



Peripheral vascular disease (PVD)



Clinical overview

Definition

Peripheral vascular disease (PVD) is a systemic disorder that involves the narrowing of peripheral blood vessels (vessels situated away from the heart or the brain). This happens as a result of arteriosclerosis, or a buildup of plaque, and can happen with veins or arteries.¹

Peripheral artery disease (PAD) is often used interchangeably with the term “peripheral vascular disease (PVD).” The term “PAD” is recommended to describe this condition because it includes venous in addition to arterial disorders. PAD stems from structural changes in the blood vessels resulting from fatty buildup (atherosclerosis) in the inner walls of the arteries. These deposits hinder and block normal blood flow.²

PVD includes PAD. PAD does not include PVD. PAD mainly affects the arteries of the arms, legs, kidneys and stomach, but usually begins in the legs.

Causes and risk factors³

- Atherosclerosis
- High cholesterol, heart disease, high blood pressure, hypertension
- Family history of PAD, heart disease or stroke

Signs and symptoms⁴

- Intermittent claudication-cramping in one or both of their lower legs when they are active but not when they rest
- Diminished pulses in legs or feet
- Changes in the skin color or temperature, hair loss, or wounds that don’t heal on the legs and feet
- There may be no symptoms

Diagnostic tools

- Medical history and physical exam
- Angiography of the legs
- Ankle/brachial index, or ABI, Doppler ultrasound exam of an extremity, magnetic resonance angiography or CT angiography⁵
- Plethysmography (QuantaFlo)⁶

Treatment⁵

- Stop smoking, diet management, exercise and weight control
- Management of underlying conditions
- Surgery (e.g., angioplasty)



Best documentation practices for healthcare providers

Subjective

In the subjective section of the office note, document the presence or absence of any current symptoms related to PVD/PAD (e.g., pain, cold extremities, intermittent claudication, etc.).

Objective

The objective section should include any current associated physical exam findings (diminished pulses, hair loss, skin discoloration, ulcerations, etc.) and related diagnostic testing results.

Assessment

Describe the diagnosis to the highest level of specificity, including cause, site/location, current status, any known complications.

State the cause of PVD/PAD, if known, using terms that clearly show cause and effect (such as “associated with,” “due to,” “secondary to,” “diabetic,” etc.).

- When documenting occlusive peripheral arterial disease, specify the cause of the occlusion (e.g., atherosclerotic, thrombotic, embolic, external compression).

Plan

- Document a clear and concise treatment plan.
- Medications linked to the diagnosis (e.g., anticoagulants, pain relievers, vasodilators)
- Include orders for diagnostic testing.
- Indicate in the office note to whom or where any referral or consultation requests are made.
- Document when the patient will be seen again, even if only on an as-needed basis.



Coding tips

Atherosclerosis of the native arteries of the extremities

ICD-10-CM codes **I70.20** - through **I70.26**- 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 of native arteries with ulceration and gangrene, only a code from subcategory **I70.26**- is assigned, as this code includes both gangrene and ulceration.

Diabetic peripheral vascular disease

- ICD-10-CM Official Guidelines for Coding and Reporting Section I.A.15. “With” advises: Conditions that appear in the alphabetic index as indented subterms under the various types of “Diabetes > with” are coded as diabetic complications, even in the absence of physician documentation explicitly linking them, unless the documentation clearly indicates these conditions are not caused by diabetes.
- Peripheral arteriosclerosis is a type of peripheral angiopathy. When a medical record documents peripheral arteriosclerosis in a diabetic patient assign code **E11.51**, Type 2 diabetes mellitus with diabetic peripheral angiopathy without gangrene, along with an additional code from subcategory **I70.2-**, Atherosclerosis of native arteries of extremities, to fully capture the patient's condition when the documentation provides specificity about the atherosclerosis such as laterality, affected vessel as well as additional manifestations of the disease (i.e., claudication, rest pain, etc.).
(References: AHA Coding Clinic, Second Quarter ICD-10 2018, Page 7, Diabetes with peripheral angiopathy; AHA Coding Clinic Third Quarter ICD-10 2018, Page 4, Diabetes mellitus with arteriosclerotic peripheral artery disease.)
- ICD-10-CM does not presume a cause-and-effect relationship between diabetes mellitus and coronary artery disease, cardiomyopathy or cerebrovascular disease.

Combination codes

According to the ICD-10-CM Official Guidelines for Coding and Reporting (I.B.9.), "Multiple coding should not be used when the classification provides a combination code that clearly identifies all of the elements documented in the diagnosis. When the combination code lacks necessary specificity in describing the manifestation or complication, an additional code should be used as a secondary code."⁷

- It is inappropriate and incorrect to also assign code **I73.9** Peripheral vascular disease, unspecified because a) combination code **E11.51** fully identifies both diagnostic conditions involved; and b) peripheral vascular disease is not unspecified, rather, it is specified as diabetic peripheral vascular disease.

Additional reminders

- Remember that peripheral vascular disease refers to locations outside the brain, carotid arteries and heart.
- PVD, PAD and intermittent claudication all code to **I73.9**.
- An additional code is used, if applicable, to identify chronic total occlusion of artery of extremity (**I70.92**).
- "Peripheral vascular disease" is synonymous with peripheral angiopathy.
- When symptoms or physical exam findings are present such as rest pain, ulceration, claudication, etc. code to the highest level of specificity based on the documentation.



Coding examples

Example 1	
Final diagnosis	Type 2 diabetes mellitus Hyperlipidemia Congestive heart failure Peripheral arterial disease/PVD
ICD-10-CM code(s)	E11.51 Type 2 diabetes mellitus with diabetic peripheral angiopathy without gangrene E78.5 Hyperlipidemia, unspecified I50.9 Heart failure, unspecified
Comments	It is inappropriate and incorrect to also assign code I73.9 Peripheral vascular disease, unspecified because a) combination code E11.51 fully identifies both diagnostic conditions involved

Example 2	
Final diagnosis	Atherosclerosis of both legs Intermittent claudication
ICD-10-CM code	I70.213 Atherosclerosis of native arteries of extremities with intermittent claudication, bilateral legs
Comments	This assessment would follow ICD-10-CM Official Guidelines for Coding and Reporting Section I.A.15." With" ICD-10-CM Coding path: Atherosclerosis - see also Arteriosclerosis>Arteriosclerosis, arteriosclerotic>arteries of extremities - see arteriosclerosis, extremities>extremities (native arteries)>leg>bilateral>with>intermittent claudication I70.213

Example 3	
Final diagnosis	Chronic atherosclerotic peripheral arterial disease of native arteries of bilateral lower extremities with rest pain due to diabetes mellitus type 1
ICD-10-CM code(s)	E10.51 Type 1 diabetes mellitus with diabetic peripheral angiopathy without gangrene I70.223 Atherosclerosis of native arteries of extremities with rest pain, bilateral legs
Comments	This coding example documents a more specific diagnosis of "chronic atherosclerotic peripheral arterial disease of native arteries of bilateral lower extremities with rest pain due to diabetes mellitus Type 1." The appropriate code for the type of diabetes mellitus with diabetic peripheral angiopathy is assigned, along with an additional code from subcategory I70.2- , Atherosclerosis of native arteries of extremities, to fully capture the patient's condition. Reference: AHA Coding Clinic, Third Quarter 2018, Diabetes mellitus with arteriosclerotic peripheral artery disease ⁸

References

1. Medicine, Y. (n.d.). Peripheral vascular disease (PVD). Yale Medicine. <https://www.yalemedicine.org/conditions/peripheral-vascular-disease#:~:text=Peripheral%20vascular%20disease%2C%20or%20PVD>
2. Associate, A. H. (n.d.). Peripheral artery disease definition. <https://www.heart.org/-/media/Files/Health-Topics/Peripheral-Artery-Disease/PVD-vs-PAD.pdf>
3. Zemaitis, M. R., Boll, J. M., & Dreyer, M. A. (2023). Peripheral Arterial Disease. Nih.gov; StatPearls Publishing. <https://www.ncbi.nlm.nih.gov/books/NBK430745/>
4. Writer, W. C. (2021). Peripheral Artery Disease vs. Peripheral Venous Disease. WebMD. <https://www.webmd.com/heart-disease/pad-vs-pvd>
5. QuantaFlo. (2024). Semler Scientific. <https://www.semilerscientific.com/quantaflo/>
6. Sudheendra, D. (2019). Peripheral artery disease - legs: MedlinePlus Medical Encyclopedia. Medlineplus.gov. <https://medlineplus.gov/ency/article/000170.htm>
7. AAPC. (2023). ICD-10-CM Complete Code Set 2024. AAPC.
8. American Hospital Association (AHA). (2018). Diabetes mellitus with arteriosclerotic peripheral artery disease. Coding Clinic, Third Quarter 2018, 4.