

Definitions

“Peripheral vascular disease” is a broad term that refers to diseases of the blood vessels outside the heart and brain.

These diseases, over time, cause occlusion of the peripheral blood vessels by the following mechanisms:

- Inflammation: Narrowing of blood vessel
- Atherosclerosis (fatty deposits): Blockage of blood vessel
- Thrombus (clot) formation: Blockage of blood vessel

Occlusion of the peripheral blood vessels results in restriction of blood flow.

Peripheral venous (vein) disease

The most common type of peripheral venous disease is deep vein thrombosis (DVT) or clot. See the separate DVT coding guidelines.

Peripheral arterial (artery) disease (PAD)

The most common type of peripheral vascular disease (PVD) is peripheral arterial disease. Peripheral artery disease (PAD) is most commonly caused by atherosclerosis or “hardening of the arteries.” This problem occurs when fatty material (plaque) builds up along the walls of the arteries (similar to coronary artery disease), causing narrowing of the arteries that reduces blood flow. In addition, the arterial walls become stiffer and cannot widen (dilate) properly, which also interferes with normal blood flow. People with PAD often also have coronary artery disease (CAD) and thus have a higher risk of heart attack or stroke. PAD mainly affects the arteries of the arms, legs, kidneys and stomach, but it usually begins in the legs.

Risk factors

- Atherosclerosis
- Diabetes
- Smoking
- Abnormal cholesterol levels
- Hyperlipidemia
- Heart disease (coronary artery disease)
- High blood pressure
- Obesity
- Older age
- Family history of PAD

Signs/symptoms (usually affect lower extremities)

- Most common symptom of PAD is intermittent claudication (pain or discomfort in the lower extremities and buttocks that occurs with exercise/activity and resolves with rest)
- Diminished pulse in the legs or feet
- Decreased blood pressure in the affected limb(s)
- Arterial bruits (a whooshing sound heard with a stethoscope over the artery)
- Ulceration and sores with poor healing
- Hair loss on the legs and feet
- Discoloration of skin (bluish, dusky)
- Decreased warmth in the lower extremities

Diagnostic tools

- Medical history and physical exam
- Ankle-brachial index (ABI) test (compares blood pressures of the ankle and arm)
- Laboratory testing (i.e., blood testing for elevated cholesterol or diabetes)
- Ultrasound of the lower extremities
- Angiography of the arteries of the lower extremities

Complications

- Ulcers or open sores in or on legs and feet that can become infected and can lead to amputation
- Increased risk for heart attack and stroke

Treatment

- Smoking cessation
- Management of underlying conditions such as diabetes, high cholesterol and high blood pressure
- Diet management, exercise and weight control
- Medications (to prevent blood clots, control pain if needed, to improve blood flow, etc.)
- Surgery (e.g., angioplasty)

Documentation tips for providers

- A good rule of thumb for any medical record is to limit – or avoid altogether – the use of acronyms and abbreviations. The abbreviation “PVD” is sometimes used to refer to peripheral vascular disease; however, this abbreviation *can* have other meanings. (e.g., posterior vitreous detachment, portal vein dilation). Further, in handwritten office notes, the abbreviation “PVD” is sometimes misinterpreted as “PUD” (peptic ulcer disease, pulmonary disease, etc.). The meaning of an abbreviation or acronym can often be determined based on context, but this is not always true. **Best practice is to clearly spell out and fully describe the particular type of peripheral vascular disease that is present and all related manifestations.**
- The Subjective section of the office note should document the presence or absence of any current symptoms related to peripheral vascular disease (i.e., pain, cold extremities, etc.). When intermittent claudication is present, clearly describe the patient’s particular symptoms.
- Do not document intermittent claudication as simply “claudication.” There are other types of claudication (e.g., spinal claudication and jaw claudication).
- The Objective section of the office note should include any current associated physical exam findings (diminished pulses, hair loss, skin discoloration, etc.) and related diagnostic testing results.
- **Final Impression or Assessment:**
 - As noted above, the final diagnostic statement should spell out in full and clearly describe the particular type of peripheral vascular disease condition that is present. Document the site/location. Specify the underlying causative condition and any related manifestations by using appropriate descriptors and/or linking terms such as “due to,” “secondary to,” “associated with,” “related to,” etc. Example: “Peripheral vascular disease of the lower extremities due to atherosclerosis with intermittent claudication.”
 - Do not describe current peripheral vascular disease as “history of.” In diagnosis coding, the phrase “history of” means the condition is historical and no longer exists as a current problem.
 - Do not document a past peripheral vascular condition that has resolved as if it is current.
 - Do not use terms that imply uncertainty (“probable,” “apparently,” “likely,” “consistent with,” etc.) to describe a current, confirmed peripheral vascular disease condition.
 - Do not document suspected and unconfirmed peripheral vascular disease as if it were confirmed. Document signs and symptoms in the absence of a confirmed diagnosis.
 - Document the current status of the peripheral vascular disease condition (stable, improved, worsening, etc.).
- Document a specific and concise treatment plan for peripheral vascular disease, including current medications and planned diagnostic testing.
 - If referrals are made or consultations requested, the office note should indicate to whom or where the referral or consultation is made or from whom consultation advice is requested.
 - Document when you plan to see the patient again.

ICD-9-CM tips and resources for coders

The AHA Coding Clinic guideline for Peripheral vascular disease, atherosclerotic, Fourth Quarter 1992, page 25, advises that vague diagnoses such as “peripheral vascular disease” or “intermittent claudication” without further specification should be clarified with the physician. However, when provider query is not possible and the medical record clearly supports a current diagnosis stated simply as “peripheral vascular disease,” the code that must be assigned is 443.9, Unspecified peripheral vascular disease.

Code 443.9 includes intermittent claudication not otherwise specified, peripheral angiopathy not otherwise specified, and spasm of artery.

Other peripheral vascular disease classifies to code 443.89.

Atherosclerosis of the extremities is assigned to category 440.2 with a fifth-digit required to identify particular manifestations of the disease:

- 440.2X: Atherosclerosis of native arteries of the extremities
- 440.20: Atherosclerosis of the extremities, unspecified
- 440.21: Atherosclerosis of the extremities with intermittent claudication
- 440.22: Atherosclerosis of the extremities with rest pain
- 440.23: Atherosclerosis of the extremities with ulceration
- 440.24: Atherosclerosis of the extremities with gangrene
- 440.29: Other atherosclerosis of native arteries of the extremities

These codes are listed in order of priority, and the codes are hierarchical, meaning the higher-level codes include the conditions of the lower-level codes. For example, if the patient has atherosclerosis with ulceration and gangrene, only code 440.24 is assigned, as this code includes both gangrene and ulceration. (AHA Coding Clinic guideline for Atherosclerotic peripheral vascular disease, Fourth Quarter 1993, pages 27-28)

When coding occlusive peripheral arterial disease, the code choice is based on the cause of the occlusion. If the physician/provider does not document the cause, he/she should be queried for clarification. (AHA Coding Clinic guideline for Occlusive peripheral vascular disease, March-April 1987, pages 6-7)

Intermittent claudication

As stated above, the most common symptom of peripheral arterial disease is intermittent claudication – pain or discomfort in the lower extremities and buttocks that occurs with exercise or activity and resolves with rest. Please note the following:

- Even though peripheral arterial disease (PAD), peripheral vascular disease (PVD) and intermittent claudication all classify to code 443.9, intermittent claudication is not the same condition as peripheral arterial disease (PAD) or peripheral vascular disease (PVD).
- Intermittent claudication is a symptom of peripheral arterial disease that is not present in every case of PAD or PVD.
- Intermittent claudication is caused by reversible muscle ischemia (too little blood flow and, therefore, too little oxygen to the muscle) that occurs in occlusive arterial disease of the limbs.
- In some cases, the symptom of intermittent claudication can decrease or even go away with treatment (even though the underlying PAD or PVD may still remain).

Peripheral vascular disease due to diabetes mellitus classifies to the following codes:

- 250.7X: Diabetes with peripheral circulatory disorders (requires fifth digit to specify type of diabetes and whether controlled or uncontrolled)
- 443.81: Peripheral angiopathy in diseases classified elsewhere

Please note: Diabetes mellitus can cause circulatory or vascular complications that are not *peripheral* vascular diseases. For example, diabetes mellitus can cause cerebrovascular atherosclerosis (atherosclerosis of the blood vessels within the brain) or coronary artery atherosclerosis (atherosclerosis of the blood vessels in the heart). The blood vessels of the heart and the brain are not part of the peripheral vascular system. A diagnostic statement of “Diabetes mellitus with circulatory (vascular) complication” is vague and classifies to codes 250.80 (Diabetes with other specified manifestations, type II or unspecified type, not stated as uncontrolled) and 459.9 (Unspecified circulatory system disorder). To ensure accurate code assignment, the provider must clearly document and fully describe the specific circulatory or vascular complication that is present.

Coding examples

| Example 1 | |
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| Final Diagnosis | Peripheral vascular insufficiency |
| ICD-9-CM code(s) | 443.9 (if unable to query the physician for further specification) |

| Example 2 | |
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| Final Diagnosis | Intermittent claudication |
| ICD-9-CM code(s) | 443.9 (if unable to query the physician for further specification) |

Example 3

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|-----------------------------|---|
| Final Diagnosis | Chronic peripheral vascular disease due to diabetes |
| ICD-9-CM code(s) | 250.70, 443.81 |

Example 4

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| Final Diagnosis | Uncontrolled type 2 diabetes mellitus with vascular complications |
| ICD-9-CM code(s) | 250.82, 459.9 |

Example 5

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| Final Diagnosis | Large gangrenous ulcer of left calf due to peripheral arteriosclerosis |
| ICD-9-CM code(s) | 440.24, 707.12 |

Example 6

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| Final Diagnosis | Peripheral vascular disease of the lower extremities due to atherosclerosis with intermittent claudication |
| ICD-9-CM code(s) | 440.21 |

References: American Heart Association; American Hospital Association (AHA) Coding Clinic; ICD-9-CM Official Guidelines for Coding and Reporting; MedlinePlus; National Heart, Lung and Blood Institute; WebMD