جامعة الإمام عبدالرحمن بن فيصل
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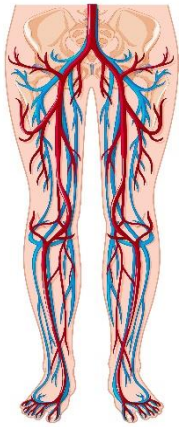
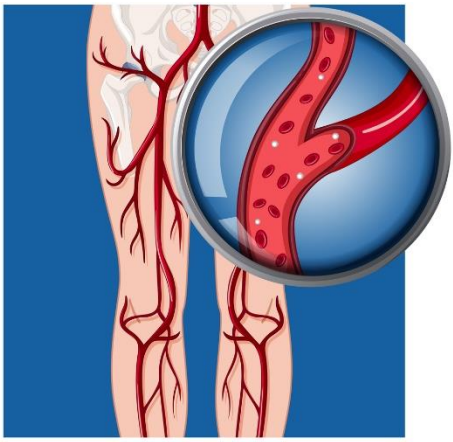
مستشفى الملك فهد الجامعي
King Fahad Hospital The University

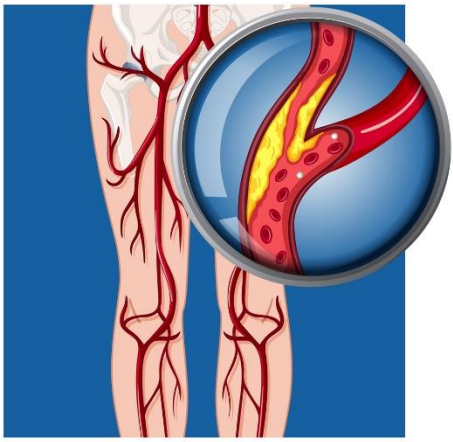
Peripheral Artery Disease



What are peripheral arterial diseases?

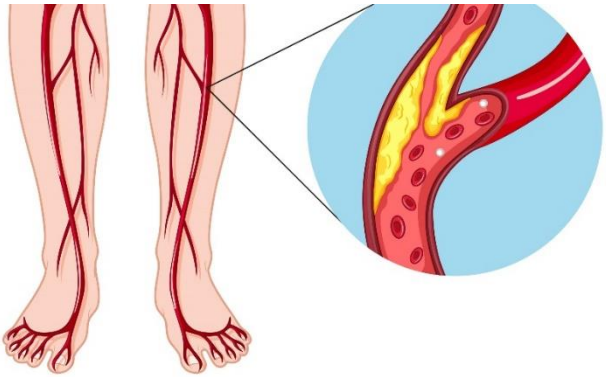
Peripheral arterial disease affects the blood vessels and arteries that carry oxygenated blood and nutrients to the arms and legs (extremities). Healthy arteries have a soft lining that prevents blood clots and promotes steady blood flow. However, fatty (plaques) can build up gradually on the inner lining of the artery walls.





What are peripheral arterial diseases?

It is known as atherosclerosis, meaning that it is hardening or stiffening of the arteries. The plaques are made of fats, cholesterol, and other substances, including cells affected with inflammation, proteins, and calcium. Plaques travel in the bloodstream and may cause narrowing or blockage of arteries, which leads to obstruction of blood flow to the other organs and tissues. Lack of sufficient blood and nutrients the other organs and tissues is a damage may lead to serious health problems.



What are the symptoms of peripheral arterial disease?

It may take several years before PAD develops, andsome symptoms may appear later in life.

1. Intermittent claudication:

This name given to the feeling of discomfort, pain, and cramps in the leg in when doing any activities, while the muscles need more blood flow, but these symptoms disappear at rest, intermittent claudication is the first symptom of peripheral artery disease, and pain often affects the calf, but it can be felt in the buttocks and thighs. The patient may also feel numbness, weakness, heaviness, or fatigue in the muscles of the legs when walking rather than when at rest. The pain can be so severe that it affects walking.

What are the symptoms of peripheral arterial disease?

Other symptoms of peripheral arterial disease may include:

- Pain with soreness in legs and toes when resting, especially at night when stretching flat.

- feeling of cold skin feet.

- Changes in skin color, such as redness or other changes.

- Recurrent infections.

- Non-healing sores on the feet and their toes.

What are the risk factors for peripheral arterial disease?

Family history of Cardiac Vuscular Disease.

Diabetes

Age above 65 years old

Hypertension

High cholestrol level

Smoking

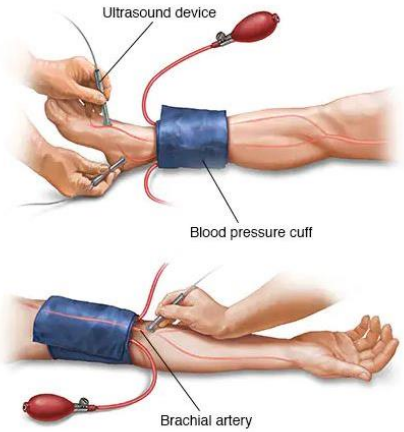
How to know you suffer from peripheral arterial disease?

You should speak to the doctor if you suffer from symptoms of peripheral arterial disease, to know the dimensions of the health problem and to receive treatment. Early detection and treatment are useful in preventing disease complications such as heart attack and stroke. The doctor examines the patient and discuss with him his health history and risk factors. The patient may need some medical tests to determine whether he/she suffers from peripheral artery disease and its severity.

What are the medical test that the patient with peripheral arterial disease may need?

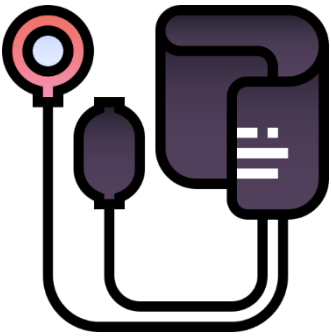
1. The ankle brachial index:

It is a test that compares the blood pressure in the lower legs and the blood pressure in the arms. In this test, blood pressure measuring sleeves are attached to the patient's arms and legs, and the sleeves swell, and a manual device known as a Doppler device is used to listen to the blood flow. The test detects the amount of blood passing through the legs and feet. If the patient suffers from peripheral arterial disease, the blood pressure in these areas will be lower.



What are the medical test that the patient with peripheral arterial disease may need?

2. Pulse Rate Recorder:

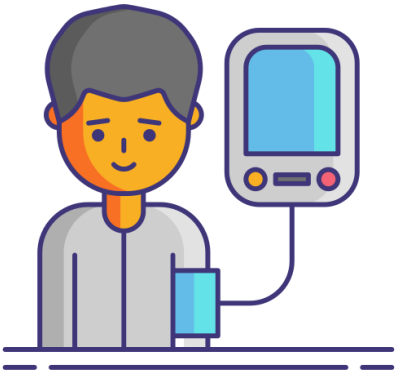


This test measures changes in the amount of blood passing through the legs, and it is also useful for identifying sites that suffer from blockage. During this test, a blood pressure cuff is placed on the arm and several other sleeves on the legs. Meanwhile, the patient lies with the sleeves slightly inflated. As the blood pulses as it passes through the arteries, the blood vessels expand, leading to an increase or decrease in the amount of air in the sleeve, and changes are recorded. Changes in blood pressure are recorded before and after the patient exercises on the treadmill, as this is useful in determining whether the pain is caused by peripheral arterial disease.

What are the medical test that the patient with peripheral arterial disease may need?

3. Ultrasound Arteriography:

This test checks blood flow, where a hand-held device called a transducer is placed on the patient's skin over the artery to be examined. The transducer sends out sound waves the patient cannot hear. These waves return after hitting the artery. Ultrasound is recorded, and images reflect the blood vessel (artery). This test can be used to reveal the location of the blockage in arteries.



What are the medical test that the patient with peripheral arterial disease may need?

There are other medical examinations and tests that a patient may need including angiography, X-ray, CT scan, or magnetic resonance imaging (MRI).

When imaging blood vessels and arteries with X-rays, blood vessels are injected with a special dye, and then X-rays are taken to reflect the internal side of the blood vessels, which are useful in examining blood flow and blockages detection.

CT scan uses x-rays to take images from different angles in a very short time. The computer collects the images and shows cross-sections for the blood vessels on the monitor. During an MRI, powerful magnets are used to create images reflect the patient's body organs and blood vessels.

Sources and references

All pictures used are from flaticon.com & shutterstock.com

Review and audit:

The content of this booklet has been reviewed by consultants of the Surgery department at King Fahad University Hospital

Health Awarness Unit

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