of lipedema. (6) The authors identified 5 uncontrolled before-and-after studies in the English language that suggested that liposuction may be effective in reducing the size of the extremities, symptoms, and functional limitations of lipedema. One of the publications was a follow-up to an earlier study, and no reports were identified outside of Germany. Limitations of the evidence included the lack of controlled trials and patient's self-assessment with scales that had not been validated for use in patients with lipedema.

Mortada et al. (2024) performed a systematic review and meta-analysis to assess the efficacy and safety of liposuction for individuals with lipedema. (7) The review included 20 studies (N=1785 patients) published up to March 2023. The selected studies comprised 14 prospective cohort studies, 3 retrospective studies, 2 case series, and 1 cross-sectional study. Based on data from 14 studies, the majority of patients were classified as stage 2 (503 individuals), followed by stage 3 (467 individuals), and a smaller number at stage 1 (64 individuals). There were no cases classified as advanced (Stage IV) disease. The most commonly reported comorbidities were hypothyroidism and allergies, followed by conditions such as depression, migraine, sleep disorders, arterial hypertension, asthma, and bowel disorders. Lipedema was most frequently observed in the outer and inner legs, as well as the arms. The most commonly utilized technique was tumescent liposuction (81%), followed by power-assisted liposuction (35%) and WAL (29%). The data analysis showed an average of 2.88 ($\pm$ 1.30) treatment sessions per patient, with a mean aspirate volume of 4,429 mL per session. Liposuction sessions varied from 1 to 2.5 hours, and 11 (of 20) studies reported postoperative use of compression garments. A meta-analysis of 9 studies revealed improvements in the quality of life (standardized mean difference [SMD] 2.48, $p < .0001$), pain (SMD 2.04, $p < .0001$), pressure sensitivity (SMD 2.2,

p<.0001), bruising (SMD 1.61, p<.0001), cosmetic impairment (SMD 2.07, p<.0001), heaviness (SMD 2.01, p<.0001), walking difficulty (SMD, 1.34, p<.00001), and itching among lipedema patients who underwent liposuction. Although complications such as inflammation, thrombosis, seroma, hematoma, and lymphedema-related skin changes were reported, severe complications were rare. No instances of shock, recurrence, or mortality were reported. The mean follow-up duration for the patients across studies was 15 months (range, 1 to 96 months).

The above systematic review by Mortada et al. (2024) was based on prospective cohort studies, which introduces a risk of publication bias. Insufficient detail in some reports contributed to potential data inconsistencies. Moreover, 70% (14 of 20) of the studies originated from Germany, highlighting the possibility of important differences in the approach to clinical care that may limit generalizability. Studies are ongoing with one RCT (with estimated enrollment of 450 patients) currently being conducted across multiple German centers, comparing wet liposuction techniques with decongestive therapy alone, with results expected by 2026. (8) (see Table of Summary of Key Trials).

A meta-analysis by Fijany et al. (2024) aimed to evaluate the efficacy and safety of different liposuction techniques in patients with lipedema, incorporating 10 studies with post-operative outcomes and complication data. (9) The studies comprised of two using traditional tumescent liposuction (TTL), five utilizing power-assisted liposuction (PAL), one employing WAL, and two studies featuring both PAL and WAL. In total, 2,542 procedures performed on 906 patients were analyzed. Consistent with the findings of Mortada et al. (2024), the combined outcomes for all techniques showed significant improvements in pain relief, reduction of bruising and edema, decreased tension, reduced pressure sensitivity, and enhanced cosmetic and general impairment (all p<0.00001). TTL, PAL, and WAL each significantly contributed to reducing pain, bruising, swelling, pressure sensitivity, and cosmetic impairment (all p<0.05). WAL was particularly effective in alleviating tension and general impairment (all p<0.005); however, the heterogeneity for these outcomes was high. The overall complication rates reported were low, with TTL at 1.5%, PAL at 4.0%, WAL at 0%, and studies using both PAL and WAL at 2.3%.

Section Summary: Lipedema

The evidence on liposuction for lipedema includes systematic reviews and meta-analyses of observational studies. The latest meta-analysis of 9 studies (N=635 patients) investigating the impact of various liposuction techniques for individuals with lipedema revealed improvements in the quality of life, pain, pressure sensitivity, bruising, cosmetic impairment, heaviness, walking difficulty, and itching among lipedema patients who underwent liposuction. This analysis was based on prospective cohort studies, which introduces a risk of publication bias. Insufficient detail in some reports contributed to potential data inconsistencies. All studies included in the meta-analysis originated from Germany; generalizability to other clinical care settings may be limited. The durability of the procedure is uncertain, and no studies were identified that compared liposuction to continued decongestive therapy.

Lymphedema

Clinical Context and Therapy Purpose

Lymphedema is a chronic condition that is managed with lifelong care. Care is aimed at improving comfort, reducing limb volume, and slowing the rate of progression. For the relatively few individuals who fail conservative treatment, surgical options may be recommended. Surgical approaches include lymphatic surgery and soft tissue reduction.

The purpose of liposuction in individuals who have lymphedema is to provide a treatment option that is an alternative to or an improvement on existing therapies.

The following PICO was used to select literature to inform this policy.

Populations

The relevant population of interest is individuals with lymphedema who have failed to respond to conservative therapy or present with more advanced lymphedema with fat deposition and tissue fibrosis.

Interventions

The therapy being considered is liposuction using specialized techniques to remove the deposited fibrofatty tissue with cannulas. Tumescence infused in the subcutaneous tissues causes the fat cells to swell and vessels to constrict; micro-cannulas are then used to suction the fat. Procedures use local anesthetics in the tumescent fluid and do not require general anesthesia. Specialized techniques for liposuction may include power-assisted, which uses a variable speed motor for reciprocating motion, laser-assisted, ultrasound-assisted, radiofrequency-assisted, and water-assisted. (4) WAL is a popular technique that uses pulsating jets of tumescent solution to dislodge fatty tissue with simultaneous suction of the fat and tumescent fluid. Compression garments must be worn following liposuction to prevent the rapid reaccumulation of fibrofatty tissue.

Liposuction reduces the amount of fatty tissue but does not eliminate it, and multiple sessions may be needed.

Comparators

Conservative treatment consists of skin care, exercise and weight reduction, compression garments, manual lymphatic drainage, and in more severe cases intermittent pneumatic compression. Decongestive therapy involves intensive treatment by a health care professional for 5 days a week.

Outcomes

The general outcomes of interest are symptoms, change in disease status, functional outcomes, and quality of life.

Reported outcomes for lymphedema are reduction in size of extremities, direct circumferential measurement, restriction of movement, spontaneous pain or discomfort, edema/swelling,

trophic skin changes, and quality of life. Assessment of the fat layer with magnetic resonance imaging, bioimpedance spectroscopy, and perometry have also been reported.

Study Selection Criteria

Methodologically credible studies were selected using the following principles:

- To assess efficacy outcomes, comparative controlled prospective trials were sought, with a preference for RCTs;
- In the absence of such trials, comparative observational studies were sought, with a preference for prospective studies;
- To assess long-term outcomes and adverse events, single-arm studies that capture longer periods of follow-up and/or larger populations were sought;
- Studies with duplicative or overlapping populations were excluded.

Systematic Reviews

Literature on the use of liposuction to treat lymphedema is limited.

A 2021 meta-analysis sponsored by the American Association of Plastic Surgeons evaluated the evidence on surgical treatment of lymphedema. (10) Pooled analysis of 2 studies (n=48) showed a 63.95% greater reduction in volume and pooled analysis of 2 studies (n=69) showed a greater reduction in volume by 895 mL for liposuction compared to compression therapy alone. Durability of the procedure was not addressed.

A qualitative systematic review of liposuction for lymphedema of the lower limb was published by Forte et al. (2019). (11) The authors identified 8 articles with 191 patients (4 were case reports) that met the inclusion criteria of the review. The mean duration of lymphedema ranged from 10 to 20 years. Volume reduction of greater than 50% was reported following liposuction and compression therapy, with a greater volume reduction for secondary lymphedema compared to primary lymphedema. One study reported improvement in function, quality of life, and rate of infection. No comparative studies were identified.

Lilja et al. (2024) conducted a systematic review to assess the efficacy of three distinct surgical approaches for the treatment of breast cancer-related lymphedema: lymphovenous anastomosis, vascularized lymph node transfer, and liposuction. (12) A total of 12 studies (16%) investigated the effects of liposuction (n=487 participants) on breast cancer-related lymphedema, with publications up to June 2023. These studies were conducted in Sweden (10 studies), the Netherlands (1 study), and South Korea (1 study). Eleven studies were prospective, and one was retrospective. The primary outcome assessed was excessive arm volume reduction across all studies. The average duration of lymphedema before surgery was 9.3 ± 2.0 years. Techniques used included dry liposuction, power-assisted liposuction, and tumescent liposuction. A meta-analysis was not performed due to significant heterogeneity in effect sizes across studies ($I^2 = .99$). Most of these studies (83%) followed participants for 12 months. Qualitative analysis of the included studies showed a consistent reduction in arm volume with long-term benefits and reported no major complications. The current data, derived from articles with a high risk of bias, is of low evidence quality.

Randomized Controlled Trial

Alamoudi et al. (2018) reported a non-blinded RCT on submental liposuction for cervical lymphedema following head and neck cancer treatment. (13) Twenty patients with cervical lymphedema were randomized into treatment with liposuction or to no treatment control. Patients filled out 2 surveys after consenting for the trial and at 6 months. Compared to the no-treatment group, patients in the liposuction group showed statistically significant improvement in patient's self-perception and subjective scoring of appearance. Limitations of the study include the lack of description of randomization and allocation concealment, lack of blinding combined with subjective outcome measures, lack of a physiotherapy control, small sample size, and short duration of follow-up to assess the durability of the procedure.

Section Summary: Lymphedema

The evidence on liposuction for lymphedema includes systematic reviews, and 1 non-blinded small RCT on submental liposuction for cervical lymphedema following head and neck cancer treatment. The available evidence suggest that arm volume can be reduced by the procedure, but follow-up is limited, and the studies have a number of other limitations that include lack of blinding, subjective outcome measures, lack of a physiotherapy control, and small sample size. The latest systematic review of 12 observational studies (N=487 participants) investigating the impact of various liposuction techniques on treating breast cancer-related lymphedema revealed considerable variability in effect sizes across these studies. Due to the high risk of bias, this body of evidence is considered low quality. No trials were identified that compared liposuction to a decongestive therapy protocol with continued compression. Further study is needed to evaluate the impact of liposuction when compared to a decongestive therapy protocol.

Summary of Evidence

For individuals with lipedema who receive liposuction, the evidence includes systematic reviews and meta-analyses of observational studies. Relevant outcomes are symptoms, change in disease status, functional outcomes, and quality of life. The latest meta-analysis of 9 studies (N=635 patients) investigating the impact of various liposuction techniques for individuals with lipedema revealed improvements in the quality of life, pain, pressure sensitivity, bruising, cosmetic impairment, heaviness, walking difficulty, and itching among lipedema patients who underwent liposuction. This analysis was based on prospective cohort studies, which introduces a risk of publication bias. Insufficient detail in some reports contributed to potential data inconsistencies. All studies included in the meta-analysis originated from Germany, highlighting a significant geographical bias. The durability of the procedure is uncertain, and no studies were identified that compared liposuction to continued decongestive therapy. To address these limitations, future investigations must prioritize randomized controlled trials (RCTs) to assess the safety and efficacy of various liposuction techniques. One such trial is currently in progress and will provide needed information on the benefits and harms of this procedure. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals with lymphedema who receive liposuction, the evidence includes systematic reviews, and 1 non-blinded small RCT on submental liposuction for cervical lymphedema following head and neck cancer treatment. Relevant outcomes are symptoms, change in disease status, functional outcomes, and quality of life. The available evidence suggests that arm volume can be reduced by the procedure, but follow-up duration is limited, and the studies have a number of other limitations that include lack of blinding, subjective outcome measures, lack of a physiotherapy control, and small sample size. The latest systematic review of 12 observational studies (N=487 participants) investigating the impact of various liposuction techniques on treating breast cancer-related lymphedema revealed considerable variability in effect sizes across these studies. Due to the high risk of bias, this body of evidence is considered low quality. No trials were identified that compared liposuction to a decongestive therapy protocol with continued compression. Further study is needed to evaluate the impact of liposuction when compared to a decongestive therapy protocol. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

Clinical Input From Physician Specialty Societies and Academic Medical Centers

2025 Input

Clinical input affirmed that the use of liposuction in individuals with lymphedema or lipedema who failed to respond to conservative treatment provides a clinically meaningful improvement in net health outcome and represents generally accepted medical practice.

Practice Guidelines and Position Statements

American Association of Plastic Surgeons

A 2021 consensus document sponsored by the American Association of Plastic Surgeons evaluated the evidence on surgical treatment of lymphedema. (10) The conference recommended, based on grade 1C (very low quality) evidence, that there is a role for debulking procedures such as liposuction and for liposuction combined with physiologic procedures in reducing the nonfluid component in lymphedema.

International Society of Lymphology

In 2023, the International Society of Lymphology updated a consensus document on the diagnosis and treatment of peripheral lymphedema. (14) The consensus of the panel was that liposuction has been shown to completely reduce non-pitting lymphedema due to excess fat deposition, but long-term management requires strict patient adherence to compression garments.

International Consensus Conference on Lipedema

A 2017 international consensus conference on lipedema identified studies from Germany that reported long-term benefits for up to 8 years following liposuction, concluding that lymph-sparing liposuction is the only effective treatment for lipedema. (15)

National Institute for Health and Care Excellence

The National Institute for Health and Care Excellence (NICE) issued clinical guidance addressing the use of liposuction for chronic lymphedema in 2022. (16) The guidance reviewed the

evidence and concluded that current evidence on the safety and efficacy of liposuction for chronic lymphedema is adequate to support the use of this procedure provided that standard arrangements are in place for clinical governance, consent, and audit. The evidence on safety shows that the potential risks include venous thromboembolism, fat embolism, and fluid overload. Patient selection should only be done by a multidisciplinary team with expertise in managing lymphedema. The procedure should only be done in specialist centers by clinicians with training and expertise in liposuction for lymphedema following agreed perioperative protocols.

The NICE also issued guidance for liposuction in lipedema in 2022. (17) They recommend liposuction for lipedema should be used only in the research setting because the safety data for liposuction in lipedema is inadequate but concerning.

Ongoing and Unpublished Clinical Trials

Some currently ongoing and unpublished trials that might influence this policy are listed in Table 2.

Table 2. Summary of Key Trials

NCT Number	Trial Name	Planned Enrollment	Completion Date
Ongoing			
NCT05284266	Surgical Treatment of Lipedema in Norway - a National Multicenter Study	220	Dec 2027
NCT04272827	Multicenter, Controlled, Randomized, Investigator-blinded Clinical Study on Efficacy and Safety of Surgical Therapy of Lipedema Compared to Complex Physical Decongestive Therapy Alone (LIPLEG)	450	Sep 2026

NCT: national clinical trial.

Coding

Procedure codes on Medical Policy documents are included **only** as a general reference tool for each policy. **They may not be all-inclusive.**

The presence or absence of procedure, service, supply, or device codes in a Medical Policy document has no relevance for determination of benefit coverage for members or reimbursement for providers. **Only the written coverage position in a Medical Policy should be used for such determinations.**

Benefit coverage determinations based on written Medical Policy coverage positions must include review of the member's benefit contract or Summary Plan Description (SPD) for defined coverage vs. non-coverage, benefit exclusions, and benefit limitations such as dollar or duration caps.

CPT Codes	15876, 15877, 15878, 15879
HCPCS Codes	None

*Current Procedural Terminology (CPT®) ©2024 American Medical Association: Chicago, IL.

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Centers for Medicare and Medicaid Services (CMS)

The information contained in this section is for informational purposes only. HCSC makes no representation as to the accuracy of this information. It is not to be used for claims adjudication for HCSC Plans.

The Centers for Medicare and Medicaid Services (CMS) does not have a national Medicare coverage position. Coverage may be subject to local carrier discretion.

A national coverage position for Medicare may have been developed since this medical policy document was written. See Medicare's National Coverage at <<https://www.cms.hhs.gov>>.

Policy History/Revision

Date	Description of Change
01/01/2026	Document updated with literature review. The following changes were made to Coverage: 1) Modified conditional criteria for both lipedema and lymphedema; and 2) Added "Lipectomy or liposuction is considered experimental, investigational and/or unproven for the treatment of lymphedema or lipedema in all other situations where the above criteria are not met." Added/updated references 1, 2, 7-9, 12 and 14; others removed.
05/15/2025	New medical document originating from SUR701.024. Coverage for lipedema was updated to include criteria on Stemmer sign: "Suction assisted protein lipectomy (also known as suction lipectomy and liposuction) for the treatment of lipedema, including any subsequent revisions, may be considered medically necessary when ALL the following criteria are met: 1. There is documentation of significant physical functional impairment (e.g., difficulty ambulating or difficulty performing activities of daily living) or medical complication, such as recurrent cellulitis; and 2. The individual has not responded to at least 3 consecutive months of optimal medical management (such as conservative treatment with compression garments and manual lymph drainage); and 3. The plan of care postoperatively is to continue to wear compression garments as instructed to maintain the benefits of treatment; and

	4. For the diagnosis of lipedema, the individual has <u>ALL</u> the following clinical exam findings: - Bilateral symmetric adiposity in the extremities; - Non-pitting edema; - Negative Stemmer sign, unless the individual has coexisting lymphedema (Stemmer sign is negative when a fold of skin can be pinched and lifted at the base of the second toe or at the base of the middle finger); - Tissue in affected areas is soft to palpation; - Tissue in affected areas is tender to palpation; and 5. Submission of photographs document the affected extremities requested for treatment.” Coverage for lymphedema was updated from experimental, investigational and/or unproven to: “Suction assisted protein lipectomy (also known as suction lipectomy and liposuction) may be considered medically necessary in individuals with documented lymphedema when ALL of the following criteria are met: 1. There is documentation of significant physical functional impairment (e.g., difficulty ambulating or difficulty performing activities of daily living) or medical complication, such as recurrent cellulitis; and 2. The individual has not responded to at least 3 consecutive months of optimal medical management (such as conservative treatment with compression garments and manual lymph drainage); and 3. The plan of care postoperatively is to continue to wear compression garments as instructed to maintain the benefits of treatment; and 4. Submission of photographs document the affected extremities requested for treatment.”
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