ND

Medical Policies

Print

Policy Number:	E-5018		
Policy Name:	Pneumatic Compression Devices		
Policy Type:	Medical	**Policy Subtype:**	Durable Medical Equipment (DME)
Effective Date:	09-15-2025		

Description

A pneumatic compression therapy device functions as a pump to improve circulation. The device consists of an inflatable garment, usually for the arm, leg, and/or ankle, and an electric pump. The inflatable garment is intermittently inflated and deflated in a cycle of time and pressure. Pneumatic compression therapy devices are classified as non-segmented or segmented, with or without calibrated gradient pressure.

This policy is designed to address medical guidelines that are appropriate for the majority of individuals with a particular disease, illness, or condition. Each person's unique clinical circumstances may warrant individual consideration, based on review of applicable medical records.

Policy Application

All claims submitted under this policy's section will be processed according to the policy effective date and associated revision effective dates in effect on the date of processing, regardless of service date; **and/or**

All claims submitted under this policy's section will be processed according to the policy effective date and associated revision effective dates in effect on the date of service.

Criteria

Coverage is subject to the specific terms of the member's benefit plan.

Pneumatic compression devices/lymphedema pumps and appliances **for in-home use** may be considered medically necessary when **ALL** of the following are met:

- When prescribed by a physician; **and**
- Has appropriate physician oversight (i.e., physician evaluation of the individual's condition to determine medical necessity of the device, suitable instruction in the operation of the machine as to the pressure to

be used and the frequency and duration of use, and ongoing monitoring of use and response to treatment).

Segmented or non-segmented pneumatic compression devices without calibrated gradient pressure for home use may be considered medically necessary for the treatment of ANY ONE of the following:

- Lymphedema treatment (pumps and appliances) of the arm or leg that has failed a four (4) week trial of conservative therapy and the treating physician determines that there has been no significant improvement or if significant symptoms remain after the trial. The trial of conservative therapy must include ALL of the following:
  - A compression bandage system or compression garment; and
  - Exercise; and
  - Elevation of the limb.

OR

- Chronic venous insufficiency (CVI) of the lower extremities with non-healing venous stasis ulcer(s) after a six (6) month trial of conservative therapy directed by the treating physician. The trial of conservative therapy must include ALL of the following:
  - A compression bandage system or compression garment; and
  - Appropriate dressings for the wound; and
  - Exercise; and
  - Elevation of the limb.

OR

In-home use of limb compression devices for the following indications may be considered medically necessary for ANY ONE of the following:

- Prevention of post-thrombotic syndrome; or
- Venous thromboembolism (VTE) prophylaxis after major orthopedic surgery (e.g. total hip arthroplasty, total knee arthroplasty, hip fracture surgery) in individuals with a contraindication to pharmacological agents, (i.e., at high risk for bleeding); or
- VTE prophylaxis after major non-orthopedic surgery or non-major orthopedic surgery in individuals who are at moderate or high risk of VTE (see Professional Statements and Societal Positions) with a contraindication to pharmacological agents, (i.e., at high risk for bleeding).

In-home use of limb compression devices for VTE prophylaxis for the following conditions, are considered experimental/investigational and, therefore, non-covered because the safety and /or effectiveness of this service cannot be established by the available published peer-reviewed literature.

- After major orthopedic surgery for individuals without a contraindication to pharmacological prophylaxis; or
- After major non-orthopedic surgery or non-major orthopedic surgery, for individuals who are at moderate or high risk of VTE without a contraindication to pharmacological prophylaxis and in individuals who are at low risk of VTE; or
- After all other surgeries.

A portable, intermittent, limb compression device (i.e. Vena Pro) is considered experimental/ investigational and, therefore, non-covered because the safety and/or effectiveness of this service cannot be established by the available published peer-reviewed literature.

In-home use of limb compression devices for VTE prophylaxis for periods longer than 30 days post-surgery is not medically necessary.

Pneumatic compression devices not meeting the criteria as indicated in this policy are considered not medically necessary.

Procedure Codes

E0650	E0651	E0652	E0655	E0660	E0665	E0666
E0667	E0668	E0669	E0671	E0672	E0673	E0676
E0680	E0682	E1399				

Segmented pneumatic compression therapy devices with calibrated gradient pressure may be considered medically necessary when the following medical necessity criteria are met:

- The individual's medical condition has failed to respond to therapy using a segmented pneumatic compressor without calibrated gradient pressure with clear documentation that the individual has unique characteristics that prevent satisfactory pneumatic compression treatment using a non-segmented device with a segmented appliance/sleeve or a segmented device without manual control of the pressure in each chamber.

Segmented pneumatic compression therapy devices with calibrated gradient pressure not meeting the criteria as indicated in this policy are considered not medically necessary.

Procedure Codes

E0652	E0671	E0672	E0673	E0680

The use of pneumatic compression devices for the treatment for lymphedema of the head, neck, chest or trunk, and/or the treatment of arterial insufficiency, is considered experimental/investigational and, therefore, non-covered, because the safety and/or effectiveness of this service cannot be established by the available published peer-reviewed literature.

Procedure Codes

E0656	E0657	E0670	E0675	E1399

Summary of Evidence

For individuals who have lymphedema who failed to respond to conservative therapy who receive pneumatic compression pumps applied to limb only, the evidence includes randomized controlled trials (RCTs) and systematic reviews primarily focusing on upper-limb lymphedema secondary to breast cancer. Relevant outcomes are symptoms, change in disease status, functional outcomes, and quality of life. Most of these RCTs were deemed moderate-to-high quality by the Agency for Healthcare Research and Quality, and about half

reported significant improvements with the use of pumps compared to conservative care. Recent meta-analyses indicate that incorporating intermittent pneumatic compression (IPC) with complete decongestive therapy can further enhance lymphedema management within four (4) weeks post-treatment. Similar findings are observed when IPC is combined with decongestive lymphatic therapy compared to decongestive lymphatic therapy alone in managing upper limb lymphedema after breast cancer surgery, with the former combined regimen showing improved external rotation joint mobility. The evidence is sufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have lymphedema who failed to respond to conservative therapy who receive pneumatic compression pumps applied to limb and chest and/or trunk, the evidence includes two RCTs of the Flexitouch system (Tactile Medical), published in 2012, comparing treatment with and without truncal involvement. Relevant outcomes are symptoms, change in disease status, functional outcomes, and quality of life. In one RCT, two (2) (of four (4)) key outcomes were significantly better with truncal involvement than without. This trial was limited by small sample size, failure to adjust statistically for multiple primary outcomes, and use of intermediate outcomes (e.g., amount of fluid removed) rather than health outcomes (e.g., functional status, quality of life). The second RCT did not find statistically significant differences between groups for any of the efficacy outcomes. The available evidence does not demonstrate that pumps treating the trunk or chest provide incremental improvement beyond that provided by pumps treating the affected limb only. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have lymphedema who failed to respond to conservative therapy who receive pneumatic compression pumps applied to the head and neck, the evidence includes one (1) RCT and a systematic review to assess the use of pneumatic compression treatment for head and neck lymphedema. Relevant outcomes are symptoms, change in disease status, functional outcomes, and quality of life. The RCT, comparing treatment with a pneumatic compression pump along with lymphedema self-management compared to self-management alone, examined the feasibility, adherence, and safety of the Flexitouch advanced pneumatic compression device (APCD) by Tactile Medical. The findings showed some improvements in individual-reported outcomes and swelling, although adherence was low, with only one (1) individual using the device twice daily as prescribed. The systematic review also suggested benefits from using the APCD, and it was considered safe and feasible according to the observational studies that reported adverse events. Most studies included participants who had completed or were concurrently undergoing complete decongestive therapy. Out of the five (5) observational studies included in the systematic review, four (4) (80 percent) had potential conflicts of interest related to the funding source. The only study not sponsored by the industry highlighted difficulties in obtaining the APCD, with fewer than half of the individuals receiving the device as prescribed. Further research with larger sample sizes and comparisons against the criterion standard of complete decongestive therapy is necessary to establish the efficacy of this treatment approach. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have venous ulcers who receive pneumatic compression pumps, the evidence includes RCTs and one systematic review. Relevant outcomes are symptoms, change in disease status, morbid events, and quality of life. A meta-analysis of three (3) trials found significantly higher healing rates with lymphedema pumps plus continuous compression than with continuous compression alone; however, two (2) of the three (3) trials were judged to be at high risk of bias. A 2020 RCT compared lymphedema pumps with continuous compression did not find significant between-group differences in healing rates or durability of pain relief. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

Professional Statements and Societal Positions Guidelines

American College of Chest Physicians (ACCP) - 2012

Guidance on Determining High Risk for Bleeding

American College of Chest Physicians (ACCP) 2012 guidelines on prevention of VTE in orthopedic surgery individuals list the following general risk factors for bleeding:

- Previous major bleeding (and previous bleeding risk similar to current risk)
- Severe renal failure
- Concomitant antiplatelet agent Surgical factors: history of or difficult-to-control surgical bleeding during the current operative procedure, extensive surgical dissection, and revision surgery

The guidelines note, however, that is specific thresholds for using mechanical compression devices or no prophylaxis instead of anticoagulant thromboprophylaxis have not been established.

Guidance on Risk Level for Individuals Undergoing Non-orthopedic Surgery

The 2012 ACCP guidelines on prevention of VTE in non-orthopedic surgery individuals included the following discussion of risk levels: 'In individuals undergoing general and abdominal-pelvic surgery, the risk of VTE varies depending on both individual-specific and procedure-specific factors. Examples of relatively low-risk procedures include laparoscopic cholecystectomy, appendectomy, transurethral prostatectomy, inguinal herniorrhaphy, and unilateral or bilateral mastectomy. Open abdominal and open-pelvic procedures are associated with a higher risk of VTE. VTE risk appears to be highest for individuals undergoing abdominal or pelvic surgery for cancer...'

'Independent risk factors include age at least 60 years, prior VTE, and cancer; age greater than 60 years, prior VTE, anesthesia at least two (2) hours, and bed rest at least four (4) days; older age, male sex, longer length of hospital stay, and higher Charlson comorbidity score; and sepsis, pregnancy or postpartum state, central venous access, malignancy, prior VTE, and inpatient hospital stay more than two (2) days. In another study, most of the moderate to strong independent risk factors for VTE were surgical complications, including urinary tract infection, acute renal insufficiency, postoperative transfusion, perioperative myocardial infarction, and pneumonia'.

The American College of Obstetricians and Gynecologists (ACOG 2007, reaffirmed 2021) proposed the following risk classification for VTE in individuals undergoing major gynecological surgery:

- Low: Surgery lasting less than 30 minutes in individuals younger than 40 years with no additional risk factors.
- Moderate: Surgery lasting less than 30 minutes in individuals with additional risk factors; surgery lasting less than 30 minutes in individuals age 40 to 60 years with no additional risk factors; major surgery in individuals younger than 40 years with no additional risk factors.
- High: Surgery lasting less than 30 minutes in individuals older than 60 years or with additional risk factors; major surgery in individuals older than 40 years or with additional risk factors.
- Highest: Major surgery in individuals older than 60 years plus prior venous thromboembolism, cancer, or molecular hypercoagulable state.

American Society of Clinical Oncology (ASCO) - 2019

Guidance for Individuals with Cancer

In 2019, the American Society of Clinical Oncology (ASCO) released updates to the clinical practice guideline on VTE prophylaxis and treatment in individuals with cancer. The guideline makes the following recommendation for mechanical prophylaxis in this individual population:

- 'Mechanical methods may be added to pharmacologic thromboprophylaxis but should not be used as monotherapy for VTE prevention unless pharmacologic methods are contraindicated because of active bleeding or high bleeding risk.'

- 'A combined regimen of pharmacologic and mechanical prophylaxis may improve efficacy, especially in the highest-risk individuals.'

Diagnosis Codes

Covered Diagnosis Codes for Procedure Codes E0650; E0651; E0655; E0660; E0665; E0666; E0667; E0668; E0669; and E0682

I87.011	I87.012	I87.013	I87.021	I87.022	I87.023	I87.031
I87.032	I87.033	I87.091	I87.092	I87.093	I89.0	I97.2
L97.111	L97.112	L97.113	L97.114	L97.115	L97.116	L97.118
L97.119	L97.121	L97.122	L97.123	L97.124	L97.125	L97.126
L97.128	L97.129	L97.211	L97.212	L97.213	L97.214	L97.215
L97.216	L97.218	L97.219	L97.221	L97.222	L97.223	L97.224
L97.225	L97.226	L97.228	L97.229	L97.311	L97.312	L97.313
L97.314	L97.315	L97.316	L97.318	L97.319	L97.321	L97.322
L97.323	L97.324	L97.325	L97.326	L97.328	L97.329	L97.411
L97.412	L97.413	L97.414	L97.415	L97.416	L97.418	L97.419
L97.421	L97.422	L97.423	L97.424	L97.425	L97.426	L97.428
L97.429	L97.505	L97.506	L97.508	L97.511	L97.512	L97.513
L97.514	L97.515	L97.516	L97.518	L97.519	L97.521	L97.522
L97.523	L97.524	L97.525	L97.526	L97.528	L97.529	L97.811
L97.812	L97.813	L97.814	L97.815	L97.816	L97.818	L97.819
L97.821	L97.822	L97.823	L97.824	L97.825	L97.826	L97.828
L97.829	L97.911	L97.912	L97.913	L97.914	L97.915	L97.916
L97.918	L97.919	L97.921	L97.922	L97.923	L97.924	L97.925
L97.926	L97.928	L97.929	L98.415	L98.416	L98.418	L98.425
L98.426	L98.428	L98.495	L98.496	L98.498	Q82.0	

CURRENT CODING

HCPCS:

E0650	Pneuma compresor non-segment	Commercial
E0651	Pneum compressor segmental	Commercial
E0652	Pneum compres w/cal pressure	Commercial
E0655	Pneumatic appliance half arm	Commercial
E0656	Segmental pneumatic trunk	Commercial
E0657	Segmental pneumatic chest	Commercial
E0660	Pneumatic appliance full leg	Commercial
E0665	Pneumatic appliance full arm	Commercial
E0666	Pneumatic appliance half leg	Commercial
E0667	Seg pneumatic appl full leg	Commercial
E0668	Seg pneumatic appl full arm	Commercial
E0669	Seg pneumatic appli half leg	Commercial
E0670	Seg pneum int legs/trunk	Commercial
E0671	Pressure pneum appl full leg	Commercial
E0672	Pressure pneum appl full arm	Commercial
E0673	Pressure pneum appl half leg	Commercial
E0675	Pneumatic compression device	Commercial
E0676	Inter limb compress dev nos	Commercial
E0680	Non pneum comp control cal	Commercial
E0682	Non pneum compress full arm	Commercial
E1399	Durable medical equipment mi	Commercial
E0650	Pneuma compresor non-segment	Medicaid Expansion
E0651	Pneum compressor segmental	Medicaid Expansion
E0652	Pneum compres w/cal pressure	Medicaid Expansion
E0655	Pneumatic appliance half arm	Medicaid Expansion
E0656	Segmental pneumatic trunk	Medicaid Expansion
E0657	Segmental pneumatic chest	Medicaid Expansion

E0660	Pneumatic appliance full leg	Medicaid Expansion
E0665	Pneumatic appliance full arm	Medicaid Expansion
E0666	Pneumatic appliance half leg	Medicaid Expansion
E0667	Seg pneumatic appl full leg	Medicaid Expansion
E0668	Seg pneumatic appl full arm	Medicaid Expansion
E0669	Seg pneumatic appli half leg	Medicaid Expansion
E0670	Seg pneum int legs/trunk	Medicaid Expansion
E0671	Pressure pneum appl full leg	Medicaid Expansion
E0672	Pressure pneum appl full arm	Medicaid Expansion
E0673	Pressure pneum appl half leg	Medicaid Expansion
E0675	Pneumatic compression device	Medicaid Expansion
E0676	Inter limb compress dev nos	Medicaid Expansion
E0680	Non pneum comp control cal	Medicaid Expansion
E0682	Non pneum compress full arm	Medicaid Expansion
E1399	Durable medical equipment mi	Medicaid Expansion

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ND Committee Review

Internal Medical Policy Committee 3-11-2025 New Policy - *Effective May 05, 2025*

- *Adopted* new policy with the same name as archived policy E-7.

Disclaimer

Current medical policy is to be used in determining a Member's contract benefits on the date that services are rendered. Contract language, including definitions and specific inclusions/exclusions, as well as state and federal law, must be considered in determining eligibility for coverage. Members must consult their applicable benefit plans or contact a Member Services representative for specific coverage information. Likewise, medical policy, which addresses the issue(s) in any specific case, should be considered before utilizing medical opinion in adjudication. Medical technology is constantly evolving, and the Company reserves the right to review and update medical policy periodically.