

# Medical Tests and Procedures for Finding and Treating Heart and Blood Vessel Disease

## Toolkit No. 23

### What does diabetes have to do with heart and blood vessel disease?

If you have diabetes, you're much more likely to have

- heart disease, also called coronary artery disease
- blood vessel disease, such as atherosclerosis (hardening of the arteries) or peripheral arterial disease (PAD)
- a heart attack
- a stroke

You can cut your chances of having these problems by taking special care of your heart and blood vessels. In addition to regular checkups, your health care team can do special tests to check the condition of your heart and blood vessels. If you already have heart or blood vessel problems, your health care team can use special procedures to open up or bypass narrowed or blocked blood vessels. Choosing foods wisely, being physically active, and taking medications can also help you stay healthy.

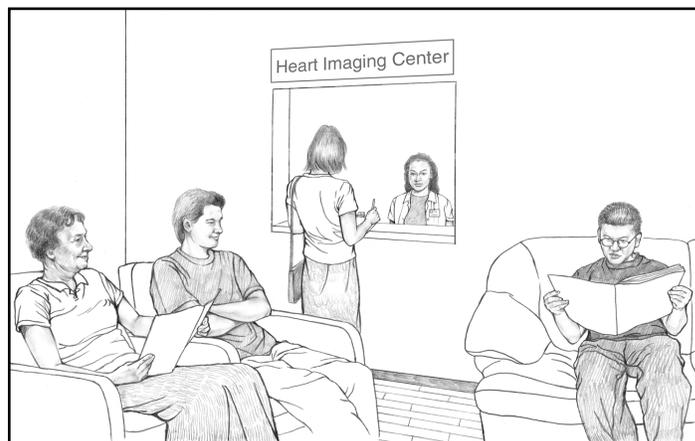
This toolkit defines some of the medical tests and procedures used for finding and treating heart and blood vessel disease. Terms are listed in alphabetical order.

#### Angiogram or arteriogram

In an angiogram (AN-gee-oh-gram) or arteriogram (ar-TEER-ee-oh-gram), dye is injected into the blood vessels using a catheter (small tube) and X rays are taken. This test shows whether arteries are narrowed or blocked. A **coronary angiogram** checks for narrowing or blockages in the blood vessels that go to the heart. A **cerebral arteriogram** checks the blood vessels that go to the brain.

#### Angioplasty

Angioplasty (AN-gee-oh-plas-tee), also called **balloon angioplasty**, is a procedure used to remove a blockage in a blood vessel to the heart



A number of medical tests and procedures are available to diagnose and treat heart and blood vessel disease.

**(coronary angioplasty)** or the brain. A small tube with a balloon attached is threaded into the narrowed or blocked blood vessel. Then the balloon is inflated, opening the narrowed artery. A wire tube, called a stent, may be left in place to help keep the artery open.

#### Ankle brachial index

A test called an ankle brachial index (BRAY-kee-al) or **ABI** is used to diagnose PAD. The health care provider compares the blood pressure in the ankle with that in the arm. Lower blood pressure in the lower part of the leg compared with the pressure in the arm may indicate PAD.

#### CABG

See the definition for coronary artery bypass graft.

#### Cardiac catheterization

Cardiac catheterization (CATH-ih-ter-ize-A-shun) is used in conjunction with other tests. A small tube is inserted into an artery and guided into the blood vessel of the heart.

#### Carotid artery surgery

Carotid artery surgery, also called **carotid endarterectomy** (en-dar-teh-REK-teh-mee), is used to remove buildups of fat inside the artery and to restore blood flow to the brain.

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## Chest X ray

A chest X ray shows the size and shape of the heart and can also show congestion in the lungs.

## Coronary artery bypass graft

During a coronary artery bypass graft, also called a bypass or **CABG** (pronounced “cabbage”), a blood vessel taken from the leg, wrist, or chest is attached to the coronary artery to bypass a blockage and restore blood flow to the heart. A bypass graft can also be used for blood vessels leading to the brain.

## CT scan

A CT (computed tomography), also called a **CAT scan**, uses special scanning techniques to provide images of organs such as the brain.

## ECG

See the definition for electrocardiogram.

## Echocardiogram

An echocardiogram (EK-oh-CAR-dee-oh-gram) uses very-high-frequency sound waves (ultrasound) to produce images of the heart and blood vessels on a screen. Results indicate whether the heart is pumping blood correctly. A **stress echocardiogram** uses either exercise or medication and ultrasound to provide images of the heart and blood vessels under stress.

## EKG

See the definition for electrocardiogram.

## Electrocardiogram

An electrocardiogram (ee-LEC-tro-CAR-dee-oh-gram), also called an **ECG** or **EKG**, provides information on heart rate and rhythm and shows whether there has been damage or injury to the heart muscle.

## Exercise perfusion test

An exercise perfusion (per-FYOO-shun) test, also called a **stress nuclear perfusion test**, uses small amounts of radioactive material to produce images of blood flow to the heart as you exercise.

## Exercise stress test

Exercise stress tests are used to find heart disease that is evident only during physical activity. These tests can also be used to help a patient choose the most appropriate physical activity program. Also called a **treadmill test**, a stress test uses an ECG to measure how the heart performs during activity, such as walking on a moving treadmill. A **medication stress test** uses medication instead of exercise to increase the heart rate.

## Holter monitoring

A Holter monitor is a small, portable machine that records the heart’s electrical activity. The person wearing the monitor keeps track of symptoms and activities for the evaluation period. Readings on the machine are compared with the symptoms.

## MRI

MRI (magnetic resonance imaging) uses special scanning techniques to provide images of body tissues. **MRA** (magnetic resonance angiography) uses MRI to examine blood vessels.

## Nuclear ventriculography

Nuclear ventriculography (ven-trick-yu-LAH-greh-fee), also called **radionuclide** (ray-dee-oh-NEW-clyde) **ventriculography**, uses small amounts of radioactive material to check heart function either while the body is at rest or during exercise. This test can also be used to check the blood vessels that go to the brain.

## PET scan

A PET (positron emission tomography) scan uses special scanning techniques to provide images of body tissues.

## Stress test

See the definition for exercise stress test.

