

Peripheral Revascularization: Angioplasty • Atherectomy • Stent

Cardiology Services

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Peripheral Revascularization: Peripheral Angioplasty, Atherectomy, Stenting



NCD 20.7

See also, **NCD 20.7**: Percutaneous Transluminal Angioplasty (PTA) at <https://www.cms.gov/medicare-coverage-database/search.aspx> if applicable to individual's healthplan membership.

Guideline

A peripheral revascularization procedure may be considered medically appropriate when **ALL** of the following criteria are met: [7] [8] [13] [16] [21] [25]

- **ALL** of the following: [16] [25]
 - Peripheral angiography or non-invasive testing performed within the last 12 months [16] [25]
 - Results of prior testing confirm anatomic location of stenosis [16] [25]
 - Stenosis of 70% or more
- **ANY** of the following: [13] [16] [25]
 - Acute limb ischemia (ie, pain, pallor, pulselessness, paresthesia, paralysis, poikilothermia [cold sensation] for less than 2 weeks) [6] [11] [13] [16]
 - Critical limb ischemia for 2 weeks or more with **ANY** of the following: [13] [16] [25]
 - Ischemic pain at rest [13] [14] [25]
 - Lower extremity wound/ulcers, non-healing [3] [4] [13][14] [25]
 - Gangrene in lower extremities [6] [13] [22] [25]
 - Aneurysm, femoral or popliteal, when prior duplex ultrasound, CTA or MRA demonstrates **ANY** of the following:
 - Popliteal aneurysm 2 cm or more [1] [5] [17]
 - Femoral aneurysm 2 cm or more
 - Embolic event stemming from a popliteal or femoral artery aneurysm
 - Intermittent claudication symptoms that severely limit lifestyle and **ALL** of the following: [11] [22]

- Guideline Directed Medical Therapy (GDMT) including **ALL** of the following: [8] [9] [13] [16] [22][25]
 - Antiplatelet agents (eg, Aspirin or clopidogrel) [8] [14] [22] [25]
 - Cilostazol to improve exercise tolerance [8] [25]
 - Diabetes management [25]
 - Exercise or supervised exercise to point of pain then rest [25] [24]
 - Hypertension therapy, aggressive [23]
 - Smoking cessation counseling [2] [13] [25]
 - Statin drug therapy [2] [9] [14] [25]
- Physical examination suggestive of peripheral artery disease (PAD) with **ANY** of the following:[4] [8] [9] [13] [14]
 - Lower extremity pulses are absent or diminished [6] [8] [14]
 - Ambulation impaired (and absent of other conditions that would impair ambulation, such as stroke/trauma history, pulmonary conditions) [14] [22]
 - Dependent rubor (ie, dusky-red coloration of lower extremity when in dependent position) [13]
 - Pallor on elevation (ie, soles of feet pale in appearance in light-skinned patients and ashen coloring in darker-skinned patients) [6] [13]
- Symptomatic peripheral artery disease (PAD) and **ALL** of the following: [16]
 - Activities of daily living (ADL) with significant disability/inability to complete [22]
 - Structured exercise therapy (SET), geared to PAD, 12 weeks completed [8][18] [21] [24] [25]
 - SET provided **NO** relief of symptoms [8] [16]

References



LCD 37893

See also, **LCD 37893**: Endovenous Stenting at <https://www.cms.gov/medicare-coverage-database/search.aspx> if applicable to individual's healthplan membership.

**LCD 35998**

See also, **LCD 35998**: Non-Coronary Vascular Stents at <https://www.cms.gov/medicare-coverage-database/search.aspx> if applicable to individual's healthplan membership.

**LCD 35084**

See also, **LCD 35084**: Non-Coronary Vascular Stents at <https://www.cms.gov/medicare-coverage-database/search.aspx> if applicable to individual's healthplan membership.

**LCD 33763**

See also, **LCD 33763**: Vascular Stenting of Lower Extremity Arteries at <https://www.cms.gov/medicare-coverage-database/search.aspx> if applicable to individual's healthplan membership.

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Procedure Codes

**Table 1. Peripheral Revascularization: Angioplasty and Stenting
Associated Procedure Codes**

CODE	DESCRIPTION
37220	Revascularization, endovascular, open or percutaneous, iliac artery, unilateral, initial vessel; with transluminal angioplasty
37221	Revascularization, endovascular, open or percutaneous, iliac artery, unilateral, initial vessel; with transluminal stent placement(s), includes angioplasty within the same vessel, when performed
37224	Revascularization, endovascular, open or percutaneous, femoral, popliteal artery(s), unilateral; with transluminal angioplasty
37225	Revascularization, endovascular, open or percutaneous, femoral, popliteal artery(s), unilateral; with atherectomy, includes angioplasty within the same vessel, when performed
37226	Revascularization, endovascular, open or percutaneous, femoral, popliteal artery(s), unilateral; with transluminal stent placement(s), includes angioplasty within the same vessel, when performed
37227	Revascularization, endovascular, open or percutaneous, femoral, popliteal artery(s), unilateral; with transluminal stent placement(s) and atherectomy, includes angioplasty within the same vessel, when performed
37228	Revascularization, endovascular, open or percutaneous, tibial, peroneal artery, unilateral, initial vessel; with transluminal angioplasty
37230	Revascularization, endovascular, open or percutaneous, tibial, peroneal artery, unilateral, initial vessel; with transluminal stent placement(s), includes angioplasty within the same vessel, when performed
0505T	Endovenous femoral-popliteal arterial revascularization, with transcatheter placement of intravascular stent graft(s) and closure by any method, including percutaneous or open vascular access, ultrasound guidance for vascular access when performed, all catheterization(s) and intraprocedural roadmapping and imaging guidance necessary to complete the intervention, all associated radiological supervision and interpretation, when performed, with crossing of the occlusive lesion in an extraluminal fashion

**Table 2. Peripheral Revascularization: Artherectomy Associated
Procedure Codes**

CODE	DESCRIPTION
37229	Revascularization, endovascular, open or percutaneous, tibial, peroneal artery, unilateral, initial vessel; with atherectomy, includes angioplasty within the same vessel, when performed
37231	Revascularization, endovascular, open or percutaneous, tibial, peroneal artery, unilateral, initial vessel; with transluminal stent placement(s) and atherectomy, includes angioplasty within the same vessel, when performed

Definitions/Key Terms

Acute Limb Ischemia is severe hypo-perfusion of an extremity characterized by pain, pallor, pulselessness, poikilothermic (cold), paresthesia (tingling) and paralysis for less than two (2) weeks.

Angioplasty: A balloon angioplasty employs a deflated balloon-tipped narrow catheter that is inserted through the skin of the groin or arm into an artery. The catheter is threaded through the artery until it arrives in the coronary artery where there is narrowing or blockage. The catheter tip is then inserted through the narrowed area. Once in the narrowed area, the balloon is inflated, mashing the plaque into the vessel walls to reduce the narrowing. The balloon is then deflated and the catheter removed.

Guideline-Directed Medical Therapy (GDMT) refers to the optimal course of treatment for each stage of a chronic cardiac condition (eg, angina, heart failure), including those at high risk of disease progression, but without structural heart disease or symptoms. The goal is titration of medications to maximally tolerated doses.

Intermittent Claudication refers to symptoms of fatigue, discomfort, cramping, or pain of vascular origin in the muscles of the lower extremities consistently induced by exercise and relieved by rest (eg, within ten (10) minutes).

Peripheral Angiography is a procedure performed by inserting a catheter into a peripheral artery (usually the femoral artery) and injecting a small amount of contrast dye to allow the visualization of blood flow and identification of any areas of stenosis.

Peripheral angioplasty is a peripheral artery performed angioplasty procedure (using a catheter with a tiny balloon-tip that is inserted through an artery to open the artery by inflating the balloon).

Peripheral Artery Disease (PAD) is a blood circulation disorder in the arteries that supply the limbs. PAD may be partial (due to a stenosis) or complete (due to an occlusion).

Peripheral Stenting is the placement of a tiny mesh tube inside a newly widened or cleared artery to keep the vessel open.

Peripheral atherectomy is a procedure using a catheter to remove plaque from the blood vessels.

Rutherford Classification is a system whereby the symptoms of acute and chronic limb ischemia are classified into categories:

- Category I: Viable, not immediately threatened, no sensory loss of muscle weakness
- Category II (Grade I): Threatened
 - Marginally: Salvageable if promptly treated, minimal sensory loss (toes) or none, no muscle weakness

- Immediately: Salvageable with immediate revascularization, sensory loss more than toes, associated rest pain and mild to moderate muscle weakness
- Category III (Grade I): Irreversible, major tissue loss or permanent nerve damage, profound sensory loss, profound muscle weakness
- Category IV (Grade II): Ischemic rest pain (chronic limb ischemia)
- Category V (Grade III): Minor tissue loss-nonhealing ulcer, focal gangrene with diffuse pedal ischemia
- Category VI (Grade III): Major tissue loss-extending above transmetatarsal (TM) level, functional foot no longer salvageable

Structured Exercise Therapy (SET) is an exercise program directly supervised by a qualified healthcare provider(s) in a hospital or outpatient facility. SET includes intermittent walking exercise is used to the point of moderate-to-maximum claudication, alternating with periods of rest. Training is performed for a minimum of 30 to 45 minutes per session at least 3 times per week for a minimum of 12 weeks. The program can be stand alone or within a cardiac rehabilitation program.^{1,2}

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