

**Peripheral Vascular Disease (PVD)** refers to a problem of the circulatory system which affect the peripheral blood vessels (excludes heart and brain), causing narrowing or occlusion of the vessels by inflammation, fatty deposits (Atherosclerosis) or clot formation (Thrombus), causing restriction of the blood flow.

## Types of Peripheral Vascular Diseases

- **Peripheral Artery disease (PAD).** Affect the peripheral arteries, decreasing the blood flow to the limbs, most commonly lower limbs. Caused by hardening of the arteries due to fatty deposits (atherosclerosis), which narrows and blocks arteries in critical regions of the body.
- **Peripheral venous disease** Affect the peripheral veins that normally serve upper and lower limbs as well as other critical regions of the body, excluding vein on brain and heart. The most common type of peripheral venous disease is deep vein thrombosis (DVT), or clot.

## Causes

The most common cause of PVD is peripheral artery disease, which is due to atherosclerosis. Fatty material builds up inside the arteries and mixes with calcium, scar tissue, and other substances, forming plaques that block, narrow, or weaken the artery walls. Other causes of PVD include:

**Blood Clots:** The exact cause is unknown. What is known is that the immune system attacks and destroys the insulin-producing cells in the pancreas, leaving the body with little or no insulin.

**Diabetes:** In a patient with diabetes, the high blood sugar damages blood vessel over time making them weaker and narrower. There are usually high levels of fats in the blood and can accelerate the development of atherosclerosis.

**Inflammation of the arteries or arteritis:** Arteritis can cause narrowing or weakening of the arteries. Certain autoimmune disorders lead to vasculitis. This inflammation also affects the organ systems too.

**Infection:** Inflammation and scarring caused by infection can block, narrow, or weaken blood vessels.

**Structural Defects:** Blood vessels that have defects within the structure cause narrowing, most of these are birth defects. Takayasu disease is a vascular disease which damages the aorta. This is mostly common among females of Asian origin.

**Injury:** Blood vessels can be injured in an accident such as a motor vehicle accident or a bad fall.

## Signs and Symptoms

Signs and symptoms of Peripheral Vascular Disease may include:

- Pain in the buttock
- Numbness, tingling, or weakness in the legs
- Burning or aching pain in the feet or toes while resting.
- A sore on a leg or a foot that will not heal.
- One or both legs or feet feeling cold or changing into different colors such as pale, bluish, or dark reddish.
- A sore on a leg that does not heal.
- Hair loss on the legs
- impotence

## Risk factors

- Family History of heart disease, high blood pressure, high cholesterol, or stroke
- Overweight

- Inactivity
- Smoking
- Diabetes,
- High Blood pressure
- High Cholesterol
- Overweight
- Infections
- Stroke

### Diagnosics test

- Medical history and physical exam
- Diagnostic angiogram- this is done to locate the blockage or narrowing and determine the severity.
- Angiography- a type of x-ray. Uses a dye injected into the arteries to highlight blockages and narrowing of arteries.
- Ultrasonography
- MRI

### Treatment

Treatment for Peripheral Vascular Disease depends on the underlying cause of your disease, the severity of your condition.

- Quit smoking.
- Regular exercise
- Healthy diet
- Healthy weight
- If you suffer from any chronic conditions such as high blood pressure, diabetes follow your health care provider's recommendation.
- Angioplasty- Is performed with a catheter inserted with a needle into the affected artery. The balloon attached to the end is inflated, pushing aside the plaque and widening the artery so that it no longer restricts blood flow or a stent will be used.
  - Medications
  - Cilostazol (Pletal): this drug keeps platelets from clumping together.
  - Pentoxifylline (Trental): This drug improves

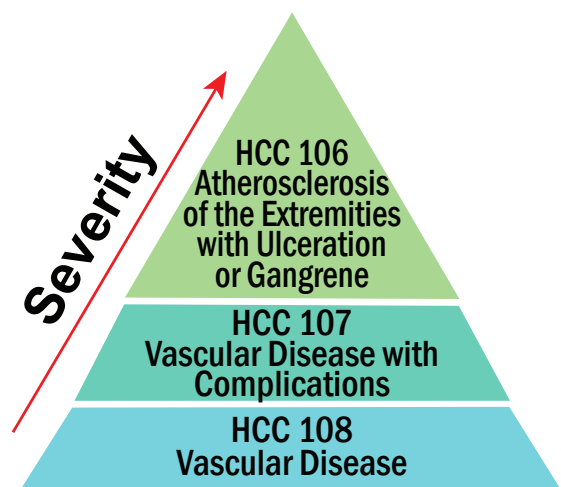
blood flow by making red blood cells more flexible and making the platelet less sticky.

- Antiplatelet agents: aspirin, dipyridamole, ticlopidine, clopidogrel- These prevent clots from forming.

### Clinical Documentation and Coding Tips

- Always document it to the highest level of specificity
- SOAP Notes documentation tips:
  - **Subjective** – Document the presence or absence of any current symptoms related to diabetes.
  - **Objective** – Document signs and symptoms and labs/test results related to peripheral vascular disease present now of the visit.
  - **Assessment** – Document diagnostic statements that are compatible with the ICD-10 nomenclature, describing each final PVD-related diagnosis to the highest specificity.
  - **Plan** – Document and link all medications used to treat diabetes; detail any referrals, consultations, labs, or diagnostic testing requested.

### Coding Peripheral Vascular Disease



ICD 10 Data	Description
<b>I70.0-I70.92</b>	Atherosclerosis of arteries in different parts of the legs
<b>I71.00- I71.03</b>	Dissection of different sites of aorta
<b>I71.1-I72.9</b>	Aneurysms of aorta and other arteries
<b>I73.01</b>	Raynaud's syndrome with gangrene
<b>I73.1</b>	Thromboangitis obliterans [Buerger's disease]
<b>I73.81</b>	Erythromelalgia
<b>I73.89</b>	Other specified peripheral vascular diseases
<b>I73.9</b>	Peripheral vascular disease, unspecified

### Always Remember

- Code to the most specificity of the diagnosis such as, site and underlying cause.
- For occlusive peripheral arterial disease, the cause of the occlusion.
- Status of peripheral vascular disease whether is stable, improved, etc.
- PVD described as history of the code is, Z68.79
- PVD to be coded as current must be specified as a current condition.

### Medicare Hierarchal Condition Categories (HCC)

Hierarchical condition category (HCC) coding is a risk-adjustment model designed to estimate future health care costs for patients. This model filters ICD-10CM codes into diagnosis groups (DxGs), and then into Conditions Categories (CCs). Hierarchies or **families** are placed to gain an HCC numeric code, which translates to a risk adjustment factor (RAF) value. Each diagnosis code found in the model, as a stand-alone diagnosis code or within a family or hierarchy, carries a value through RAF, but this value can change if the patient has other influencing factors such as ESRD, hospice, or are dual-eligible. Families or hierarchies set a value based on severity of illness, with more severe diagnoses carrying the overall risk score for that family. Diagnoses within families or hierarchies are inclusive of one another, while any additional diagnoses from other hierarchies or stand-alone diagnoses are additive and increase each patient's overall risk score.

Peripheral Vascular Disease (HCC's 106, 107, 108) is a chronic condition that falls under HCC with an average RAF Score 0.294

These HCCs category belongs to the "**Peripheral Vascular Diseases**"