HEALTH BASICS

Cardiovascular

Cardiovascular describes the heart, blood vessels, and circulation of blood around the body.

WHAT IT IS
The heart, blood vessels, and blood circulation

WHERE IT COMES UP
Health checks, test reports, diagnoses, medicines, and exercise advice

WHY IT MATTERS
Circulation supplies organs with oxygen and nutrients

WHAT IT IS NOT
Not a disease or diagnosis

WHO TO ASK
A primary care clinician or cardiovascular specialist

HOW IT IS CHECKED
Blood pressure, examination, blood tests, and heart tests

Overview

Cardiovascular means relating to the heart and blood vessels. "Cardio" refers to the heart, while "vascular" refers to blood vessels.

The cardiovascular system is also called the circulatory system. It moves blood around your body, delivering oxygen and nutrients to tissues and carrying away carbon dioxide and other waste.

Cardiovascular is not a disease or a diagnosis. It is a broad medical term. You may see it used in phrases such as cardiovascular health, cardiovascular risk, cardiovascular exercise, cardiovascular test, or cardiovascular disease.

The meaning depends on the context. For example, "cardiovascular risk" means the chance of developing certain heart or blood vessel conditions over time. "Cardiovascular disease" refers to a group of specific conditions affecting the heart or blood vessels.

How it works

The heart is a muscular pump with four chambers. The two upper chambers are called the atria. The two lower chambers are called the ventricles.

The right side of the heart sends blood to the lungs. In the lungs, blood releases carbon dioxide and picks up oxygen. The left side then pumps oxygen-rich blood to the rest of the body.

Valves between the heart's chambers keep blood moving in the correct direction. They open to let blood pass and close to reduce backward flow.

Each heartbeat is controlled by electrical signals. These signals usually begin in a group of cells called the sinus node, the heart's natural pacemaker. The signals coordinate when the heart chambers squeeze.

Blood travels through several types of vessel:

Blood pressure is the force of blood against artery walls. A blood pressure reading has two numbers. The upper number measures pressure when the heart contracts. The lower number measures pressure while the heart relaxes between beats.

The cardiovascular system responds to what your body is doing. During physical activity, the heart usually beats faster and pumps more blood to working muscles. During rest, the body generally needs less blood flow.

Other organs help regulate circulation. The lungs control oxygen and carbon dioxide levels. The kidneys help control fluid balance and blood pressure. The nervous and hormonal systems adjust heart rate and blood vessel width.

- Arteries carry blood away from the heart
- Veins return blood toward the heart
- Capillaries are tiny vessels where oxygen, nutrients, and waste move between blood and tissues

Why it matters for your health

Every organ relies on an adequate blood supply. The brain, heart, kidneys, muscles, and other tissues need oxygen and nutrients to work.

Cardiovascular health is affected by many factors. Some can change over time, including blood pressure, cholesterol levels, blood sugar, smoking, physical activity, sleep, and diet. Others cannot be changed, such as age, family history, and some inherited conditions.

Clinicians may estimate cardiovascular risk when deciding whether further assessment or risk-reducing treatment may be useful. A risk estimate is not a diagnosis or a prediction of exactly what will happen. It combines information such as age, blood pressure, cholesterol,

smoking status, and certain medical conditions.

"Cardiovascular fitness" has a different meaning. It describes how effectively your heart, lungs, blood vessels, and muscles work during sustained activity. It may be discussed when planning exercise or assessing physical function.

A cardiovascular test does not necessarily mean that a serious problem is suspected. Tests may be used for routine monitoring, to investigate symptoms, before some procedures, or to follow an existing condition.

What can go wrong

The term cardiovascular disease , often shortened to CVD, covers several conditions rather than one illness.

Atherosclerosis is a buildup of fatty material, inflammation, and other substances in artery walls. It may narrow arteries or contribute to a blood clot.

Coronary artery disease affects arteries supplying the heart muscle. If blood flow is suddenly blocked, part of the heart muscle may be injured. This is a heart attack, also called myocardial infarction.

A stroke happens when blood flow to part of the brain is blocked or when a blood vessel in the brain bleeds. Although stroke affects the brain, it is often included under cardiovascular disease because it involves blood vessels.

Other related conditions include:

These conditions have different causes, tests, and treatments. Having one cardiovascular risk factor does not mean that you have cardiovascular disease.

- Heart failure , when the heart cannot pump or fill well enough for the body's needs
- Arrhythmias , meaning abnormal heart rhythms
- Heart valve disease , affecting how one or more valves open or close
- Cardiomyopathy , a disorder of the heart muscle
- Peripheral artery disease , which reduces arterial blood flow outside the heart
- Aortic disease , affecting the body's main artery
- Venous thromboembolism , involving blood clots in veins

What you can do

If "cardiovascular" appears in a letter, test result, or health record, ask what it means in that specific context. Useful questions include:

There is no single test that checks the entire cardiovascular system. Assessment may include blood pressure, pulse, examination, cholesterol or blood sugar tests, or an electrocardiogram. An electrocardiogram, often called an ECG or EKG, records the heart's electrical activity.

Other tests have specific purposes. An echocardiogram uses ultrasound to show the heart's structure and movement. Exercise testing examines how the heart responds to activity. Imaging may look at the heart, arteries, veins, or blood flow. These tests are not routinely needed for everyone.

Keep a record of cardiovascular diagnoses, medicines, relevant test results, and close family history. If you measure blood pressure at home, record the numbers, date, time, and any instructions you were given about technique.

Routine follow-up is appropriate for discussing risk factors, repeated unusual readings, family history, or questions about exercise. Do not start or stop medicines, including aspirin, solely because you have read about cardiovascular risk.

Seek prompt medical advice for new symptoms such as recurring chest discomfort, unexplained breathlessness, fainting, or persistent palpitations. Palpitations are the feeling that the heart is racing, pounding, fluttering, or skipping beats.

Call emergency services for chest pressure or pain that is severe, persistent, or accompanied by breathlessness, sweating, nausea, or pain spreading to the arm, back, neck, or jaw. Also call for sudden facial drooping, arm weakness, speech difficulty, collapse, or severe breathing difficulty. Do not drive yourself if emergency care may be needed.

- Is this describing my general risk, a test, or a diagnosis?
- Which condition is being considered or monitored?
- Do I need another measurement or test?
- When should this be reviewed?

Common questions

Does cardiovascular mean heart disease?

No. Cardiovascular means related to the heart and blood vessels. Cardiovascular disease refers to diagnosed conditions involving those structures.

Is high blood pressure a cardiovascular condition?

High blood pressure affects the cardiovascular system and raises the risk of several heart and blood vessel conditions. Diagnosis usually requires properly taken readings rather than one isolated result.

Is cholesterol part of the cardiovascular system?

Cholesterol is a waxy substance carried in the blood. The body needs it for normal functions, but some cholesterol patterns are associated with atherosclerosis and cardiovascular risk.

What is cardiovascular exercise?

It is sustained activity that raises your heart rate and breathing. Examples can include brisk walking, cycling, swimming, or running. What is suitable for you depends on your health, current ability, and any advice given for existing conditions.

Which clinician deals with cardiovascular health?

A primary care clinician can assess many risk factors and common concerns. A cardiologist specializes in the heart. Vascular specialists focus on blood vessels, while other specialists may be involved depending on the condition.

Can one normal test rule out every cardiovascular problem?

No. Each test examines particular features, such as rhythm, structure, blood flow, or risk factors. Results need to be interpreted alongside the reason for testing and other health information.

Sources

- National Heart, Lung, and Blood Institute: How the Heart Works
- National Heart, Lung, and Blood Institute: Heart Tests
- Centers for Disease Control and Prevention: About Heart Disease
- American Heart Association: What Is Cardiovascular Disease?
- MedlinePlus: Vascular Diseases
- American Stroke Association: Stroke Symptoms and Warning Signs