

## MEDICAL POLICY – 2.02.514

# External Counterpulsation Therapy

Ref. Policy: MP-107

Effective Date: July 1, 2024

Last Revised: June 24, 2024


Replaces: N/A

RELATED MEDICAL POLICIES:

None

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## Introduction

Angina is chest pain, pressure, or discomfort that occurs when the heart doesn't get enough oxygen-rich blood. Chronic stable angina is chest pain/discomfort that has a pattern of what triggers it, how long it lasts, and how often it happens. Angina is a symptom of coronary artery disease and can limit physical activity based on how severe it is. External counterpulsation therapy (ECP) is a minimally-invasive treatment for chronic disabling stable angina for those who haven't improved with medication and are unable to have surgery. With ECP, large air cuffs are wrapped around the legs. The cuffs inflate and deflate to help increase blood flow to the heart. This policy describes when external counterpulsation therapy (ECP) may be considered medically necessary.

**Note:** The Introduction section is for your general knowledge and is not to be taken as policy coverage criteria. The rest of the policy uses specific words and concepts familiar to medical professionals. It is intended for providers. A provider can be a person, such as a doctor, nurse, psychologist, or dentist. A provider also can be a place where medical care is given, like a hospital, clinic, or lab. This policy informs them about when a service may be covered.

## Policy Coverage Criteria

Service	Medical Necessity
<p><b>External counterpulsation therapy (ECP)</b></p>	<p><b>An initial full course (35 one-hour treatments per benefit period, which may be offered once or twice daily, usually five days per week) of external counterpulsation therapy (ECP) may be considered medically necessary for the following indications:</b></p> <ul style="list-style-type: none"> <li>• Individuals with a diagnosis of chronic disabling stable angina Class III or IV per the New York Heart Association (NYHA) or Canadian Cardiovascular Society (CCS) refractory to maximum medical therapy and not amenable to surgical intervention (in the opinion of a cardiologist or cardiothoracic surgeon) such as percutaneous transluminal coronary angioplasty (PTA) or cardiac bypass because of one of the following: <ul style="list-style-type: none"> <li>○ Their condition is inoperable or at high risk of operative complications or post-op failure; or</li> <li>○ Their coronary anatomy is not amenable for such procedures; or</li> <li>○ They have co-morbid states which could create excessive risk.</li> </ul> </li> <li>• Repeat courses of ECP will be considered on a case by case basis for persons with chronic stable angina if all of the following criteria are met: <ul style="list-style-type: none"> <li>○ Individual meets medical necessity criteria for ECP</li> <li>○ Prior ECP has resulted in a sustained improvement in symptoms, with a significant (greater than 25%) reduction in frequency of angina symptoms</li> <li>○ Improvement by one or more angina classes (NYHA or CCS)</li> <li>○ Three or more months has elapsed from the prior ECP treatment.</li> </ul> </li> </ul> <p><b>Note:</b> See Related Information below for <a href="#">Limitations</a></p>

**Coding**



Code	Description
<b>HCPCS Codes Covered if Selection Criteria are Met (If Appropriate)</b>	
G0166	External counterpulsation, per treatment session
<b>ICD-10 Codes Covered if Selection Criteria are Met</b>	
I20.0	Unstable angina
I20.1	Angina pectoris with documented spasm
I20.8	Other forms of angina pectoris
I20.9	Angina pectoris, unspecified

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## Related Information

### Limitations

- This policy only addresses external counterpulsation (ECP) performed in the outpatient setting
- All other cardiac conditions not otherwise specified as nationally covered for the use of ECP remain nationally non-covered
- Must be performed under the direct supervision of a physician who must be present and immediately available to provide assistance and direction during the treatment
- US Food and Drug Administration (FDA) approved ECP devices intended for the treatment of cardiac conditions
- Hydraulic versions of ECP devices will not be covered
- ECP is not intended as a first-line therapy for angina

ECP is not covered for individuals with any of the following conditions:

- Arrhythmias that interfere with machine triggering
- Active thrombophlebitis



- Severe lower extremity vaso-occlusive disease
- Presence of a documented aortic aneurysm requiring surgical repair
- Pregnancy

## Evidence Review

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### Background

The Centers for Medicare and Medicaid Services (CMS) define external counterpulsation (ECP) as a noninvasive outpatient treatment for coronary artery disease refractory to medical and/or surgical therapy. ECP is also commonly referred to as enhanced external counterpulsation. The individual is placed on a treatment table where their lower trunk and lower extremities are wrapped in a series of three compressive air cuffs which inflate and deflate in synchronization with the individual's cardiac cycle.

Although ECP devices are cleared by the US Food and Drug Administration (FDA) for use in treating a variety of cardiac conditions, including stable or unstable angina pectoris, acute myocardial infarction and cardiogenic shock, the use of this device to treat cardiac conditions other than stable angina pectoris is not covered, since only that use has developed sufficient evidence to demonstrate its medical effectiveness. Non-coverage of hydraulic versions of these types of devices remains in force.

New York Heart Association Grading Scale for Heart Failure:

- Class I: No limitation of physical activity. Ordinary physical activity does not cause undue fatigue, palpitation, dyspnea (shortness of breath).
- Class II: Slight limitation of physical activity. Comfortable at rest. Ordinary physical activity results in fatigue, palpitation, dyspnea.
- Class III: Marked limitation of physical activity. Comfortable at rest. Less than ordinary activity causes fatigue, palpitation, or dyspnea.
- Class IV: Unable to carry on any physical activity without discomfort. Symptoms of heart failure at rest. If any physical activity is undertaken, discomfort increases.

Canadian Cardiovascular Society Grading Scale for Angina:



- Class I: Ordinary physical activity does not cause angina, such as walking or climbing stairs. Angina occurs with strenuous, rapid or prolonged exertion.
- Class II: Slight limitation of ordinary activity. Angina occurs only during vigorous physical activity, such as walking or climbing stairs rapidly, walking uphill, walking or stair climbing after meals in cold, wind, or under emotional stress, or only during the few hours after awakening. Walking more than two blocks on the level and climbing more than one flight of ordinary stairs at a normal pace and in normal conditions.
- Class III: Marked limitation of ordinary physical activity. It is induced by walking one or two level blocks and climbing one flight of stairs in normal conditions and at a normal pace.
- Class IV: Inability to carry on any physical activity without discomfort. Anginal syndrome may be present at rest.

## References

1. American Heart Association (AHA). Classes of Heart Failure. Last reviewed June 7, 2023. <https://www.heart.org/en/health-topics/heart-failure/what-is-heart-failure/classes-of-heart-failure>. Accessed May 20, 2024.
2. Centers for Medicare and Medicaid Services (CMS). National Coverage Determination (NCD) No. 20.20 - External Counterpulsation Therapy for Severe Angina. Effective Date: 03/20/2006. <http://www.cms.gov/medicare-coverage-database/details/ncd-details.aspx?NCDId=97&ncdver=2&bc=AgAAgAAAAAAAAA%3d%3d&>. Accessed May 20, 2024.
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4. Ischemia Trial – Appendix I: New York Heart Association Grading Scale for Heart Failure and Canadian Cardiovascular Society Grading Scale for Angina. Protocol Version Date: Jan 6, 2014. [https://clinicaltrials.gov/ProvidedDocs/22/NCT01471522/Prot\\_001.pdf](https://clinicaltrials.gov/ProvidedDocs/22/NCT01471522/Prot_001.pdf). Accessed May 20, 2024.
5. Jneid H, Anderson JL, Wright RS, et al. 2012 ACCF/AHA focused update incorporated into the ACCF/AHA 2007 guidelines for the management of patients with unstable angina/non-ST-elevation myocardial infarction: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. J Am Coll Cardiol. 2013 Jun 11;61(23):e179-347. doi: 10.1016/j.jacc.2013.01.014. Epub 2013 Apr 29. <http://circ.ahajournals.org/content/early/2013/04/29/CIR.0b013e31828478ac.full.pdf>. Accessed May 20, 2024.
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7. Snow V, Barry P, Fihn SD, et al. Primary care management of chronic stable angina and asymptomatic suspected or known coronary artery disease: a clinical practice guideline from the American College of Physicians. Ann Intern Med. 2004 Oct 5;141(7):562-567. <http://annals.org/article.aspx?articleid=717863>. Accessed May 20, 2024.



## History

Date	Comments
09/16/19	New policy, approved August 13, 2019, effective January 1, 2020. An initial full course (35 one hour treatments per benefit period, which may be offered once or twice daily, usually five days per week) of external counterpulsation therapy (ECP) may be considered medically necessary when criteria are met. Repeat courses will be considered on a case by case basis.
10/01/20	Annual Review, approved September 17, 2020. No changes to policy, references updated.
10/01/21	Annual Review, approved September 23, 2021. No changes to policy, references updated.
07/01/22	Annual Review, approved June 27, 2022. No changes to policy, references updated.
01/01/24	Annual Review, approved December 11, 2023. No changes to policy, references updated. Changed the wording from "patient" to "individual" throughout the policy for standardization.
07/01/24	Annual Review, approved June 24, 2024. No changes to policy, references updated.

**Disclaimer:** This medical policy is a guide in evaluating the medical necessity of a particular service or treatment. The Company adopts policies after careful review of published peer-reviewed scientific literature, national guidelines and local standards of practice. Since medical technology is constantly changing, the Company reserves the right to review and update policies as appropriate. Member contracts differ in their benefits. Always consult the member benefit booklet or contact a member service representative to determine coverage for a specific medical service or supply. CPT codes, descriptions and materials are copyrighted by the American Medical Association (AMA). ©2024 Premera All Rights Reserved.

**Scope:** Medical policies are systematically developed guidelines that serve as a resource for Company staff when determining coverage for specific medical procedures, drugs or devices. Coverage for medical services is subject to the limits and conditions of the member benefit plan. Members and their providers should consult the member benefit booklet or contact a customer service representative to determine whether there are any benefit limitations applicable to this service or supply. This medical policy only applies to Individual Plans.

